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**Vol 4 EXCAVATIONS IN THE NORTH SECTOR (Int 41)**

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[For illustrations see Research Report and Site Atlas]

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## 1. SUMMARY

The north sector of the excavation sample was the same area as Int 41. This volume of the field reports describes how the fieldwork was carried out in Int 41, and presents studies on the prehistoric sequence, on the early medieval burials at Mound 2 and 5, and on the early medieval execution burials of Group 2 (Burial 40-51).

These studies refer to the Field records held by the British Museum, where

1-5 digit number with no prefix = Find number (see volume 10)

4 digit number with no prefix or prefix c= context record

1-3 digit number F= feature record

D= Drawing number

N= Photographic print number

S= Photographic slide number

Note that drawings and photographs published in the Research Reports do not feature in the Field Reports.

## 2. INTRODUCTION

### 2.1 Aims and Objectives

Int.41 was excavated in pursuit of the projects' principal research objectives (see Bulletin No.4 1986, Vol 3). It comprised the northern arm of the cruciform transect to be excavated under the agreed research design. The local aims were:-

- investigate the structure of the mounds
- establish the character and variety of the presumed Early Medieval burials beneath, within and surrounding the mounds
- establish the sequence of mound-building within the cemetery
- investigate and complete the work of earlier excavators
- establish the contemporary vegetational and environmental sequence
- investigate the character and survival of the prehistoric deposits
- evaluate the archaeological deposits from Zone E

The opportunity was also taken to refine our recording techniques and this is illustrated by the variety and quality of the data retrieved.

### 2.2 Location

Intervention 41 was the largest excavation area to be opened at Sutton Hoo. It corresponded to the area of Sector 2 published in the project design (Bulletin No.4, Fig 33; see Vol 3), although the final size was slightly smaller than the original design proposed. It covered an area 32m by 64m (2048 m<sup>2</sup>) and was aligned north-south at the north end of the site. Zone A (Carver 1983). The co-ordinates of the trench edges were 108/154-140/154, 108/218-140/218.

The area enclosed two mounds of presumed Early Medieval date - *Mound 2* and *Mound 5*, and included two earlier excavations, by Brown (1938; Tumulus D, INT. 3) and Longworth and Kinnes (1970; Area C, INT.12).

### 2.3 Operations Undertaken

#### 2.3.1.

Preliminary surveys, using surface and subsurface non-destructive techniques were undertaken

during the evaluation programme, 1983-86 (see 3.1).

### 2.3.2

The central portion of the trench cut by Basil Brown in 1938 (INT 3) was re-opened (INT 26, 1984-5) in order to provide an opportunity to learn the characteristics of the strata of and under Mound 2.

### 2.3.3

The excavation of Int.41 began in early August 1986. The first turf was ceremonially lifted on the 7th August and work continued on a full time basis until excavation was completed, over 136 weeks later in May 1989. The excavation was completed entirely by hand without the aid of any mechanical excavators. A great number of people was involved in the work over the years ranging from inexperienced students to local volunteers, professional archaeologists to work-experience recruits. The work involved not only the routine excavation of archaeological strata but included the processing of every find and the photography of quadrant surfaces at each horizon. Most of the crucial recording work was conducted in the hectic summer season between July-October, when the site was run, with varying degrees of success, as a field school for archaeology students [N161/2A]. Running through these summer seasons a small core of Community Programme trainees was also employed. Between March and September 1987 they were joined by a second team of CP workers from Ipswich.

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- 3.1.2 Metal-detector survey (AJC)
- 3.1.3 Geophysical survey (AJC)
- 3.2.1 Quadrant layout (AJC)
- 3.2.2 Survey stations (AJC)
- 3.2.3 Location of drawn sections (AJC)
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### 3. METHODS AND RESULTS : The Data Acquired

#### 3.1 Pre-excavation surface and sub-surface Surveys

Before excavation removed the turf, the predominant cover was a mixture of Sheep's Fescue with smaller patches of Yorkshire Fog, Spring Beauty and bracken (Bulletin No.4, 1986, Fig 12; see Vol 3). Mound 2 survived as a very prominent topographic feature 2.13m high and 20.48m in diameter, but Mound 5 just 10.00m to the south was only visible as a very low plateau. Apart from a single linear feature seen running NE-SW across this mound there were no obvious signs of major disturbance on the turf surface of the sector. It was clear that Mound 2 had suffered from the

aggressive attention of rabbits and moles since large and deep burrows could be seen cutting through the turf. These often corresponded to small platforms on the turf surface where upcast had accumulated. In order to assess and evaluate the extent of any turf or sub-turf disturbance and to plot the nature of the archaeological deposits, a battery of remote-sensing techniques was applied. The results of these surveys formed the basis of the evaluation published in 1986 (Bulletin No.4). They suggested that Int.41 would be cut through an important area in which the archaeological deposits would be well preserved (0.50-0.80m deep) and where surface disturbance would be limited to the top 0.40 (Bulletin No.4, Fig 25; see Vol 3).

The five preliminary surveys were:

#### 3.1.1 *Contour Survey: (Int.30)*

A detailed survey plotted at 0.10m intervals using an EDM was conducted immediately after the turf and bracken cover had been mown. This work was supplemented by a series of later surveys conducted by the excavators just prior to excavation (see 1001) and during the excavation of specific horizon surfaces. The results of the earlier survey clearly illustrated the predominance of Mound 2 and revealed a shallow depression running east-west across the summit of the mound. This could be matched with a corresponding slight irregularity in the line of the perimeter at either end where short tongues of make-up spilled out at the base of the slope. The contours suggested the presence of a ditch surrounding the mound. There was no indication of a similar ditch around Mound 5. A further analysis of the surface topography was undertaken by Paul Reilly of IBM, in which the vertical (Z) co-ordinate was replaced by its cube. The result was to reveal a rectangular 'plateau' across the southern edge of Int 41 and what was to have been Int 50. It transpired that this could be associated with an ancient ploughzone.

#### 3.1.2 *Photography*

In order to supplement the contour survey and to provide a more subtle image of the ground surface, a series of night-time photographs were taken. Using a generator to drive a battery of lights to illuminate the turf surface, general shots of the area around the mounds illustrated the undulating surface of the turf and confirmed the presence of a ditch around Mound 2.

#### 3.1.3 *Vegetation survey: (Int.18)*

Over the mounds the variation in the vegetational cover was relatively restricted. On Mound 2 only small patches (less than 3.00m in diameter) of different vegetation could be distinguished against the background cover of Sheep's Fescue. Some of these patches, particularly on the west side were suspected as Second World War slit trenches by their size and regularity (F709, F710), surprisingly there was no evidence to indicate the line of Browns' 1938 trench. This situation contrasted to Mound 5 the patches were few but large, one of these patches clearly coincided with the series of trenches cut by Longworth and Kinnes (F254, F255). Beyond the northern perimeter of Mound 2 was the largest and most distinct variation (F143). This band of Broad Leaf grass (Yorkshire Fog and Spring Beauty) was particularly lush and vigorous and had been created by the farmer dumping manure against the base of the mound. An identical dump, surviving as a low heap, lies just beyond the eastern edge of the intervention (F117).

#### 3.1.4 *Metal-detection: (Int.27)*

The results of a metal-detector survey were complementary with the vegetational survey and illustrated the potential extent of the sub-turf disturbance. All the readings from the deep seeking and discriminating detector were surveyed and plotted. Although only odd scraps of metal were visible on the turf surface, the real extent is more dense. It should be noted that all the surveys under discussion were limited Zone A but the northern end of the intervention was cut through into Zone E. A fence divided these two zones. Inside the upstanding barbed-wire fence and against the perimeter of the mound were large concentrations of readings. These represent the extent of an earlier fence that had been rolled up and buried. The distribution of this debris continued beyond the sides of the intervention, following the line of the present fence. All the remaining readings were

individual targets. Only three concentrations were noted and these occurred on the western side of Mound 2. The concentration of non-ferrous readings suggested that they were the emplacements for slit trenches. No similar concentrations were recorded on Mound 5 or even between the two mounds. Few readings were noted along the line of a putative fence F1 to suggest it had been a wire fence.

### 3.1.5 *Geophysical: (Int. 28,29)*

Soil sounding radar was employed on a few north-south transects across the western side of Mound 2. The results were rather ambiguous (*Bulletin* No.4, 1986, Fig 17; see Vol 3), but suggested the presence of a ship trench, at least to the specialist. The magnetometer survey covered a slightly larger area down the west side of Mound 2 and 5, and continued out beyond the edge of the intervention. Again the printed results were rather unimpressive but they may improve with better presentation.

### 3.1.6 *Previous excavators*

Previous excavators had already cut substantial trenches through the body of both mounds. Part of Browns' main trench had been re-opened in 1984 (Int.26) to form an essential element in the evaluation survey. Since 1985, this trench had been rivetted and roofed over with wooden planks, sealed by polythene sheets and anchored with sandbags. At the extreme southeast corner the intervention also joined with the corner of Intervention 13, part of an extensive network of trenches laid out by Longworth and Kinnes between 1966-68 (Area B). The backfill of this trench was recorded on the relevant principal section drawing.

## 3.2 *Data Acquisition Strategy and Procedures*

### 3.2.1

The majority of our earlier excavations, between 1984-86, had concentrated on the periphery of Zone A (Int.20,21,22,32,38,39), or on the boundary of Top Hat Wood (Int.24.31). Only a single transect, Intervention 23, had been excavated in Zone A, and this was only along an anti-glider ditch. Intervention 26 was cut through the backfill of Browns' trench.

### 3.2.2

Int.41 therefore covered a new archaeological terrain but it was excavated by the members of the current project. Techniques and recording procedures were easily adapted from our earlier work. Indeed the earlier excavations had been used specifically as a testing ground to refine our methods in order to tackle the recording of large 3-D structures. To a large extent our recording forms - context, feature cards and our planning styles had already been standardised. Our major problem lay in establishing a satisfactory approach to achieving horizon visibility. It was during the first tentative few months that the problems of visibility and horizon depths were sorted out and until this was achieved our recording remained inconsistent. This is illustrated in the early revision of our horizon surfaces, in the excavation of the first features on Mound 2 and in the variety of methods employed to remove the mound make-up.

## 3.3 *Horizon Definition and Recording*

### 3.3.1 *Organisation*

Int.41 was divided into a series of quadrants of different sizes. Each quadrant was labelled with a letter. Quadrant sizes varied from the largest e.g. Q and S, which were 9 by 19m. to the smaller quadrants, e.g. M and GM, which were only 8 by 5m. The quadrants were divided into two groups, a leading and a trailing set. The work at each new horizon began in the set of leading quadrants. Along the quadrant edge, at the junction with the trailing quadrants were the lines of our principal sections. Usually it was convenient to lower each quadrant to the same horizon surface before drawing each section. Therefore, to maintain our section, a baulk, usually 1.00m wide, was left upstanding between the quadrants. It should be noted that all the contexts drawn on the sections



belong to the set of the *trailing* quadrants.

The quadrant system was designed to divide the area of the intervention into smaller units that could easily be controlled archaeologically. Our experience from Interventions 32,38 and 39 had clearly shown that greater control of the surfaces could be achieved by working in smaller units. With only a small full-time workforce it was essential not to overstretch our resources. It also provided a convenient method of excavating the intervention in plan. Thus once the sections had been drawn the baulks could be removed down onto the horizon surface.

### 3.3.2 *Definition*

A horizon can be described as a fresh surface which provided a clear and relatively unobstructed view of the archaeological strata. A maximum of seven different horizons was established in Intervention 41, but it is essential to remember that a horizon need not necessarily cover the whole of the intervention surface. Horizon 1 marked the level at which the latest features cut into or overlying the mounds could be seen; over Mound 2 this was the edges of Browns' trench and possible slit trenches, over Mound 5 it was the edges of Int. 12. Horizon 2 was the level by which all disturbed strata, including the debris thrown out by earlier excavators had been removed leaving a clear view of the make-up. Although now numbered as single horizons (1-7), the early horizons were originally subdivided as each spit within the horizon was exposed e.g. 1:10, 1:11, 1:12, etc. The labelling of these intermediate stages (that were not actually horizons) was confusing; the manner of recording each spit surface was time consuming and was creating a false impression of the surface. Until the turbulence beneath the turf had been removed we were really only dealing with very disturbed contexts. This system of sub-dividing horizons was abandoned before Horizon 2 was reached, instead the depth of spit removed was controlled by utilising a new context number for each new spit.

The horizon surface should not be read as a stratigraphic statement; many equivalences can be drawn between contexts from different horizons and some contexts may have been removed between horizons. Finally, the make-up of Mound 2 was particularly difficult to separate into convenient stratigraphic order, the make-up was a mass of inter-related contexts which generally defied clean stratigraphic ordering.

### 3.3.3 *Recording*

Each horizon was employed to record the geometry of the archaeology. It will be illustrated later that each horizon surface was not at all easy to define even between adjacent quadrants (see Horizon 1 notes). The geometry of each quadrant was recorded using two primary techniques;

- as written and drawn statements (plans, contexts, features)
- photographically (quadrant shots of prepared surfaces)

At each horizon a series of horizon plans was drawn-up (1:10). For this purpose each quadrant was subdivided into a set of smaller units or modules (see D12). At each horizon the size and shape of the module was identical, and so it is easy to retrieve plans of the same module at different horizons. Apart from Horizon 7, beneath Mound 2, all the module plans were drawn on A1 sheets of permatrace. Beneath Mound 2 the modular planning system was abandoned and instead context/feature edges were drawn on A4 permatrace and the drawing appended with the feature package. The decision to alter the system was based upon practical reasoning. Most of the features on this horizon surface were relatively small, they would conveniently fit onto one or two sheets of A4. Moreover, because the subsoil surface had been left as an isolated plateau (surrounded by an irregular quarry ditch) the modular set which had been designed to fit the quadrants were inappropriate, in some instances only one corner of a large module sheet would have been utilised.

New horizons were not always consistent across the whole intervention surface; thus the plans which belong to the modular sets do not always provide a comprehensive cover. If an horizon surface only covers a restricted area it was only planned in that area. It was only down through the successive excavation of Mound 2 that there was a consistent series of plans beginning at Horizon 1.

Occasionally, it was necessary just to copy the plans of an earlier horizon onto another set of plans for a later horizon (some features on Horizon 2 between the mounds had not changed shaped and so were copied onto the Horizon 7 plans). All the plans were constructed from tags set out around the edges of contexts. The position of each tag was surveyed using the Psion and a theodolite, plotted on permatrace and joined up on site as the appropriate shape. Indicated, but for only a selection of the points, were heights (AOD). These outline plans of contexts were supplemented by a photographic record.

### 3.3.4 *Method of Survey: Remote Plotting into the 'Planet' Software*

#### 3.3.4.1

No fixed grid was established over the surface of the intervention. Instead temporary grid stations were set up at a variety of convenient positions. All the surveying was conducted from these temporary stations using a Psion and theodolite and a thin wand or staff graded in millimetres. The cylindrical co-ordinates so captured were converted to cartesian coordinates by the site's own program. (Program: PLANET, written by M O H Carver 1986. See *Field Archaeologist* (1987), 102-103). If used carefully and conscientiously the Psion method provided a file of very accurate co-ordinates for these tags. Only during the excavation of the graves was the Psion method abandoned and a planning frame employed, but even then the position of the frame was anchored by Psion co-ordinates. A vast array of co-ordinates were recorded and these have been stored in ASCII files (341 files).

There were two major reasons for using the Psion. Our experience had shown that it was difficult to establish an accurate site grid during an excavation on the unstable sands of Sutton Hoo; and secondly it would have been very difficult to plan in 2-dimensions the surfaces of mounds which were essentially 3-dimensional in shape. We had also hoped to develop the planning routine into a remote/mechanical process using software to 'join-the-tags'. In order to establish appropriate intervals between each tag, we consulted Paul Reilly (22/1/87). Following discussions on site we decided to split the routine recording of context edges so that we distinguished between points, or readings taken around the periphery of the context from readings taken over the body of a context. This would separate points into two groups and it would be clear which points were to be joined up to draw the circumference of each context. This structure was entered into the Psion programme so each type of point could be distinguished. Incidentally, the structure of the Psion programme had also undergone various modifications during operation (becoming Planet 3 by 1991) but the basic separation of context readings was retained together with a feature option to record the co-ordinates of points from excavated features. The modifications were concerned primarily with improving the speed of operation on site and so various repeating option fields were set up. Although tags should ideally be set out with a few composing profiles, it was impossible to impose such a rigid system on excavated feature edges. Instead we settled for tags located randomly over the extent of a feature, but which would be distributed every 0.10-0.20m. Ultimately all the co-ordinates were plotted by hand, but one set of files were sent to P. Reilly for him to experiment with graphic enhancement to see whether it is possible for computers to draw accurate edges to the contexts. (No results received).

#### 3.3.5 *Photographic Recordings of Horizons*

For each horizon an oblique overhead shot of each quadrant was taken using a medium format camera - a Category 2 photograph (see Tables 3 and 4). The larger quadrants were subdivided into smaller convenient sizes in order to record the surface in the optimum detail. At different horizons the photographs may have been taken from different positions, covering a different sized area but these could not always conform to the modules laid out specifically for planning. The position of the tower when the photograph was taken and the size of the area photographed was noted at each horizon for each quadrant. The set of horizon photographs begins on the surface of Horizon 1. Originally the long quadrants, in this case Q, S and T were photographed as a single shot, but because of the length and lack of detail visible on the surface all the long quadrants were split into three segments, consequently quadrants Q, S and T were re-cleaned and re-photographed.

Once the photograph had been processed it was printed in colour on an A4 sheet. This photograph

was annotated by the supervisor and filed in a ring binder by horizon. The annotation, on a sheet of A4 permatrace, traced the defined edges of contexts and provided brief colour and texture descriptions. At Horizon 1 and 2 over Mound 2 context numbers were allocated specifically to surface stains from these A4 permatrace sketches. Subsequently, these contexts were *not* planned and so their edges were only sketched on the plans. A 1:100 sketch plan showing these contexts across the horizon surface was drawn up from the A4 sheets (Horizon 1, D157, Horizon 2, D230) and these are supplements to the formal plan of the appropriate horizon surface, D136 and D227 respectively. Context numbers had been identified retrospectively in this manner because it was difficult on the horizon surfaces to mark with tags the clear boundary between the contexts.

### 3.3.6 *Contexts*

The manner in which context numbers were allocated to the surface stains was refined at Horizon 2, even for those contexts seen only retrospectively from the quadrant photographs. At Horizon 1, the policy had been to allocate single context numbers to stains, and generally these context numbers described the full extent of the stain. This meant that if a stain crossed a quadrant boundary the same context number was retained. It was thought by the director and supervisor that this system was generating slightly spurious associations between the subtle variations in related stains especially since adjacent quadrants were separated physically at least by a metre-wide baulk. Therefore at Horizon 2 a refined system of context allocation was introduced. A new context number was allocated to every context in each quadrant irrespective of whether it crossed a quadrant boundary. This produced a set of equivalent contexts which could be matched once the baulk had been removed.

This system of allocating context numbers was primarily applied to the broad set of contexts belonging to mound make-up or buried soil complexes.

### 3.3.7 *Procedures*

The recognition of features and contexts was the sole responsibility of the appropriate supervisor, and so the visibility produced on the horizon surface was crucial. Once a horizon surface was cleaned and photographed, the supervisor sketched the position and labelled the contexts, and tags were then pinned along the perimeter of each context. Each context was recognised according to a set of criteria based upon a mixture of intuition and experience. The set of criteria for recognising contexts and features is discussed elsewhere (Int.32/39 Field Report 1987, Vol 8ii) but applies with equal force. The recognition and description of contexts and features provided a relatively high level of interpretation during on-site operations. Consequently it was quite often necessary to reappraise the descriptions of these data sets: where identification was secure, animal burrows were not planned or recorded as features. Generally most burrows were easily recognised by their loose fill and shape, to plan all the burrows would have taken weeks of extra work (see Horizon 7 A4 quadrant photographs beneath Mound 2).

### 3.3.8 *Excavation of Features*

The excavation procedure for removing features was established in a formal manner as we reached Horizon 2. Routine pre- and post-excavation planning of edges was to continue in pencil; only sections were to be coloured using a standard set of coloured pencils; each fill was to be sampled for pollen (30g) and if charred remains were present microscopically for flot (5 ltr. equivalent to one bucket load). All the fill was to be sieved for finds, and if the fill was extensive, a sample 1:9 bucket or barrow load was to be sieved. All the finds recovered from the sieving operations were only recorded to their context and not the metre square. This approach was adopted because on such a large site where there was no fixed grid it was not possible to accurately predict from which metre the sieving fill was removed. Indeed keeping the fill from only one metre square is extremely difficult if the feature fell across the junction of four squares. The removal of make-up from the mounds and the recovery of finds only by metre square was possible because a temporary grid had been *deliberately* laid out. The burials whether suspected cremations or inhumations were recorded in a slightly more detailed fashion (see relevant section for a detailed discussion).

### 3.3.9 Character and Quality of the Record

#### 3.3.9.1

Apart from our written and drawn records which survive as the Field Records, all the work on Int.41 was periodically recorded on film by the BBC. At one stage, the site team attempted to use a video camera to help record a visual image of the horizon surfaces. This experiment was unsuccessful, since the crucial colour variations of the ground surface could not be picked out to an acceptable standard.

#### 3.3.9.2

The written records comprise:-

- Site file containing drawing index; position of survey stations; excavation notes filed by horizon
- Site notebooks (X3), giving a daily diary of events
- Context and feature indices
- Context records
- Feature records
- Structure records
- Finds index
- Co-ordinates file

#### Drawn Records

- Plans A1, A4 (usually at 1:10)
- A4 colour print of horizon surfaces by quadrant
- Coloured sections along principal quadrant axes

#### Photographic Records

- A4 colour print of horizon surfaces
- feature 'portraits', colour print
- colour slides, providing a chronicle of methods and discoveries
- B/W large format for key shots for which publicity was anticipated

#### 3.3.9.3 Sections

The principal drawn sections lay along the quadrant intersects and were drawn using a colour coded style onto sheets of A1 permatrace. Three lengths of section have been duplicated Z-E (D 21077.5); R-S (D46/28); and W-R (D67/1093), but two short lengths remain incomplete HN-JO (caused by Int.26) and Q-L (D590). A single set of colour pencils were used to compose the drawings. The recorder (C.L. Royle) noted in the 'Recorders Notebook' the conventions and style appropriate to these sections. The sections describe the colours visible in the section from the surface of the turf down to the base of the subsoil (Horizon 2 or 7). Around the perimeter of the intervention it was usually only the profile of excavated features which were annotated onto the sections. The exceptions to this rule are the complete sections drawings of the Mound 2 quarry ditch system and internally the sections through B. Brown trench down into the deep burial chamber. These features were defined and excavated prior to Horizon 7. Initially detailed photographic coverage of the sections were demanded as a supplement to the drawings. Although attempted against the sections exposed beneath Horizon 1 (i.e. on Horizon 2 surface) the results were unsatisfactory. The lengths of photographed section were difficult to match with the drawings; they certainly did not provide comparable detail, indeed the face of the section had often been recleaned and even sprayed to recreate the drawn image. At Horizon 2 and at subsequent horizons when sections were drawn, a revised strategy was employed. Photographs were targeted to shorter lengths of section which contained crucial evidence e.g. cuts of features through mound make-up or constructional detail. Once the complete section was drawn, through all horizons, they were to be photographed to provide

a secure copy.

*Lost Context Cards:* The following list of Context Cards cannot be found. A great amount of effort was taken in searching through other files belonging to different interventions but the cards were not discovered. Therefore, I can only assume they were either lost during the course of the excavation or were never written out after being listed in the Index. In June 1989 AJC replaced all these lost records - 1133,1258,1310,1571,1469.

### 3.3.10 *Summary of Procedure for the definition of Horizons 0,1 and 2*

#### 3.3.10.1

Before the removal of any turf each quadrant was photographed by the site recorder. This surface was intensively contour-surveyed using the Psion and a millimetric staff. A short wooden extension, 0.05m long, was stuck to the base of the staff to raise it above the ragged turf.

#### 3.3.10.2

The turf was cut by spade and removed by metre square [N 132/16]. Each metre square was labelled and taken over to the spoil pound where it was carefully stacked in squares. The priority was to remove the turf from the leading quadrants. After the turf from the leading quadrants had been stripped we decided to sample the loose earth clinging to the root mantle (12/2/87). Over the trailing quadrants 1:9 metre squares were sieved. All the loose earth was shaken off each turf and then taken for sieving. Once the stones had been separated from the tilth they were emptied into a bucket and sorted to pick out the finds. For this operation only the supervisors searched for finds (AJC, CLR). Between the quadrants the baulks survived with their turf cover.

#### 3.3.10.3

At this stage the swirl of earth on the surface beneath the turf was photographed [N 127/23]. Since the leading quadrants were the first to be cleaned they had been photographed before a further change in the recording programme. Photography at this stage was abandoned for the set of trailing quadrants.

#### 3.3.10.4

From the leading quadrants the loose earth had been scraped off by shovel onto a loose surface following the contours of the ground. Context 1002 was allocated to this scraping operation. Scraping was limited to the leading quadrants (Q,FL,M,O and the east side of S). Work began in quadrant Q because this quadrant provided a key link between Mounds 2 and 5. Every metre square was sieved. The surface beneath 1002 was cleaned by trowel and photographed [N 162/33]. Work continued in quadrant Q where the second spit was removed. This spit was recorded as context 1006, again all the metre squares were sieved. A great amount of effort was invested in the sieving operation, where over 600 buckets of stones were sorted from Q alone. Our experience of sieving a whole quadrant was to have implications for the programme of work timetabled for the following spring and summer. The total sieving of the contexts above the horizon surface had proved extremely time consuming - the workforce were not being regular in attendance, the root debris was clogging the sieving machines, and the machines could only be operated by the strongest members of the workforce. From the combined experience of deturfing, shovelling and sieving it was estimated that the overall horizon surface would not be reached at the current rate until mid-November 1987, some 30 weeks behind the programmed schedule. The rewards of the sorting operation were very meagre, very few pieces of diagnostic pottery or flint were appearing. As a result a rationalised sampling strategy was introduced where only 1:9 metre squares would be sieved [N 184/3]. This pattern of squares were picked because they would provide a uniform cover over the whole of the intervention surface.

#### 3.3.10.5

The objectives of the sampling policy were:

- (a) pick out variations in the concentration/distribution of finds.

(b) use quadrant Q as a template to compare the general distribution pattern.

(c) establish a correlation between finds in the ploughsoil and subsoil features.

#### 3.3.10.6

A slightly complicated situation had now arisen. 1002 had already been sieved off some of the leading quadrants and the intermediate surface recorded by photography. Now we would shovel down directly onto the surface of Horizon 1 beneath, and so dispense with context 1002. The deeper single spit would be recorded as 1006, and every 1:9 metre squares sieved according to our array. In the leading quadrants where 1002 had been removed we imposed the new array for 1006. In the trailing quadrants an identical array of squares were sieved and all the finds recovered to 1006. No sieving was undertaken from squares which fell on the backfill of earlier excavation trenches (INT.12 and 26). It is clear from the position of the 1:9 sampling array that some of the metre squares coincided with the large robber trench (F142), and Browns' excavation (F4). These features were not seen until the Horizon 1 surface was exposed whereas Int. 12 and 26 could clearly be seen before this surface was reached.

#### 3.3.10.7

Once the turf had been removed a metal detector was employed to sweep across the intervention surface of 1002/1006. Again any finds we picked up were recorded by context to their metre square.

#### 3.3.10.8

An established procedure of excavation was gradually developed. For each quadrant: \_

1. Turf photographed.
2. Turf contour-surveyed.
3. Turf removed and stacked by metre square.
4. Surface metal-detected.
5. Sieving squares laid out, earth removed for sieving, stones sorted.
6. Scramble removed by shovel.
7. Horizon 1 surface trowelled.
8. Photographed
9. Context edges labelled and planned.
10. Leading sections drawn along baulks.
11. Baulks removed.

#### 3.3.10.9

On the Horizon 1 surface the overwhelming mass of turbulence had been removed and the ephemeral contexts of the mound and associated features could be seen. Only now could the edges of B.Brown's trench (F4) be picked out. The depth of earth removed from Intervention 41 varied; only 0.15m had been taken off Mound 5 and the adjacent area, but 0.30m was removed off Mound 2.

#### 3.3.10.10

At Horizon 1 a second detailed contour survey of the whole intervention was undertaken (1080). Following an on site discussion with MOHC we decided to attempt an overall horizon photograph (Category 1) of the intervention. Ideally a uniform finish was required on the surface, it was thought this could be achieved by a combination of brushing/spraying/trowelling. During a trial run on the 28/5/87 the conditions were adverse and it was clear we had little control over such a large area with only a small site team. The large scale photograph was abandoned until a later date when we hoped the mound make-up would also be more distinctive. Horizon 2 was chosen as the next surface on which to take a Category 1 photograph.

#### 3.3.10.11

At Horizon 1 the leading sections were drawn and this work continued virtually full-time until Horizon 7. Some minor amendments were introduced to the recording of the sections at this stage: detailed section photography was abandoned. Originally NMB had been asked to record the sections

photographically in enough detail to recreate the sections drawn by CLR [N 169/15]. This response was triggered by our fear of not having an objective record (similar to the quadrant shots of the horizons) or a second archive copy of an essential element of the mound structure.

The reasons for abandoning section photography can be summarised as follows:

(a) The time and expense of photographing the sections; the sections had to be divided up into lengths equivalent to those of the drawings (usually 8.00m). In contrast to the sections the photographs could not be composed as composite portraits.

(b) Variable lighting and local surface conditions provided inconsistent finishes on the face of the cleaned sections.

(c) The unstable nature of the sections combined with the urgent pace of the excavations left little time to check the photographs against the section, often the section had been removed before the photograph appeared!

The general nature of the section photographs were supplemented by more detailed photographs of particular targets. Detailed shots were taken of significant attributes, such as cuts of features, detail of mound make-up etc.

#### 3.3.10.12

The topography of Int.41 conveniently split the archaeology into three distinct zones - Mound 2, Mound 5 and Central Zone around and between the mounds. Coincidentally each of these zones was worked separately.

### 3.4 The Latest Events detected: contexts defined before Horizon 1

#### 3.4.1 *Spoil Heaps on Mound 2*

Just beneath the surface of the turf a series of low spoilheaps were discovered [N169/3]. These dumps were distinct as they were a lighter brown colour than the surrounding surface (1002/1006). Although of various sizes the dumps were basically shallow and very dry. The heaps are distributed in 4 areas on the shoulder of the mound. Eight of the dumps are down the north side adjacent to B.Brown's trench (F4 seen in plan at Horizon 1). A pair of heaps on the south-east corner possibly also belong to Brown. A single heap on the west side is directly adjacent to a slit trench seen at Horizon 1 (F52) and is probably the upcast from this trench rather than Brown's.

#### 3.4.2

F8 was the only negative cut recognised on this intermediate surface (not shown on plan). It was recognised as a darker brown rectangular stain with a firmer texture. Although excavation was attempted only 0.04m was removed before work was abandoned. In contrast the heaps are genuine and can be dated fairly confidently by association to the activities of Brown (1938), and the army (?1942).

#### 3.4.3

The disturbed nature of the sub-turf levels 1002/1006 is illustrated by the variety of metalwork picked off using the detector. A broad array of army debris was collected including shrapnel, bullets, mortar bombs, tunic buttons together with finds of Early Medieval date - a gilt bronze disc, Find 4534, and a scatter of ship rivets. The discovery of wire fragments within the heaps associated with Browns work does suggest there may have been a temporary fence around the excavations.

### 3.5 The Definition and Recording of Horizon 1

#### 3.5.1 *Mound 2 Zone*

### 3.5.1.1

At Horizon 1 Mound 2 was a large sub-circular mound 31.00m in diameter and was surrounded by an interrupted and irregular quarry ditch - F42, 4.50m wide. At this stage the ditch was only seen in the northeast and southeast corners of quadrants J and T respectively. The outer edge of Mound 2 was defined by the break in slope and was surveyed as 1026. Occasionally, the break in slope was beyond the inner edge of a presumed buried soil, also tentatively seen at this horizon. The surface of Mound 2, the geometry of the make-up, was recorded in two principal ways:

- planning of clear edges
- quadrant photographs of the horizon surface

Contexts were allocated directly to surface variation and retrospectively from the quadrant photographs.

The surface of the mound at Horizon 1 was described as F3. On the southwest corner of the mound, in quadrants Q and L, a series of small irregular sandy patches were recorded (1016). Originally interpreted as the sandy upcast from a ship trench, they were later identified as a band of animal disturbance concentrated along the junction of the mound with the quarry ditch (F42). On the western shoulder of the mound, in quadrant FL, a concentration of pebbles and sandy fill had also originally been interpreted as a cremation (F27 1049), a description which could not be sustained after excavation [N 202/1]. More successful interpretations were applied to a series of three subsquare/rectangular features again seen on the western slope of the mound. These three features, F28 1050, F29 1051, and F52 1081 were slit trenches. They ranged from 1.25 - 1.75m in length but were generally only 1.00m wide. Their depth can be estimated at between 0.30 - 0.40m. Inside their rough irregular edges, and on the surrounding surface a scatter of spent bullet cases were discovered. A low spoilheap (F48) belong to F52 had been discovered and excavated at an intermediate stage (pre-Horizon 1). None of the slit trenches were excavated, their fills were lowered with the mound make-up onto the next horizon surface.

On the north side of the mound in quadrants F, G and J, the edges of four context were planned, F51 1088, F30 1054, and 1064 and 1065 (F3). 1064 and 1065 were distinct but localised variations in the colour of the mound make-up. F30 was investigated as a possible pit or slit trench. However, as the surrounding edges were cleared and the darker 'relic' turf of the horizon surface was removed, the edges of the feature rapidly expanded. This feature was described as a non-feature and treated as a key-hole into the next horizon. F51 was also left until Horizon 2, but re-discovered after being planned.

### 3.5.1.2 Basil Brown's Trench

Once all the quadrants had been lowered and cleaned to Horizon 1 the cut of B. Brown's trench (F4 1028) was clear. Initially there was some confusion with locating Browns' trench. Quadrant O had been cleaned before JO, and in O the outline of an east-west trench had already been planned (F3 1097). This trench was approximately 3.00m wide and ran through quadrants O and N up to the summit of the mound where the edges were lost amongst the paraphernalia of Intervention 26. A concentration of rivets had been recovered over this fill as we reached the horizon surface. Although 1097 was removed as mound make-up, rivets continued to be recovered in this area right down onto the Horizon 7 surface (see F257 1625). The topographic evidence provided by the slope of the turf surface in quadrant O also suggested that a trench had been driven across the mound. During the excavation 1097 was removed as mound make-up and was matched in colour and texture with other 'humic' spreads (1098, 1101, 1106, 1109), seen as relic turf buried by the upcast of Browns' excavations. In retrospect, the evidence for a major east-west robber trench cutting across the full body of the mound is substantial. There are clear parallels from Mound 6, Int.44, for extensive robbing/excavation at Sutton Hoo.

The true course of Browns' trench F4 was revealed in quadrant JO [N 191/14] and contained a rather uniform red-brown fill against a darker horizon surface. The narrow entrance trench ran diagonally south-west across the mound and into the cut of Int.26. On the surface the trench was 2.00m wide



and 9.50m long. At the top of the mound the trench opened out into a larger subrectangular cut 5.50 by 10.00m. In quadrant HN the course of the trench was difficult to follow, it did not match the line of the trench exposed in Int.26. The fill of the trench in quadrant HN was recorded as 1052, the equivalent context for the remaining fill was 1028. In quadrant GM the edges of the trench were not seen although following the line of the trench it should have been visible in the southeast corner. In part the small size of the quadrant may account for the omission, unfortunately the metre wide baulk also fell across the corner. Further disturbance had been caused by the construction of shuttering for Int.26.

#### 3.5.1.3

Once all the visible edges had been planned, 1028/1052 was metal-detected and removed by a combination of shovel and trowel. As each fresh spit of the backfill was removed the detector was swept across the surface until the next horizon level was reached, a depth of 0.20 - 0.30m. Leading sections were cleaned and drawn if they crossed the backfill, any finds which were not delicate Early Medieval metalwork were located by context to their metre square; this included rivets. If the delicate EM metalwork was recovered 'in-situ' its position was surveyed to the nearest centimetre. A series of hachure plans were drawn-up to show the extent and shape of the excavated trench. Individual hachures were not drawn on these plans, just a line marking the top and bottom of the slope.

F4 List of hachure plans onto Horizon 2 surface.

Drawing Quadrant/Module

149	HN1
150	HN2
151	M1
152	M2
159	JO1
160	JO2
163	N1
164	N2

#### 3.5.1.4

A second smaller trench, F14 1024, cut by Brown into the south west corner of Mound 2 was discovered. Originally sited by Brown to confirm the existence of a quarry ditch it was exposed on this horizon surface, it contained a metal bucket which stuck-out through the fill. The feature was sub-oval in shape, just over 3.00m long and 2.00m wide. The fill was removed by shovel together with the mound make-up, it was only excavated at a later date on the Horizon 2 surface.

#### 3.5.1.5

An intermittent dark band was encountered at the base of the slope of the Mound in quadrants G (1066), H (1082), R (1089), S (1031) and T (1031) [N 194/6]. Initially interpreted as outcrops of buried soil they were not excavated/investigated at this horizon. Later excavation at Horizon 2 established that these contexts belonged to the quarry ditch, F42. This set of contexts remained intact from Horizon 1-2. Indeed at Horizon 2 the outline of the contexts were just copied over onto the new set of Horizon plans.

#### 3.5.1.6

In quadrant H three separate sandy orange patches were planned, 1083, 1084 and 1085. These were patches of subsoil which were exposed and later found to be adjacent to a quarry ditch causeway.

#### 3.5.1.7

Although not excavated until Horizon 2, the intermittent surrounding quarry ditch already exhibited a degree of superficial detail. In quadrant T a light red-brown fill predominated (1072) and was bounded on the outer edge by a ring of darker fill (1071). This fill appeared to run beneath 1072 and could be matched, in retrospect, with 1031 running along the inner edge against the mound.

#### 3.5.1.8

Other features were seen on the Horizon 1 surface but were only dug at Horizon 2 - F15 1025, F49 1086, F50 1087. Once the full extent of the quarry ditch was exposed (Horizon 2), it was clear these features cut the ditch. Finally F54 1096, an 'empty' grave, was excavated. On the trailing baulk the surface of the grave was still at Horizon 1 but inside quadrant R the surface was already at Horizon 2.

#### 3.5.1.9

Contexts were applied to the Horizon 1 surface after studying the quadrant photographs. Out on the site, context edges were too indistinct so tags could not be laid out. A sketched 1:100 plan was drawn-up (D157), to show the general position of each context. The edges of the contexts did not respect quadrant boundaries. Three major groupings of equivalent contexts were noted. On site only one example of each group was thoroughly recorded and sampled.

Group 1, Mound make-up described as 1938 'relic' turf - 1098, 1101, 1106, 1109. These contexts concentrated on the west and east side of Mound 2 within a visible dip in the mound surface. The dark brown firm nature of this group of contexts led the excavators to believe this was a buried surface, probably the 1938 surface of the mound prior to Browns' excavations. These contexts had clearly been subject to recent disturbance by the army, Brown and probably earlier robbers.

Group 2. Sandier mottled orange-brown spreads located along the north and south shoulders of the mound - 1099, 1100, 1102. Tentatively interpreted as belong to the deeper upcast from Browns' 1938 trench. These contained relatively little evidence of disturbance, a few rivets were recovered from this group. It is more likely that the shoulders of the mound have been subject to more than casual attention and they may have been deliberately truncated before the robbing episode. Thus these contexts exposed at this first horizon probably represent genuine mound structure, (an identical group of contexts were later recovered from Mound 6 and 7 to suggest the shoulders of these mounds may have been subject to similar processes).

Group 3. Looser spreads of soft siltsand mid brown in colour occurred down the lower slopes to the north and south sides of the mound - 1103, 1105, 1107, 1108, 1110, 1111, 1228. The loose nature of this material suggests recent and continual disturbance. It was suspected that a significant depth of ploughsoil had accumulated around the base of the mound as a result of recent ploughing. On the north side of the mound over 0.50m of this loose material was removed onto the Horizon 2 surface. In quadrant F the deposit was particularly thick and during excavation a next context - 1228 was allocated.

#### 3.5.1.10

The contexts representing the mound at Horizon 1 were removed by trowel rather than shovel. The intention was to recover enough finds from the make-up of the mound to compare with the assemblage off the adjacent areas. On the mound all the finds, apart from the delicate EM fragments were recorded to the nearest metre square. None of these contexts required sieving.

### 3.5.2 *Mound 5 Zone*

#### 3.5.2.1

Mound 5 at Horizon 1 was composed of a group of features and contexts. A degree of discontinuity between quadrants is illustrated by the interrupted and irregular line of these stains as planned. Three main factors account for this discontinuity:

- the method of excavation: each quadrant was cleaned in turn rather than together. Indeed the leading quadrants were often worked first leaving the trailing quadrants with a metre wide perimeter baulk which was removed only at the completion of the horizon.
- the presence of a metre wide baulk between quadrants provided logistical problems. Matching the exact depth of the horizon surface between the quadrants was difficult. On a steeply sloping mound any problems were exacerbated by the tilt and slope of the surface. It was not always necessary to reach the same depth in adjacent quadrants to achieve a satisfactory definition.

The Mound 5 complex at this horizon comprised an irregular band of various contexts around the perimeter and a single context over the flat summit. The southeast quarter of the mound had been dug out in a series of sub-rectangular trenches by Longworth and Kinnes Area C, 1970 (Int.12) [N 163/7].

### 3.5.2.2 *Defining the Mound*

#### 3.5.2.2.1

In quadrants Q, R, S, and V, where the trenches of Int. 12 were absent, the irregular edge of the mound was defined by a variety of contexts. These contexts were recognised as possible bands of buried soil - Q 1014, R 1090, S 1044, V 1059 and remnant mound make-up - Q1021, R 1094, 1095, S 1048, 1045, 1046, 1047, and V 1061. Apart from 1021 the contexts comprising the mound make-up were heterogeneous in colour. Their assignment as remnant mound make-up is very tentative. They could have resulted from recent disturbance such as burrowing or ploughing up to the perimeter of the mound, if not actually over the mound (no unequivocal evidence for ploughing over the mound). On the flat summit of the mound a consistent and easily recognisable context was recorded in each quadrant, even in the baulks between the backfilled trenches of Int.12. 1021 was a homogenous firm red brown layer. The contrast with Mound 2 at the equivalent horizon was striking. Only a thin spit of 0.15m separated the turf surface from Horizon 1 and since the mound is much shallower, the outer perimeter cannot be located purely by a break in slope. Very careful attention was applied in recognising the perimeter of the mound by the variation in colour and texture.

#### 3.5.2.2.2

Around the perimeter a series of tentative features was defined. In quadrant Q F17 1018, 1019 and continuing in R as F53 1092, 1093, a narrow arc of slightly discoloured sand was seen. This feature varied in width between 0.50 - 0.75m and survived to a length of just under 10m. At either end the feature gradually petered out and was not seen anywhere else around the perimeter of the mound. Our initial impression was that F17/53 was a trench for a fenceline of posts which would have been erected around the edge of the flat mound summit. Just outside the line of the arc was an oval stain F16. Although unconnected with the fence it was recognised as a posthole which contained a darker brown inner postpipe stain 1015, diameter 0.35m. surrounded by a sandier packing 1023, 0.70m in diameter. Another unconnected posthole F35 1060, was defined in the centre of quadrant V just outside a band of possible mound make-up. F35 was oval in shape with a diameter of 0.50m and contained a localised concentration of stones.

#### 3.5.2.2.3

An aerial photograph did reveal a circular discontinuity around the greater part of the mound area. This was never seen at ground level.

#### 3.5.2.3

None of the features seen cutting the mound surface at this horizon was excavated. The identification of these features must remain tentative. Once the initial horizon cleaning and planning was complete (August 1987), Mound 5 was left untouched for almost a year (July 1988). When we returned the mound surface was given a light clean. At this stage none of the planned features were

seen clearly enough to excavate/record and a decision was taken to continue to Horizon 2 before excavating any stains. 1022 had already been peeled off the perimeter of Mound 5. Over the mound 1021 was taken down by trowel in a series of very thin spits, each no more than 0.05m thick, onto the Horizon 2 surface. There was no sieving and all the finds were recorded by context to their metre square. Although only thin spits were removed off the surface the spit depth gradually increased as we moved down the slight slope around the perimeter of the mound. Horizon 2 was reached when we had removed the soft heterogeneous contexts onto a firmer and darker red-brown surface.

#### 3.5.2.4 Longworth and Kinnes excavations, Area C (Int. 12)

##### 3.5.2.4.1

At Horizon 1 all the backfill from Int.12 was removed. The six trenches were given a set of feature and context numbers, and the fill was shovelled out (Level B).

Int.41	Int.12
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F11 1010	5/1
F10 1009	5/3 5/5
F9 1008	5/7
F12 1011	5/2
F13 1012	5/4 5/6
F41 1070	5/9

##### 3.5.2.4.1

Some of the trenches had been lined by thick polythene sheets. These held a reservoir of water which made the backfill very unstable. Although acting as a skin on which roots accumulated, the thicker and more vigorous bracken roots had grown through the polythene. The sheeting had only been laid inside F10 and F11, the other trenches had been directly backfilled without protection. Sheeting had been put in those trenches where excavation had exposed fragile feature surfaces. With two notable exceptions, no finds were recorded from the backfill of the trenches. One exception was a piece of bone, probably human, which was discovered against the eastern edge of F9. If it is human the most likely source would be the graves excavated in 1969, (note the body from Grave 3 (F154) recovered from trench F9, was intact (apart from a sample removed from just below the knee) and had been protected by a painted wooden box) [N 164/30]. [The other is find no. 116 from F10/1009, fragments of a silver collar. MOHC] [N171/36].

In order to protect the trailing baulk along the north side of quadrant X, a width of backfill from F12 and F41 had been left. Only a very narrow berm of intact deposits lay between our section line and the trench edges.

Once the section had been drawn (Horizon 7) the remaining backfill was removed to expose the original shape of the trenches. The line of the trenches was only planned once on the Horizon 1 surface so the outlines of the trenches on our plans were copies of this horizon.

#### 3.5.3 *Horizon 1 between the Mounds*

##### 3.5.3.1.

The problem of achieving an identical horizon surface within different and even adjacent quadrants is illustrated on the relatively flat surface around the mounds; for example, both F60 and F61 ran up to the edge but not across into quadrant R from S and T. This zone covers all the area beyond the boundary of each mound. Apart from a small cluster of features in the SW corner of quadrant V, the main cluster of features and contexts occurs in S and T. There were no features north of the Mound 2 complex.

At this horizon the surface was predominantly above the level of the subsoil. A general and uniform spread of light-orange brown earth lay across the zone - 1022. The overburden 1001, 1002 and 1006 had been removed by shovel and the finds retrieval was enhanced by the implementation of a variety of sieving routines. There were two patches of subsoil visible, both on the eastern side, in quadrants S and T. In T, just outside the course of the quarry ditch, a very smooth sandy yellow subsoil was exposed - 1073. In S a similar but subcircular patch - 1034, and approximately 3.50m in diameter was cut by a number of distinct plough marks.

#### 3.5.3.2

A set of *plough marks* F37 1035, ran roughly parallel to each other in an east-west direction. These stains were not excavated and they gradually disappeared as trowelling lines swept over the area. In plan the stains varied between 0.80m - 2.30m in length but they were consistently 0.12m wide. There is no doubt that these marks belong to a single and probably final episode of ploughing across this zone. Although no other plough marks were planned at this horizon a more complete set of faint marks were seen and photographed on the horizon shot in quadrant Y. Not only did these ploughmarks run east-west but they overran all subsequent archaeology in this quadrant. The marks are clearly visible on the horizon shot N174/18. Given the visibility of these marks it is surprising that no other marks were visible in any other quadrants of the intervention. Certainly it is worth emphasising that *no* plough marks were seen across the prominent buried soil platform of Mound 5.

#### 3.5.3.3

F1/1013 was another feature which was not excavated and is the only feature to cut across more than one topographical zone at this horizon. On the turf surface the feature was an inconspicuous ditch and bank and it survived as a surface stain onto Horizon 2. No structural details were recovered but the ditch must have been the bedding trench for a temporary fence which stretched from the northeast corner of the site across to Mound 1. Our only record of the depth and shape of the feature will be captured on the leading section lines (quadrants V, R and T).

#### 3.5.3.4

Respecting the outer edge of the Mound 5 buried soil plateau and the quarry ditch of Mound 2 is a set of *two parallel ditches* - F60 1032 and F61 1033. At present the only criteria for association is provided by their shape and position. The eastern end of both features butt end opposite each other but the western end terminated rather unsatisfactorily against the side of the trailing quadrant. Only on the subsoil surface (Horizon 2/7) was the full length of these ditches exposed.

#### 3.5.3.5

The only other set of features associated with each other are a group of *four circular posthole stains* - F22/1040, F23/1041, F24/1042 and F25/1043. These poststains are spaced between 0.35 - 0.45m apart, they run in a general north-south line. The features range from 0.20m in diameter (F25), to 0.25m (F22). Unfortunately, none of the features were excavated or survived at a lower definition. At Horizon 2, F25 coincided with F83 1167 and F22 with F394 1176. A direct correlation between F25 and F83 is likely but rather implausible between F22 and F394 where the difference in size and shape is substantial. Both the size of the postholes as defined on the Horizon 1 surface and their projected depth suggest strong associations with the posts belonging to the major fenceline (S7), seen at different horizons beneath the buried soil of Mound 2 and beneath 1022 in quadrant Y. Further weight is added to the argument because the excavated structure was certainly not aligned in a straight line.

#### 3.5.3.6

The remainder of the features in this zone planned on the Horizon 1 surface has no clear associations. Apart from quadrant V none of this group were excavated, and almost all had disappeared from the lower horizon surface - 1038, 1036, F21/1037, F26/1039, F43/1074, F45/ 1076,

F47/1078, F44/1075 and F46/1077 can be equated with F63/1135 and F66/1138 respectively, at Horizon 2. In quadrant V only F33/1062, 1063 were excavated. This small subcircular concentration of pebbles, 0.90m in diameter and 0.20m deep, was particularly striking against the sandy and relatively stone free background of the Horizon surface. Exceptionally the concentration of stones were planned. This heap is puzzling but were probably deposited relatively recently, possibly by Longworth and Kinnes (Int.12 1970). Part of F33 overlies a narrow ditch, F122, seen at Horizon 2 but this relationship is purely fortuitous. A closer equivalence can be drawn between F36/1057 and F125/1244. Although only at Horizon 2 was the full extent of F125 revealed the first contact with the fill was noticed at Horizon 1.

### 3.5.3.7

Once the set of features and contexts at Horizon 1 had been planned and investigated, we removed the uniform context on which they lay or cut. This context, 1022, was a light orange-brown deposit, surprisingly uniform over such a wide area around Mound 5 and 2. The context was trowelled away to expose Horizon 2 and none of the deposit was sieved. 1022 was removed in a series of spits, between 0.05 - 0.10m thick, any finds were recorded to the metre square. The careful removal of 1022 ensured a soft landing onto the next horizon. Over most of the zone a variable subsoil was exposed. At the junction of the two contexts 1022 became particularly stony. This would suggest it is the base of a soil, perhaps even a ploughsoil. Since 1022 seals a great range of features and is relatively rich in finds we could argue that the soil is relatively ancient (i.e. Early Medieval), but it is more likely that 1022 is the base of a more recent ploughsoil with stains of the final ploughing episode frozen at the base of the profile. 1022 certainly over-ran the fill of the quarry ditch F42. Around the perimeter of Mound 5 the deposit was removed with great care. 1022 was worked off the surface of the buried soil that defined the mound itself. A slight but distinct colour contrast differentiated the two contexts and left Mound 5 as an island of buried soil.

## 3.6 The Definition and Recording of Horizon 2

### 3.6.1 Procedure

#### 3.6.1.1

A greater number and variety of features were exposed on the surface of Horizon 2 in all 3 zones. On Mound 2 a suspected robber trench was tentatively picked out on the western sides of the summit (F135); the first set of rectangular and subrectangular grave outlines were defined against both Mound complex's (F127, F154 Mound 2), (F123, F124, F81, F85/6 Mound 5); and furthermore the type of burials exhibited at Sutton Hoo expanded with the discovery of the first ring ditch (F113, F114). The discovery of the ring ditch and a set of small subcircular postholes cutting the fill of a large E-W ditch system (F117) illustrated the potential stratigraphic relationships that could be revealed with careful excavation and the value of rigorously investigating each horizon surface, especially under differing environmental conditions.

#### 3.6.1.2

The Category 1 horizon photograph had been abandoned at Horizon 1 in favour of a more suitable definition surface at Horizon 2. However, even at this horizon a combination of bad luck with the weather (grounding the balloon) and the urgent pace of the excavation meant the photograph was only taken when the quarry ditch of Mound 2 (F42) had been removed (14/8/87). Another delay in the excavation were caused by the visit of the Duke of Edinburgh (7/7/87) when some energy and time had to be devoted to cleaning the site and presenting the work of various collaborators on the project. Later in July (20/7/87) the project team expanded following the appointment of a specialist finds supervisor/environmentalist.

#### 3.6.1.3

Before the Horizon photographs of each quadrant were begun, the string marking the boundary

between the quadrants was once more laid-out. The quadrant intersects had survived and were brought down from Horizon 1 and accurately located. Along the edges of the leading quadrants, tags were laid out at metre intervals.

#### 3.6.1.4

On Mound 2, the line of context-edges were only sketched off the A4 quadrant photographs; elsewhere across the intervention the edges of contexts and features were surveyed. Only feature edges were planned on Mound 2. New numbers were allocated to the new set of context and features that were exposed at this horizon, but a few identical contexts/features had survived from Horizon 1 and so their numbers were retained on the new surface (e.g. edge of Mound 2 1026, burrow upcast 1016 B.Brown's trench F4).

#### 3.6.1.5

The make-up of Mound 2 was removed in a slightly more dramatic fashion - generally by shovel but this reflected our satisfaction with the horizon surface on which we believed we had picked out all intrusions. Moreover, the make-up had not provided specific structural details which warranted closer attention.

#### 3.6.1.6

At Horizon 2, the topographic shape and character of Mound 5 became clearer. At this stage the Mound was devoid of any putative make-up and all that survived was a relatively thick band of buried soil. On the surface of Horizon 2, a limited contour survey (1276) was conducted to record the topographic shape of the plateau and to record the contours of the Mound into which a set of graves had been cut (see Horizon 4). Except over the SE corner, the edge of the plateau was relatively easily to recognise, since there was a marked difference in colour and texture between the buried soil and the gravelly subsoil. Only on the SE corner of the plateau did the edge become difficult to locate and this is where the trenches of Int.12 cut across the perimeter of the buried soil (quadrant X). In the north-east corner the edge was discernible against a variety of tightly packed features and contexts some of which apparently cut across the buried soil perimeter (quadrant S). The edge of the buried soil in the remaining quadrants was clear and uncluttered. In each quadrant, the buried soil was allocated a context number and the edges of all features and contexts were surveyed and planned.

This horizon on Mound 5, being the surface of the extant buried soil, is directly equivalent to Horizon 4 beneath Mound 2. Therefore it will be more appropriate to discuss this surface (often called Horizon 2/4) at Horizon 4. The A4 Horizon photographs of each quadrant were taken at Horizon 2/4 and are filed at Horizon 2.

#### 3.6.1.7

This horizon also witnessed the removal of the roof covering Int. 26 on Mound 12. The perimeter revetting and the essential supporting across were left in place to support the backfill of Brown's trench. These were gradually removed and cut off flush with the current surface as work progressed. A set of surveying butterflies had been left on the north and south slopes of the mound make-up within Int.26 and were included in the photogrammetric shots of Int 26 in 1984. The positions of the butterflies were located (see site file) and then removed.

#### 3.6.1.8

The subsequent horizon, described as Horizon 3 was defined only across the Mound 2 complex. It was located at an average depth of 0.40m beneath Horizon 2 and is associated with the discovery of F142 and the extended cut of the robber trench, together with a clear, although not uniform variation in the make-up of the Mound. Coincidentally our standing baulks were at their maximum safe height.

### 3.6.2 *Horizon 2 Mound 2 Zone*

#### 3.6.2.1

At Horizon 2 the Mound and its associated quarry ditch were clear [N218/05]. The Mound was subcircular in shape with a maximum diameter of 29.00m. The horizon surface was described as F137 and the variations in the colour and to a lesser extent the texture, exhibited on this surface, were allocated a new set of context numbers. We were satisfied that Horizon 2 was a significant definition surface because of the clarity in the character of the make-up and the presence of a fresh set of features. In a similar fashion to Horizon 1, the *edges* of the contexts on the Mound surface were traced retrospectively from the Horizon photographs.

#### 3.6.2.2

The *make-up of the Mound* was removed in two 0.20m spits down onto the next horizon surface. A fresh set of contexts were allocated in each quadrant to the second spit but again the edges of each context were not planned. In fact the extent of this second set was not even sketched or photographed, since they were assumed, quite correctly, to fall within the perimeter of the first set seen on the horizon surface. In quadrants F, T, O, JO and M the full 0.40m depth was not removed because most of these quadrants lie either at the corners of the Mound or down the east side where the slope of the Mound was relatively shallow.

The general character and pattern of the contexts continued at Horizon 2 [N236/8]. Only on the east side of the Mound in quadrants JO and O where there had been substantial disturbance by Brown and perhaps earlier robbers had this distinction been lost. The sandier and orange-yellow brown colour of the make-up dominated along the shoulders of the Mound - contexts 1302, 1303, 1304, 1301, 1290, 1291, 1300, 1285, 1286, 1287, 1296, 1297, 1298 and 1299. This make-up had been cut by Brown and less clearly by earlier robbers. Apart from the colour, other attributes such as the texture of these contexts were similar to contexts on the lower slopes. All the contexts exhibited evidence of disturbance by bracken, turf roots and particularly animal burrows. My impression was that the north side of the Mound, particularly on the lower slopes, where a relatively uniform dark brown band ran around the Mound, had been severely disturbed by burrowing. Recent animal nests were uncovered as 1293 was removed.

The make-up across the summit was particularly sandy and clean, consequently it was a brighter orange-yellow and any darker brown deposits clearly stood out. Indeed, the presence of clean sand in 1323 and the discovery of bedded subsoil concretions in 1313 on the south side of the Mound suggested rather strongly that the central core was composed of make-up derived directly from quarrying operations. However, the recording of darker brown deposits within this core implies the make-up was not derived exclusively from quarrying.

The uniform brown make-up of the lower slopes 1292, 1293, 1294, 1295, 1288, 1284, 1280, 1281, 1282 and 1283 presumably derived from a different source, probably turf stripping, but this had also suffered from the aggregate effect of gravity and erosion. Erosion (caused by ? ploughing) down the sides of this prominent Mound may have been relatively severe, particularly immediately after the Mound was built. Further scrambling of the make-up would have been caused by the trenching operations of earlier operators, who presumably used the sides of the mound as a convenient tip. On the horizon surface decayed turf deposits were noted. In quadrant J a distinct dark brown/grey deposit was particularly compact (1309) [N233/15]. This context was the focus of a relatively detailed investigation. The subrectangular turf spread was allocated its own feature - F138 and excavated. Although only 0.10m thick a great deal of sampling was undertaken to recover environmental data including pollen samples (30g x 3), micromorphology sample (Kubiena box) and flot samples (plant macro). Together with another spread of dark brown make-up, 1295, we originally interpreted the distinct character of this material as decayed turf stacks. Structural detail was particularly difficult to isolate against the general make-up of the Mound and the thorough disturbance evidence during excavation.

#### 3.6.2.3 *Sampling and Finds recovery*



With a few exceptions, the Mound make-up at Horizon 2 was removed by shovel. This slight modification in the way the make-up was removed correspondingly altered the sieving routine. A sample of 1:3 of the metre squares were chosen for thorough sieving across the complete network of baulks on Mound 2. The distribution of quare chosen for sieving appears, at first, rather irrational, but the choice reflected the irregular nature of the mound - for example in quadrant F only a narrow corner of the Mound was available to sample - and the presence of later features. If possible we avoided selecting the backfill of any later feature with the exception of the major robber trench.

Before each quadrant was shovelled a metal detector swept over the surface of the make-up, any targets were recovered. Shovelling began over the set of leading quadrants. In a few quadrants, the contexts were trowelled off L - 1300 1338, 1284 1339, FL - 1301, 1336, 1288, 1337, and N 1286, 1335. The spits removed by trowel were only 0.05m thick and were also very carefully metal-detected. Quadrants L and FL were removed before N. The distribution of rivets confirmed the presence of a ransacked ship burial. It was likely that the ship lay along the E-W axis of the Mound, since a parallel distribution of rivets had already been discovered along this line. At this stage it was possible that rivets could be recovered in-situ and therefore as each metal target was exposed with the metal detector very careful attention was devoted to securing the context of the find. A *robber trench* had already been discovered on the western summit of the Mound, F135, and although its full extent remained undefined at this horizon there was a strong suspicion that it was more extensive and continued further down the slope. The evidence for a robber trench across quadrant N was circumstantial; we were following a projected line of F135 across Brown's trench F4. We had no reason to suppose that the robber trench lay within the area of Brown's later cut. Quadrant F was also removed by trowel, but in this case the reasons were purely practical because the make-up was too shallow to be removed accurately with a shovel.

#### 3.6.2.4

The edges of *Brown's 1938 trench* were generally clear against the mixed turbulence of Mound make-up. Only on the north side, at the summit of the Mound was there any doubt about the true line of the trench. The cut retained the same feature and context number F4, 1028 was a light red-brown colour but 1277 was a darker brown and relatively more gravelly. The trench was excavated ahead of the Mound make-up and again the backfill from the leading sections was removed as priority. It was essential that work was organised on a strict framework that did not cause large backlogs of recording, so the leading sections were drawn and then the baulks removed across the feature.

The amount of fill removed varied according to the shape and slope of the Mound. Within the main body of the Mound up to 0.40m was removed whereas down the shallow eastern slope only 0.10 - 0.20 was removed. All the fill was metal-detected and once the targets were retrieved the backfill was shovelled out (no sieving). Trowels were used to locate accurately the edges of the trench and shape of the cut. A narrow rectangular finger of backfill in quadrant M slightly extended the length of the trench. This was cut in the SW corner of the Mound summit, and was 1.50 x 0.80m. It was consistent with the shape of a set of steps cut by Brown to get access down into the western side of his trench. Once all the fill had been lowered to the depth of the next horizon, a *new* set of hachure plans were drawn to show the shape of the cut.

#### Quad Drawing

JO291/291  
N288/289  
HN287/290  
M285/286  
GM294

The pace of the excavation did not slow during the completion of these hachure plans. The pace of the work at this point is reflected in the lack of hachures on the plans for quadrant N (part), M and GM.

### 3.6.2.5

#### 3.6.2.5.1

The second major feature to be excavated was the *robber trench*, F135. Again the backfill was removed in advance of the Mound make-up. Therefore we were able to record the shape and fill of the trench but unfortunately the situation was not straight-forward. The shape of the feature that we had planned on the horizon surface was certainly not complete or consistent with the true line of the trench which was exposed later, on the following horizon surface.

#### 3.6.2.5.2

On the Horizon 2 surface the robber trench (F135) was relatively clear as an arc of darker brown fill surrounding the north eastern ends of Brown's trench. Two contexts were recognised on the surface 1278 and 1307. The edge of 1307 was only sketched. The very dark brown/black colour of this fill did suggest, at least on the horizon surface, that it could be from another tree pit and similar in colour and texture to another possible tree-pit fill on the opposite side of the summit F139 1306/1308. Our excavation of the robber trench illustrated that 1307 was more regular in shape and is probably redeposited turf debris that decayed after being thrown back into the trench.

#### 3.6.2.5.3

The fill of F135 was metal-detected and then removed by trowel, all the fill being carefully sieved. EM finds were in a fragmentary condition. During excavation in quadrant GM, the western butt-end of F135 had disappeared but a satisfactory north edge running E-W was defined. This edge was slightly overcut by enthusiastic excavators mid-way down the face of the slope. Also before the trailing baulks were removed a false edge was followed from the surface creating the unusual norther extension on the hachure plan. In quadrant M a similarly indistinct edge which formed the butt-end to F135 was planned. This edge was unsatisfactory and it did not fit with the shape of the trench exposed in quadrant GM. The darker fill-1307, had really confused our interpretation of the extent of the robber trench. After further careful investigation, a continuous southern edge running between the western quadrant edge and Brown's trench was uncovered but not planned (see A4 quadrant photograph N194/14-15). A new feature and context number described the shape and fill of this edge, F142/1330. When excavated this edge was planned rather unsatisfactorily with hachures (D282). These plans do not indicate very clearly the vertical shape of the cut, nor do they continue up to Brown's trench F4.

#### 3.6.2.5.4

The robber trench could not be distinguished at Horizon 2 in quadrant L and FL, and it was possible that the butt-end lay beneath the baulks of quadrant L and GM. Although finds of an Early Medieval date *were* recovered from the Mound 'make-up' in L and FL, we could not define the line of the robber trench until Horizon 3. Part of the reason was the generally turbulent character of the 'make-up' that had been severely affected by burrowing animals and it was clear the trench had been backfilled down this length with material basically identical to the genuine make-up. On the Horizon 2 surface the pattern of contexts (sandy yellow/orange shoulder, darker brown lower slopes) was virtually complete around the northern, western and southern circumference of the Mound. In quadrants FL the baulks stood from Horizon 2 to the surface of Horizon 3 and we were able in retrospect, once we knew the true line of the robber trench, to allocate context numbers to the trench fill within the baulks - 1395. It is absolutely essential to realise that the EM finds retrieved from the Mound 'make-up' in L and FL belong in retrospect to the backfill of this robber trench.

#### 3.6.2.5.5

The search for the line of the robber trench east of Int.26 and beyond the edges of F4 was intense but rather unsuccessful. At Horizon 2 in quadrant H the northern edge of F4 had been difficult to define and was marked by a gradual colour change from the darker brown of 1277 on to the sandier but patchy make-up of the Mound (1290, 1365) (see photograph N194/12-13). Careful investigation

of the quadrant and an inspection of the horizon photograph suggested the presence of a second edge just north of F4. This deposit was allocated a separate context number 1329 and the edge was sketched. A cautious attempt at excavating this fill created a rather unsatisfactory edge (see D293). The line of the robber trench coincides with the position of the cut seen in section (D165) and the edge excavated independently and earlier in quadrant GM. GM and HN are separated by Int.26 and it is probably no coincidence that the inner line of hachures conforms closely to the projected line of the robber trench F135.

#### 3.6.2.5.6

In quadrant N no line of the robber trench was planned or sketched at Horizon 2, indeed the sandy, yellow brown colour of the make-up confirmed the apparently undisturbed nature of the make-up. Nevertheless, both 1286 and 1335 were removed by trowel again in 0.05m spits. To the south, in quadrant S as more make-up was removed by shovel (1313), the excavators noted that a brown coloured deposit could mark the line of the robber trench.

#### 3.6.2.5.7

On the eastern side of Mound 2, and along the northern edge of quadrant O a band of rather exceptional make-up was excavated - 1263. At this stage it was assumed to be Mound make-up but the unusual crusty texture of the brown deposit clearly requires explanation. All the make-up that had been excavated onto the surface of Horizon 3 was soft and loose. Does 1263 belong to the robber trench? As a single context 1263 is a rather localised narrow deposit, but at Horizon 3 a very similar deposit was recognised in quadrant N (1419) and O (1425) and this certainly did belong in the robber trench. A crusty texture had been noted elsewhere along the length of the robber trench particularly on the floor of the trench west of F4. (Note: the outflow pipe from Int.26 roof lay down the line of 1263).

#### 3.6.2.6

A variety of rather ephemeral features were recorded on the remainder of the Mound surface and it should be noted that these were investigated before the make-up was removed. A few small specialist excavation teams were created and allocated one of these features. F29, F52 and F14 were survivors from the earlier horizon surface but of these only F14 was excavated. The fill of the slit trenches was removed with the make-up.

#### 3.6.2.7 Basil Brown's second trench (see 3.5.1.4)

On the surface F14 was an indistinct darker brown stain but an iron bucket still protruded through the fill. Only the western half of the feature was excavated but the shape was consistent with a small excavation trench. There was no doubt that F14 was Brown's trench. On the horizon surface it was subrectangular in shape (3.00 x 2.60m).

#### 3.6.2.8

Two subrectangular features tentatively identified as graves were investigated on opposite sides of the Mound. The excavation of these features F127 on the west side and F140 on the east are discussed in the graves report for Int.41. F140 was empty and excavation was abandoned at quite an early stage. It can be securely described as part of the Mound make-up at this horizon which had been thoroughly disturbed once again by animal burrows. A similar identification can be applied to F136 1279 quadrant H on the north side of the Mound. This subrectangular feature 2.00 x 1.20 contained a concentration of small rounded pebbles. Excavation was abandoned after only 0.04 - 0.10m of 'fill' had been removed.

#### 3.6.2.9

On the eastern side of the Mound F139 was another dark brown surface stain but this varied from the firm texture of 1309 (F138) and regular shape of 1307 (F135). F139 spread across the boundary

of two quadrants N - (1306) and O (1308). Only in O was the outline of the context sketched. The feature appears to be a shallow tree hollow but was rather incompletely recorded; only part of 1308 was removed. The remaining fill was shovelled off with the Mound make-up. There are no hachure plans or sketches to show the shape of the partially excavated hollow.

#### 3.6.2.10 *The Quarry Ditch Area*

##### 3.6.2.10.1

The perimeter of the Mound was defined by a break in slope, recorded as 1026, and by bands of buried soil in quadrants S (1301), T (1031), G (1066) and subsoil H (1083), in similar fashion to the earlier Horizon situation. The identification of the buried soil bands even at this stage were very tentative and in retrospect were unquestionably erroneous, but it is significant that we were able to define a genuine ditch edge around the Mound. Since our identifications of these contexts has altered it has been necessary to change their feature associations, so 1031 and 1066 now belong to the fill of the quarry ditch F42 rather than the Mound.

##### 3.6.2.10.2

Three features were identified cutting the surface of the quarry ditch. Only F54 was comprehensively excavated and recorded (see Int.41 Grave report for details). (Both F15 and F49 were recognised at Horizon 1). F15 (0.80 x 0.30m) was excavated but only rather promptly at Level C - there is no section or hachure plan for this feature apart from sketches on the back of the record card. This relatively shallow feature (0.15m deep) was a hearth, it contained large clean fragments of charcoal and was bounded by a collar of reddened sand.

##### 3.6.2.10.3

F49 (quadrant F) was a small subcircular posthole 0.80m in diameter. This post probably belongs to the line of posts which were part of the modern fence line (Int.18 S30) pulled down during the excavation of Int.41. Only the northern side of F49 was excavated, the hasty removal of the ditch fill had destroyed all of the southern side.

##### 3.6.2.10.4

The presence of a quarry ditch around Mound 2 had been suspected from the topography of the turf surface and had been reported by Brown. It was at Horizon 2 that the extent of this ditch became clear. The northern, western and eastern line of the ditch was partially or almost totally buried beneath the turf beyond the boundary of Int.41. The ditch varied in width between 1.00m (section line S-N) to 7.00m (Q), but this variation reflected the broader character of the ditch at the four corners of the Mound. Apart from quadrant S all the edges were planned but here the outer edge was only sketched once the relationship with F60 was established.

##### 3.6.2.10.5

The character of the ditch fill in each quadrant was broadly equivalent. A silty and relatively stone free fill predominated, it was also described as a 'pinkish' red brown colour - 1144(F), 1141(G), 1151(H), 1129(J), 1257(FL), 1259(JO), 1260(L), 1250(O), 1115(Q), 1185(R), 1126(S), 1072(T). In quadrant T the pinky fill was bounded by two bands of darker fill 1031 and 1071 and in G and S by only a single inner band 1066 and 1031 respectively. These discolourations seen irregularly at the base of the Mound together with the break in slope locate the inner edge of the ditch at this horizon, the outer edge was cut against the variable sands and gravel subsoil.

##### 3.6.2.10.6

Work began on removing the ditch fill in mid July 1987 and was complete within a month. Excavation began in quadrant J along section line J-D where a 1.00m wide pilot trench was laid-out across the ditch. The object of this exercise was to evaluate the character of the ditch, so a full

programme of work could be drawn up for the summer season.

#### 3.6.2.10.7

Before the fill was removed all the contexts were metal-detected and all the targets were recovered. The majority of the fill was shovelled out directly into wheel barrows. If the context was deep, a series of spits was removed and each spit was allocated a new context number; e.g. in quadrant Q 1115 first spit 1150 and second spit; in F1144/1221 first spit, 1221 second spit. However, the ditch fill was not uniform and so a number of distinct contexts were recognised. Generally, the deeper the ditch fill the more contexts were recognised but context recognition was also a function of the total area of the ditch we could investigate. Thus in quadrants FL, JO, L and O only one context was allocated to the fill but in F four separate contexts were defined.

#### 3.6.2.10.8

The 'pinkish' brown fill on the surface of the horizon was the most extensive of all the ditch fills. All the other contexts were localised and certainly not as thick, but in each case the shape of each context was surveyed and planned before removal. Feature definition within the ditch and against the fill was particularly difficult to achieve. To some extent this was a function of the way in which the context was removed - it was not easy to keep a clean surface during shovelling operations but other reasons such as uniformity of backfill and the irregular nature of the ditch floor all combined to make definition difficult. Only one feature was seen cutting the fill of F42 - F116. In quadrants F (1237) and H (1231) the fill of F116 was recognised relatively high in the ditch backfill but all traces in G had been removed by aggressive shovelling. This feature appeared to be the cut of a smaller ditch or pit which had been dug into the partially silted backfill of F42, (see D221, 241, 242, 143, 145, 146). Beneath the 'pinkish' brown fills of the ditch a series of primary contexts can be recognised. They have been recognised as primary because of their distinctive colour and texture and their position at the base of the ditch - F (1226), (1275), G (1142), (1143), (1225), H (1152), (1234), (1247), (1249), J (1130), (1131), Q (1227), T (1071), (1073).

#### 3.6.2.10.9

A possible turf line was recognised stratigraphically above this group of primary contexts. This turf line was represented by the narrower, darker bands of fill already reported at the perimeter of the ditch - 1226, 1142, 1143, 1152, 1234, 1130, 1131, 1227 and 1071. On top of this stabilised turf line the thick pinkish brown fill accumulated. The relatively stone free and silty sand nature of this latest deposit suggests it accumulated during severe erosion probably of the unstable Mound (? possibly by surface ploughing). Similar smooth silt sand puddles were noticed at the base of our spoil heaps following heavy and prolonged rain storms. This rather straightforward explanation is probably too simplistic to account for the variety of processes that have influenced and created the character of the ditch fill. For example, the wide distribution of ship rivets in the 'pinkish' brown fill of the ditch and the presence also of farm debris across its northern line clearly illustrates the complexity of the situation.

#### 3.6.2.10.10

During the excavation of the quarry ditch severe problems were encountered as we tried to locate its inner edge. As work progressed the inner edge of the ditch had, along most of its length, been located rather unsatisfactorily by a break in slope, only in a few quadrants could a definite colour or textural variation be followed. During excavation we tried desperately to follow these ephemeral lines. Without a subsoil side as a guide, we had to be satisfied with locating the edge by the slightest textural and colour variations. We were certainly aware that earlier pre-Mound features or even animal burrows may have disturbed an inner line. The excavators were satisfied that a genuine edge had been exposed once the ditch fill of F42 was removed but this edge was textural and so difficult to record photographically.

#### 3.6.2.10.11

The shape of this empty ditch was not recorded on a separate hachure plan. Instead it was recorded only as a component of the final overall plan of the ditch complex which included F153. However,

the profile of the ditch is recorded along the major section lines between the quadrants.

### 3.6.3 *Horizon 2/4 Mound 5 Zone*

#### 3.6.3.1

The surface of the buried soil plateau which is Mound 5 at Horizon 2/4 was recorded and excavated in two separate stages and correspondingly there are two pre-excavation drawings referring to this surface (D227 and D718). This situation arose because after the surface was originally planned, Mound 5 was abandoned for eight months. When we returned the surface was recleaned, but the great majority of 'features' and 'contexts' originally allocated to the surface could not then be found. The two drawings, therefore, reflect this situation; D718 has fewer features cutting the uniform buried soil. Further confusion is added to this story because not all of the genuine features seen cutting the surface were excavated before the buried soil was removed. Indeed some were not dug until we reached the base of the buried soil profile at Horizon 7.

Horizon 4 is equivalent to Horizon 2/4 and it is described as F224. In each quadrant the buried soil was allocated a separate context - Q 1589, 1591; R 1590, 1584; S 1585, 1169; V 1586; W 1587; X 1588. In quadrants Q and R two contexts were allocated because the buried soil was apparently separated by an arc of discoloured sand F17/53 but each pair of contexts describes a uniform deposit of buried soil. In quadrants Q, R, S and V, the edge of the buried soil plateau was planned as contexts 1117 (Q); 1177 (S, X, and R) and 1241 (V). Only in quadrants W and X were the edges difficult to locate, indeed in quadrant W almost the complete perimeter of the edge had been removed by Int.12. We did not plan the smaller inner circumference of the buried soil representing the flattish plateau but it may be possible to reconstruct this inner circle from the contour survey readings, 1276 or from the principal sections. In quadrant Q and R the inner edge roughly follows the outer arc of F17/53.

#### 3.6.3.2

The texture of the buried soil was firm and a uniform dark brown colour throughout all six quadrants. It was recognised as buried soil at this stage because of the similarity in character to the buried soil beneath Mound 2, but the surface of this buried soil did not exhibit the extensive mineral staining that was so obvious on the buried soil of Mound 2. Also the buried soil plateau was relatively flat unlike Mound 2 where the surface was often difficult to identify in plan and was certainly more undulating. The most obvious similarities could be found in the colour and texture of the soil, the abraded nature of the surface finds and the lack of plough marks over the surface. Across the Mound 5 plateau 19th century ploughing was expected since plough marks had been recovered just off the plateau but even on this exceptionally good definition surface no plough marks were picked out. Outside the arc of the possible fence line F17/53 in quadrants Q and R lay two contexts which have been tentatively assigned to part of the rather elusive mound make-up - 1017 and 1091 respectively. 1091 was more convincing, it is an arc of stones which lay along the edge of the inner plateau and down the slight shoulder of the buried soil. Similar aggregations of stones were recorded from Mound 2 and later on Mound 6 where they more obviously mark the lie of the mound slope. It is possible the concentration of stones - 1091 from Mound 5 are the result of a similar tumble which ran-off the mound and down the profile of the buried soil, alternatively they may have been accumulated as a result of ploughing, up to the side of a mound. 1017 was a surface discolouration of sandier orange/brown material which generally conformed to mound make-up, but which is more likely to be the spread outcast from a burrow. In quadrant W and X, the buried soil only survived along the baulks of Int.12 but these contexts were still removed in strict stratigraphic order similarly the depth of each spit varied between 0.05 - 0.15m and the finds were surveyed off each spit.

#### 3.6.3.3

Cutting the buried soil at Mound 5 at Horizon 4 was a varied range of features. Most of these features did not survive the further recleaning over the Horizon surface but from Horizon 1 a number of features had survived - F1, F16, F17/53. The majority of the new features and contexts was now

concentrated around the eastern perimeter of the buried soil plateau in quadrants S and X. Some features/contexts crossed the boundary of the buried soil, often the backfill was indistinguishable (in colour and texture). Particularly in quadrant X the edge of the plateau had been destroyed by Int 12, so the true line of buried soil could not be established. In quadrant S 1179, 1147 and 1166 range along or crossed the boundary. 1147 apparently marks the limit of a ploughing episode but unfortunately there is no written information to confirm this impression. Similarly the lack of recorded data for 1179 suggests it was seen as a patch of discoloured sand. 1166 however, was adequately recorded and was excavated as an extra cleaning spit over the buried soil (1166=1022). In quadrant X two large pits F129 and F130 also lay just on the boundary of buried soil. Although the distinctive 'pinkish' brown fill of the pits was recognisable, it was not clear whether the fill had cut the buried soil. These two features corresponded to another pair immediately to the east F131, F133 which were certainly outside the buried soil boundary. Excavation of all four features was suspended until Horizon 7. A concentration of smaller and generally subcircular features in quadrant S were initially recognised as postholes F73, F74, F75, F76, F77, F78 and F79. F73 had disappeared after the surface was recleaned (designated as non-features); F80 (=F81) was apparently not investigated. All the remaining features of this group were described as burrows with bright yellow sandy fill, particularly loose and disturbed. Surface recleaning had also removed two other features, F72 originally thought to be the line of a grave and F87 which had been designated as a spread.

3.6.3.4 Four out of five possible graves were investigated. The five extant graves lay across only three quadrants - quadrant S F85/86, F81; quadrant V F123, F124; and quadrant V/W F154. F124 was not excavated until Horizon 7 (refer to Grave Report for a detailed discussion of this). Just off-centre on the western side of the plateau (quadrants V and W) a larger subrectangular feature was planned - F390 [N341/25]. The slight discolouration of the backfill had not been seen on the planned surface (Horizon 2/4) but only after the later reclean and during the excavation of the first spit in quadrant V. The rather eccentric shape of this feature on the plans reflects this situation. Only along the trailing baulks of Quadrant V does the outline survive, the rather curious SW corner was planned at a lower depth (c. 0.10m). All the eastern side lay at a much deeper level on the floor of F11 in Int. 12 [N344/4]. This feature was accurately described as a robber trench across the original central burial. None of the remaining features and contexts uncovered from Int. 12 belong to this horizon (see Horizon 7).

#### 3.6.4 *Horizon 2 Between the Mounds*

##### 3.6.4.1

All the context/feature edges within the zone were surveyed and planned and the surface was recorded photographically a part of the overall Horizon 2 quadrant shots.

The majority of the context/features was defined against a variable subsoil surface that had been consistently exposed in this zone after the removal of 1022 [N224/5]. Not all the features were exposed in isolation; under favourable conditions occasional stratigraphic ordering could be recovered [N202/10]. In quadrant Y a relatively early ditch fill was overlain by a ring ditch complex (S12) and a line of ephemeral postholes (S7 but the ditch itself ran beneath the relic buried/ancient soil of Mound 5.

##### 3.6.4.2

##### 3.6.4.2.1

A wide variety of features was defined, similar in structure to the repertoire recovered from Int. 32/39. Many of the features were not excavated at this stage (see below) so identification could only be tentative (many identifications were altered during the course of the excavation) and was based primarily upon their shape. The range of features included possible graves.g. F114, 115, 118, 89; postholes - F98, 99, 100, 101; ditches - F117/128, 60, 61; gullies - F122; scoops - F405, 400, 401; and pits - F407, 395. One exceptional set of features against the western side of the intervention (quadrants Q and V) were not directly comparable to Int.32. Here the meandering line of long pits F58/125 were seen as a set of quarries for Mound 5.

#### 3.6.4.2.2

Stratigraphic detail, outlined earlier, which was visible in quadrant Y was only recoverable using delicate techniques. Only after the horizon surface was carefully prepared were crucial stratigraphic relations visible. As an aid to help recover this data each horizon surface was subjected to regular reconnaissance. It was under such favourable conditions (damp early mornings) that the line of postholes (S7) were visible across the ditch fill. Under the normal harsh conditions of extreme dryness these post-stains were invisible.

#### 3.6.4.2.3

There are two major concentrations of context/feature sets on this surface - immediately north of the Mound 5 burial soil plateau (quadrants R, S and T); and in the SE corner of Int.41 (quadrants X and Y). Does this distribution reflect a fossilised pattern? It is suspected that the context/feature yield has been significantly reduced in the Zone between the Mounds particularly by post-medieval ploughing and by comprehensive turf stripping during the construction of the Mounds.

#### 3.6.4.2.4

On the horizon surface context/feature edges remained rather sinuous e.g. F395, F407 (in retrospect it was clear many of our initial descriptions were incorrect). Indeed, the south end of quadrant T, between northing 166 - 176, was covered by a thicker deposit of soil (1118 and 1132). It was necessary to remove these contexts in two separate spits onto the subsoil surface as part of the horizon definition. During their removal, the excavators suggested the thicker deposits could have derived from a ploughed-out barrow. The deposits were removed carefully using trowels and produced a cluster of prehistoric ceramics. There were no structural details on the horizon surface which could confirm the presence of a former Mound. Once the subsoil was exposed the area was resurveyed and a second set of Horizon plans drawn (Modules T1, T4, see D251 - 254 inclusive).

#### 3.6.4.2.5

Only a very limited number of features were excavated at this stage, instead the vast majority were left until Horizon 7 for excavation. Features suspected of being Early Medieval in date (burials) were selected for excavation and this included the ring ditch complex (Mound 20 S12) and one possible cremation - F56. Unfortunately the 'cremation' became a posthole, rich in microscopic organic and ceramic debris. One other feature was excavated, this also lay in quadrant Q, F57.

#### 3.6.4.3

Between the Mounds, the Horizon 2 surface is virtually identical to Horizon 7, the final definition surface. At Horizon 7 this weathered subsoil surface was re-cleaned with trowels. In this zone the features already described on an earlier plan and with a set of context/features numbers were re-tagged but not necessarily re-surveyed. Generally the Horizon 7 plans were copies of the outline of contexts/features surveyed at Horizon 2. However, if features had radically altered shape they were re-planned e.g. F395, F407. Occasionally new context numbers were allocated to the fills at Horizon 7, F395 1921. Unfortunately, some of the features and contexts did not survive the re-cleaning on this later Horizon surface. On the Horizon 2 listing these have been described as being removed by a 'Horizon spit'.

### 3.7 The Definition and Recording of Horizon 3 (Mound 2)

#### 3.7.1 Procedure

##### 3.7.1.1

At Horizon 3 Mound 2 was sub-circular in shape with a maximum diameter east-west of 29.00m. In quadrant S the perimeter of the Mound had been cut rather straight by over vigorous excavation.



The tendency was to remove make-up following the line of shovelling rather than the slope of the Mound.

Originally called an intermediate Horizon - 2:1, it was renamed Horizon 3 when it became clear that the surface provided a fresh definition. Quadrants G, Q and S had already been photographed but Horizon shots were taken for each quadrant over the Mound. A comprehensive set of new context numbers were allocated to the make-up; equivalents in the adjacent quadrants were given a separate number. The make-up exhibited a slightly different pattern of contexts; the pattern of sandy yellow brown shoulders and darker brown lower slopes (recorded at Horizon 1 and 2) gave way to a more unified system. The homogeneous brown-coloured make-up on the lower slopes had disappeared. However, inconsistencies remained in the mapping of the contexts - context-edges remained notoriously difficult to match between quadrants and again the cause was the lack of continuity in the removal of the make-up between these adjacent quadrants. The leading set of quadrants was planned before the trailing set, and, with the associated baulks between the quadrants, the line of contexts could only be projected up to the quadrants intersect.

#### 3.7.1.2

Our planning and recording procedures were slightly modified. Although a line of tags continued to describe the line of each context, greater account was taken of the variation of colour and texture on the surface. Localised variations of colour and texture which were not outlined by tags were now described by the recorder (KHS) on the plans, this included the previously unrecorded shape of animal burrows. There were three main excavators AJC, MOHC and MRH. Each took responsibility for recording the contexts of the Mound and quarry ditch they were removing. Previously AJC alone had recorded description for each context family of make-up (F3, F137) or ditch fill (F42).

#### 3.7.1.3

Initially at Horizon 3 the complete set of contexts was assigned to Mound make-up. The colours and textures of the surface suggested a body of Mound make-up [N261/29] (yellow-brown in colour), surrounded by a darker brown band tentatively identified as a turf stack with a further ring of buried soil beyond [N256/15]. It was only during excavation of the make-up that the presence of an inner quarry ditch, F153 was recognised. The set of contexts formerly described as turf and buried soil were once more reassigned to this new ditch. Correspondingly, the Mound was much smaller in diameter 26.00m E-W and 21.00m N-S but the basic shape remained. Both the make-up and ditch fill were removed by shovel and an array of 1:3 metre squares was chosen for sieving in order to retrieve a more substantial finds population. The squares chosen for sieving were almost identical to those chosen at Horizon 2, they fell within both the ditch fill and Mound make-up.

#### 3.7.1.4

Many of the features seen cutting the Mound at Horizon 2 were visible on the Horizon 3 surface. The largest of these features were F4 and F142 which cut across the centre of the Mound. Only one new tentative grave was discovered - F144 in quadrant S. All traces of the slit trenches had now disappeared.

#### 3.7.1.5

Once F4 had been taken onto the surface of the next horizon the wooden shuttering and revetments which supported the sides of Int.26 were finally dismantled. On the shuttering against the inner face of the eastern wall were a set of benchmarks, drawn and marked with a felt pen. The height of each benchmark mark was re-surveyed.

Finally, on the Horizon surface the position of the quadrant intersects were re-surveyed and the quadrant boundaries re-strung.

#### 3.7.2 *Horizon 3 in the Mound 2 Zone*

### 3.7.2.1.

The perimeter of the Mound was described by a set of contexts which formed an inconsistent subcircular shape. They lay within the band of contexts which subsequently were re-allocated to the ditch fill.

The surface of the Mound at Horizon 3 was recorded as F143. The colour of the make-up was relatively uniform. The Munsell description of these contexts illustrates their consistency of colour (usually 'strong brown', reflecting a cleaner sand component) -Quadrant Q 1385; R 1384; S 1366; T 1383; M 1394; FL 1369; GM 1400; HN 1403; JO 1389; F 1386; G 1387; H 1388; and J 1325. Within this set of major contexts localised variations in the character of the make-up were observed. Around the north and south sides of the Mound this character was consistent. However, on the east and west sides the line had been interrupted, (possibly disturbed) and this is reflected in the descriptions of the surviving brown make-up. On the east and west sides the predominant description is a redder brown make-up. Correspondingly a similar break in continuity is also matched within the ditch fill F153. On the Mound, the break need not necessarily reflect a disturbed surface (although suspected) since the slope of the Mound on the east side was very shallow and the colour and texture variation could reflect a surface which is physically lower. A visual survey of the major sections drawn through the Mound does suggest a darker brown band of make-up running just above the buried soil (see later).

### 3.7.2.2 *Character of the Mound make-up*

#### 3.7.2.2.1

The steepest slope survived where the body of the Mound remained thickest and it is from these contexts, around the core of the Mound, where some structural details were exposed. Two particular attributes, clean yellow sand and lumps of bedded subsoil suggest the core was composed of material quarried rather than stripped off the adjacent surface. The surrounding ditch system (F42 and F153) is the obvious source for this quarried make-up. Bedded subsoil lumps were recorded in quadrants R (1384), Q (1385), and M (1394) and they were also recorded on the principal sections.

#### 3.7.2.2.2

The make-up described as 'strong brown' was heterogeneous, within its body of yellow sand were interleaved bands of brown sand (seen in quadrants G 1387; H 1388; M 1394; GM 1400; S 1366 and R 1384). This strongly suggested that quarried make-up was being mixed with material quarried from a different source probably surface stripping. It was clear during the excavation of these heterogeneous contexts that the two types of make-up were being dumped simultaneously, no stratigraphic ordering was visible. At no time were any firmer construction details recognised. There appeared to be no revetment (turf stacks) surrounding the perimeter of the buried soil and indeed the rolls of stones seen in the quarry ditch does suggest that the make-up was dumped onto the surface of the developing Mound in a *single and continuous operation*, these stones were apparently allowed to roll unimpeded back down into the ditch.

#### 3.7.2.2.3

The association of such distinctive colours of make-up within a single context produced a recording problem. Generally, the character of a context had been recorded as a single matrix which contained a set of attributes but now the exposition of a heterogeneous context lead to a modification in our recording process. There were two basic solutions favoured by different recorders - record the predominant colour but note the range (AJC) or the more favoured solution, which became the rule, record both major colour *and* attributes as two separate matrices (see 1376, 1384 and 1387); three major matrices were recorded for 1388.

#### 3.7.2.2.4

Occasionally it was possible to remove the contexts in crude stratigraphic fashion - e.g. in quadrant

FL/1041 ran beneath 1369 and in quadrant O 1331 overlay 1333. However, with such a large group of equivalent contexts they could not all be removed stratigraphically. If more than one context was present in a quadrant they were usually removed simultaneously (e.g. in quadrant S 1363 and 1366).

#### 3.7.2.2.5

In contrast to the variation in colour observed within this body of make-up the variation in texture was more restricted. The make-up, whether strong brown or red brown in colour was generally soft and thoroughly disturbed by animals. Rabbits and moles had clearly drilled through all the extant make-up. Surviving within this heavily disturbed make-up were two localised patches with a distinct hard texture. Immediately beneath the fill of the robber trench F142 in quadrant M the make-up - 1394 - was firm. The compact nature of this make-up must represent the floor of the trench which had been subjected to thorough trampling as the outside the line of any suspected robber trench the surface of part of the make-up - 1392 - was crusty. There was no obvious explanation for this localised anomaly, it was possibly caused by mineral aggregation but there was no evidence to support this idea.

#### 3.7.2.2.6

All the make-up was removed by shovel except for quadrants O and JO where the Mound was significantly shallow. The thickest deposit of make-up still survived around the mound core. In quadrant R along the northern edge over a metre of make-up was removed but generally the depth varied between a few centimetres to over a metre. Those thicker dumps of make-up were removed in two spits in order to improve the recovery of finds, and to control surface visibility. Under this system successive spits *retained* the same context number. Our shovelling operations (Level C) determined our sieving strategy and once again a 1:3 array was selected following as closely as possible the pattern of squares selected at Horizon 2, but in contrast to this horizon not all squares were exactly a metre square. Squares from quadrant JO were only 0.50m square but in GM the squares were larger at 1.20m. We can account for the smaller size of the squares in quadrant JO because we had been searching there for a ship trench and at the time felt we needed to expose and investigate as much of the available surface.

#### 3.7.2.3 *Sampling and Finds Recovery*

Apart from the usual assemblage of pre-historic debris recovered from the sieving operations, one piece of bone was recovered from the make-up 1366 (quadrant S Find 17535). This was isolated from a possible cremation deposit - F155 (quadrant JO) and recovered within the make-up as a sticky greeny clay lump (see Grave Report Int.41) [N261/26]. Trowels were used to remove the make-up from O and JO because the slope of the mound was shallow but generally as we reached the surface of the buried soil over the whole of the mound platform we swapped shovels for trowels.

#### 3.7.2.4 *Burial Chamber upcast and the surface of the buried soil*

Beneath the heterogeneous make-up and above the buried soil, a splash of clean yellow sand was noted. This must represent the vestiges of the upcast from the burial chamber that was not backfilled into the central burial [N256/5]. Unfortunately, the extent of this clean yellow sand was not planned, nor did we allocate the spread a context number (responsibility lies with AJC!). However, it is clear from the major sections that it was localised around the burial chamber with a maximum depth of 0.15m (see D165, 4, 3, 121, 95), and on the southern side extended from the edge of the chamber across to section line N-O. Beneath this upcast the undulating surface of the buried soil was exposed. Our initial confidence in recognising this surface, particularly on the south side where a striking textural and colour boundary was clear between the upcast and buried soil, was misplaced. On the north side of the platform mineral staining and colour change within the lower levels of the make-up made definition very difficult and it was clear from the colour and texture that turfs had been redeposited actually onto the buried soil surface - possibly as the first dump from the quarry ditch. We returned to the surface of some quadrants, e.g. G and H, a number of times in order to remove spurious deposits of 'buried' soil down onto a satisfactory surface. Conversely there were occasions

when it was clear we had overcut the surface of the buried soil (see D93 Sections G - B). In general, where turfs had been thrown on to the buried soil (see D37, 165, 97, 42, 43), it was only possible to separate them by fine trowelling; this method identified the very slight textural differences which marked the boundary between the different types of deposit. Finally a few splashes of washed sand were visible in localised deposits immediately above the buried soil. These deposits usually contained large particles of sand but very little silt. They represent an episode of weathering, usually associated with rain storms immediately before mound construction (similar splashes of washed sand could be found at the base of our spoil heaps after a heavy storm) [N252/1]. On the surface of the buried soil these coarse sand deposits were seen beneath 1384 (quadrant R) and along Sections J -D (D91) beneath 1388. Again unfortunately these were not allocated context numbers or planned but these episodes do illustrate the complex story of the mound. The limited extent of this washed sand on the buried soil surface suggests it was not derived from the weathering of the ancient soil itself; rather it could be the slight accumulation which would occur from a weathering dump of upcast before the main body was thrown back into the chamber. It would be interesting to see whether we could match this weathered surface to deposits within the burial chamber.

#### 3.7.2.5 *Robber Trench*

##### 3.7.2.5.1

Apart from the major intrusions F4 and F142, only two rather minor incursions were noted on the surface of the make-up - F144 and F145. [N243/13] These were both investigated but the results were unspectacular and they probably represent recent burrowing activity (see Grave Report Int.41 for full description of F144).

##### 3.7.2.5.2

F142 was the extensive robber trench cut east-west across the centre of the mound. At Horizon 2 it was known as F135, both these feature numbers record a single trenching exercise. For F142 only the outline of 1432 (HN) and 1419 (N) were sketched at Horizon 3 but all the other context edges were planned. Except for quadrants HN and N a new context number was allocated to the fill in each quadrant. These context numbers do not describe a radically different type of backfill. The system of allocating a context number to the fill of the trench in each quadrant was maintained so we could begin removing the fill in one quadrant before we had defined the outline of the fill in a second - once the excavation was complete we could draw up a list of equivalent contexts. Both 1330 and 1375 had been recognised during the removal of backfill at Horizon 2.

##### 3.7.2.5.3

Generally the fill of the robber trench was a slightly darker brown colour, but a degree of textural variation was noted from F142 either side of Brown's trench. The backfill in quadrant M - 1330 - contained coarse grains of washed sand and small darker brown/black flecks. These flecks were not charcoal stains but were probably mineral stains and streaked the surface when trowelled. Identical stains were seen in section (see D165) against quadrant GM. This area of staining was described as mound make-up and it could be the original source of the mineral flecks in the robber trench; but unfortunately it is just at this point that the northern line of the robber trench is most difficult to follow. It is just possible that the mottling within GM also belongs to the unrecognised fill of the robber trench. In quadrants N and O the backfill 1419 and 1425 respectively was a red-brown colour which possessed a compacted texture, very reminiscent of 1263 (F137).

##### 3.7.2.5.4

We continued sieving all the backfill once it had been removed by trowel, and were rewarded for our patience with a range of fragmentary EM metalwork and broken rivets. Apart from the deep cut into the burial chamber all of the robber trench backfill had been removed and now another set of hachure plans were drawn to record the shape of the trench. On either side of the chamber the line of the trench was straight and relatively flat but against the western side of the original chamber an abrupt change in the shape of the floor clearly illustrates a dive down into the burial chamber. On

balance, according to the shape of the cut, it would appear more likely that the cut down into the burial chamber began on this western side. Once again, defining the outline of the trench on the eastern side was problematical.

#### 3.7.2.6 *Basil Brown's Trench*

Brown's trench F4 was clear in plan, cutting diagonally across the line of the robber trench, F142. The edges of his trench were surveyed and both 1020 and 1277 were clear in plan but the extension on the western side which had a tongue of fill for the steps had now disappeared. Inconsistencies appeared in the line of the trench, particularly between quadrants GM and M, and at this depth the entrance had shifted 2.00m west of the original cut. On the horizon surface the trench outline was still cut just through the surface. The fill was removed onto the equivalent of our Horizon 5 surface within the buried soil, this providing a valuable preview of the buried soil. At this point all the trench fill except the central cut down into the burial chamber had been removed; now the entrance trench was empty onto the subsoil floor, exposing a discoloured hearth packed with burnt flints and revealing a new set of steps. All along his trench it was clear that Brown had cut through the surrounding buried soil (Horizon 4). Presumably he also found difficulty in separating the base of the make-up from the buried soil. All of his backfill was metal-detected and removed by shovel before a new set of hachure plans were drawn up.

#### 3.7.2.7 *Quarry Ditch*

##### 3.7.2.7.1

The inner quarry ditch F153 was not recognised immediately on the horizon surface [N252/6] and it was only after we began removing the mound make-up that the line of the ditch became clear. A band of stones running around the inner edge of the ditch crudely marks the boundary between mound and ditch [N252/2]. The band of stones, which lie in the ditch, are not continuous and often there is no close match between adjacent quadrants, (the line of stones running through quadrants S and T are an exception to this rule). Two major areas of stones, one on the northern and one on the southern side, follow the shape of the mound, but no similar runs of stones were seen around the eastern or western sides (quadrants FL, L, JO and O respectively) to make the line continuous. On the north and south sides the bands of stones varied in width and composition, the width varied from less than 0.20m (G 1104) to over 1.00m @ 1354) and the composition was generally of small stones, a mixture of gravel and pebbles. On the southern side the band of stones exhibited a degree of sorting @ 1354; S 1357; T 1361) where the ordering was consistent and the larger stones were found at the base of the profile. In quadrant R the stone band (1354) was relatively well preserved and we took advantage of the situation by carefully cleaning over the stones using a stiff brush and photographing their extent and ordering (Category 2). The set of contexts which make up the band of stones are F 1343; G 1345; H 1348; J 1327; Q 1351; R 1354; S 1357 and T 1360.

##### 3.7.2.7.2

Surrounding and beneath the line of stones were two separate deposits of brown fill, these are the contexts initially described as 'buried soil' and 'turf stacks'. On the south side they lay beyond the line of stones but on the north side in quadrants G, H and J, the dark brown fill lay physically above the band of stones. Only in quadrant H and Q could the dark brown fill, 1347 and 1350 respectively, be removed stratigraphically against the stones. The colour description of these bands of ditch fill are consistent, although irregular in patterning, the bands are described as either a dark brown or a red brown. Occasional textural descriptions reflect the initial interpretation of these fills as buried soil/turf stacks. A 'turfy' texture was described from a number of the ditch fills H 1346; L 1378; O 1415; Q 1349; S 1356; T 1359 and F 1372, but they cannot be correlated to a uniform description of colour. A context is described as 'turfy' if it was dense, smooth, relatively free from stones and generally a dark brown/grey colour, occasionally a very dense matt of turf roots were visible. Until the results of the environmental analyses provide an alternative identification these distinct attributes are assumed by the excavators to reflect the turf nature of these deposits.

##### 3.7.2.7.3

On the western side in quadrants L and FL a few rather exceptional fills were removed which may reflect a more varied history of backfilling into the ditch. The lack of continuity illustrated in the line and composition of the ditch fill and even reflected in the character of the mound make-up on the west and east side suggests rather strongly that the robbers may have severely disturbed the structure of the mound and ditch. Two dark brown fills from the ditch in 1373 and 1374 (quadrant FL) contained lumps of bedded subsoil. These lumps are typical of material removed from features cut deep (more than 0.30 - 0.40m) into the subsoil. In this position the source of the lumps must either be mound make-up or fill from the burial chamber. *Only* these two contexts within the ditch fill contained these distinct subsoil lumps and yet similar lumps occurred in various contexts in the mound @ 1384, Q 1385, M 1394) which would imply that the source of the lumps in the backfilled quarry ditch lay deep within the body of the mound or in the primary fill of the burial chamber. Beneath these contexts lay a gravelly deposit 1428 which contained over twenty rivet fragments.

#### 3.7.2.7.4

Although all the contexts on the Horizon surface were surveyed and planned there were a group of contexts beneath the surface which were not planned; with the exception of 1328 all could be primary fills. This group of contexts are limited to the southern side of the quarry ditch in quadrants FL 1437, R 1418; S 1408, 1412; O 1416 and JO 1413. The fills, with the exception of 1412, which is reported as gravelly, are basically silty in character and relatively stone free. Swirls of clean washed sand were recorded from 1418 which presumably represents a short episode of erosion from the ditch sides.

#### 3.7.2.7.5

After all the ditch fill had been removed and the buried soil platform beneath the mound was exposed the shape of the excavated ditch was surveyed and drawn up as a set of hachure plans at 1:10. A few features were exposed running down the sides and floor of the empty ditch (these are discussed at Horizon 7).

#### 3.7.2.7.6

The context cards indicate that only a limited range of environmental sampling was conducted during the removal of the ditch fills, i.e.

1352 2 x 30g (pollen); 30g (Mag Sus); 1-2 kg (PSA)

1353 2 x 30g (pollen)

but this contradicts my notebook entries which suggest that 30g pollen samples were taken from each unique context and that detailed sampling (KD) occurred across the trailing baulks (X-S; H-C; FL-GM) with the specific object of retrieving macroscopic remains (Flot) and micromorphology samples (Kubiena). Within the backfill one small group of finds were allocated their own feature number. A localised group of ceramic sherds and associated charcoal was very tentatively identified as a cremation - F192, but no diagnostic flecks of bone or lumps of clay were retrieved. Finally, a second feature, seen on the horizon surface, F141 quadrant J, was assumed to be a negative cut through the deposit initially described as 'buried soil'. The feature was subsequently described as a 'no feature' and represents a degree of localised variation within the fill of the quarry ditch.

### 3.8 The Definition and Recording of Horizons 4-6 (the Buried Soils)

#### 3.8.1 Procedures

##### 3.8.1.1.

Although the buried soil beneath Mounds 2 and 5 was separated into three distinct Horizons (4, 5 and 6), they were subject to a common set of excavation and sampling procedures [N306/06]. These are discussed in this section rather than being repeated at each horizon.

Beneath Mounds 2 and 5 were preserved plateaux of buried soil. The Mound 2 buried soil platform, 25.00m in diameter, was surrounded and isolated by a quarry ditch. In contrast, the buried soil beneath Mound 5 was isolated by an irregular arc of quarry pits and had not been sealed by a comparable depth of mound make-up.

#### 3.8.1.2

Within both deposits of buried soil three separate horizons were identified - 4 (dark brown, smooth and firm-textured, relatively stone-free), 5 (darker brown, firm, slightly gravelly) and 6 (orange-brown, loose and very gravelly). Each horizon began a context which varied in thickness but generally the thinnest horizon was that beneath Horizon 5; it was also slightly irregular in plan and similarly could not always be traced in section. A new feature number described each horizon surface and a set of equivalent context numbers were allocated to the soil in each quadrant.

#### 3.8.1.3

Each horizon of the buried soil was removed in a varying number of spits. Trowels were used to peel off each spit. The depth of spit varied according to local conditions, but generally they were between 0.05 - 0.15m thick. The number of spits removed from each horizon is also a crude measure of the thickness of the deposit.

#### 3.8.1.4

The pattern of quadrants was maintained because it was essential to continue the sections down onto the subsoil surface. Baulks were not left where the buried soil had already been removed. On Mound 2 along quadrant line HN-JO the impact of Int.26, B. Brown, the robbers and the original mound builders had virtually destroyed the line of our section; and on Mound 5 the buried soil across the SE corner of the plateau had also been removed by the archaeological operations of Int.12. Along section lines X-S and W-R we had lost valuable lengths of our section. The trailing baulks also provided an appropriate setting for the recovery of an intense array of environmental samples. Except in the SE corner of Mound 5 all the baulks were cut to a regular width of 1.00m.

#### 3.8.1.5 *Sampling and Finds Recording*

##### 3.8.1.5.1

It was clear from a cursory glance at the buried soil surfaces of Horizon 4 that the deposit was relatively rich in finds. These finds were recorded at Level D.

##### 3.8.1.5.2

Once the find had been recovered it was bagged with a pre-numbered tag and anchored to the floor of the spit. A full time team of surveyors then recorded the position of each find using a 'Planet'. Each find was logged on the Psion according to its unique find number and associated context. These files were regularly down-loaded onto temporary ASCII files. A print out of each file was handed to the finds supervisor who transferred the details into the finds register (YO7). It is essential to realise that the method of recovery (by spit) masked the vertical position of each find; when plotted, all the finds seemed to cluster in the horizontal plane along the floor of each spit. A large number of finds was recovered from the buried soil (approx. 9000 from the soil of Mound 2). From a practical point of view it would have been far more labourious to have surveyed the position of each find *within* the spit to record an accurate three-dimensional co-ordinate; indeed theoretically it would have been necessary to expose each find strictly *in situ* (!) if this operation was to have any validity. Since the finds were recovered at Level D it was not necessary to sieve any of the metre squares, however a sieving control was established from the buried soil of Mound 2 as a direct by product of the wet sieving. Any finds recovered from the west sieve were kept by context to their metre square.

##### 3.8.1.5.3

Inevitably there were logistical and technical problems to overcome as we removed such a relatively large concentration of finds from the buried soil surfaces. Pre-numbered finds tags arrived on the site in batches, but occasionally the recorders were sent duplicate sets. The resulting confusion, where two finds with the same number could belong to either of two sets of co-ordinates, was overcome by cross-referencing the entries in the finds index. According to my notes, only one batch was duplicated [25900 - 25999] and the second set of finds were given another batch number 27200 - 27299.

An alternative approach was discussed, namely to discard the finds. This drastic alternative was discounted, since we felt it was essential to recover the relative densities of finds and their spatial pattern within the buried soil. Occasional duplication of finds numbers was inevitable with such a large assemblage of finds (e.g. misreading the tag). Later, as we removed the buried soil from Mound 5, the Psion software program was modified to include an error trap for checking the input of finds numbers against those already logged. This valuable checking routine improved the accuracy of the recording process. However, nothing could save the files when the Psion crashed. This occurred only once with a batch of 50 finds which had just been surveyed off the buried soil of Mound 2 (F206 Horizon 5). These finds were from a single quadrant, and could only be indexed by context without any co-ordinates.

#### 3.8.1.4

##### 3.8.1.4.1

The objectives of the *environmental programme* within the buried soil sequence can be summarised:-

- a) Map the localised variation in the environmental regime current before the mounds were constructed
- b) Establish the character and nature of the soil e.g. was it a turf/ploughsoil

To retrieve (a) the environmental targets were pollen and plant 60 macrofossils. For pollen a comprehensive body of samples were taken from the baulks at horizontal intervals of 0.25m and at 0.10m vertical intervals (see MOHC Data Acquisition Strategy, VOL 10). This strict approach was slightly modified in practice because the vertical interval was stretched or shrunk depending on the position of the Horizon 5. If the full set of buried soil contexts were exposed in section a pollen sample was taken from each context, but occasionally one or more of the contexts were not seen. Plant macrofossils were retrieved from wet sieving. Each baulk was divided into metre squares and further subdivided in section according to context. A 10 ltr flot sample of each context (if present) was taken along each metre of the baulk. The position of each environmental find was not appended onto the section drawing - there were far too many - but the sections were used to read off their vertical co-ordinate of each find (see Tables 18 and 19).

##### 3.8.1.4.2

The array and distribution of sampling points around the baulks and the sampling programme as reduced for Mound 5. The reasons for the change to a limited sampling strategy reflect a considered assessment of the inferences which can be drawn from the data. In retrospect we felt we could not use the pollen taken at short horizontal and vertical intervals to describe or read the localised (i.e. intra buried soil) variations in the local environmental (agricultural) regime. This approach is implicit in the revised sampling strategy on Mound 5, where all the environmental samples from the buried soil were taken in a *very* restricted area around the monolith stations. A second set in Kubiena boxes were taken as a continuous column down the profile, following the advice of C. French. Altogether only 12 flot and 6 pollen samples were taken to supplement the monolith and Kubiena samples. Only at stations w, 3 and 5 were a complete set of monoliths taken down the buried soil profile. (Note: description of sampling stations also revised after this report was written).



#### 3.8.1.5

On average the buried soil beneath Mound 2 and Mound 5 was approximately 0.40m thick. Surprisingly there are no obvious or detectable signs of truncation on the Horizon 4 surface. Before any of the buried soil was removed the quadrant intersections were re-surveyed and the quadrant lines re-strung.

#### 3.8.2 *Horizon 4 Mound 2 Zone*

##### 3.8.2.1

The surface of the buried soil (F158) was not easily distinguished from the redeposited soil of the base of the mound make-up. In quadrants T, O and F the buried soil was truncated by over-vigorous cleaning of the basal deposits of make-up. In quadrant T only the base of Horizon 4 was recognisable in the section but already patches of gravelly subsoil were visible in plan reflecting the depth of truncation. A similar situation prevailed on the west side of quadrant O where c. 0.10m of buried soil had been removed as make-up. The most severe truncation occurred in quadrant F where, apart from the baulks, the triangle of buried soil in the corner of the quadrant had been removed directly by shovel down onto the Horizon 7 subsoil surface. This drastic action was a determined attempt to achieve 'better' definition of the buried soil, but it reflected our inexperience!

##### 3.8.2.2

The majority of the buried soil showed no signs of truncation. On the surface particularly on the north side a concentrated swirl of staining was visible. These patches of very dense localised staining were very crusty and would appear to represent a layer of mineral accumulation through the process of leaching within the mound environment. The stains were various shades of brown and ran in irregular lines. Surrounding these reddy-brown stains were spots of firm, very dense darker brown minerals, similar spots or flecks were seen and drawn in the section of the mound make-up (see D165 HN-H). Outside the areas of disturbance and truncation the surface of the buried soil was not flat. A long narrow depression ran diagonally across the north side of the plateau in a NW-SE direction, roughly following the line of the 205 Northing. This topographic feature was not planned, nor was the surface contoured, so the only evidence for the feature is provided by the variation in the height of the buried soil recorded in the side of the principal sections. Using this evidence, I have tried to illustrate the approximate line and shape of this feature. It could represent a footpath or even the scarred surface over which a boat was dragged. Apart from the few negative cuts only the perimeter of the buried soil was planned. The perimeter was drawn on the series of hachure plans which refer to the quarry ditch F153.

##### 3.8.2.3

One set of finds from the SW corner of quadrant H merited special attention [N276/33]. A scatter of iron objects and slag covered a small area against the inner edge of the trailing baulk. This complex was given its own feature number (F181). Over 39 individual fragments were recovered, the majority from the surface but a few remained immediately beneath the surface of the buried soil and were only retrieved later during trowelling. These later finds were given the context and feature number of the buried soil rather than the finds stance F181 which referred strictly to the surface of the buried soil.

##### 3.8.2.4

At this horizon there was no unequivocal evidence of ploughing, indeed the presence of a slightly uneven topographic surface would suggest it had not been ploughed before the mound was constructed. Paradoxically the lack of any positive features and the general uniformity of the buried soil in colour and texture did suggest strongly that the soil had been ploughed.

##### 3.8.2.5

A large hole had been cut through the centre of the buried soil plateau [N288/5]. Although originally holding the lavish inhumation burial, the hole had been slightly modified by later visits from the robbers and B.Brown [N292/2]. Surrounding this deep cut the outline of Brown's trench was clear since his trench was cut down through to the surface of Horizon 5. Even more drastically his narrower entrance trench was cut well into the subsoil. On the Horizon 4 surface the shape of Brown's trench (F4) was re-planned.

#### 3.8.2.6

Immediately outside the central chamber and beyond Brown's trench lay two subrectangular features [N303/17,14]; these lay transversely across either side of the robbed burial chamber. Both features, F214 (HN) and F215 (N), are remarkably similar in shape and profile. F215 was slightly larger (1.20m long) and deeper (0.20m) but both would accommodate a substantial timber laid transversely along the chamber. The position of these features across the burial chamber is significant; they were back-filled with clean yellow sand clearly derived from the outcast of the burial chamber. The implication is that both features are firmly connected with the original burial ritual. It is possible that only these larger features survived the attrition of later disturbance around the edge of the chamber. The two features lie slightly tangentially to each other across the chamber and could have provided a degree of support for the construction and furnishing of the rich burial which was roofed over by a boat.

#### 3.8.2.7 F501

The relation of another feature, F501, [N300/15] also abutting the burial chamber complex and within the buried soil surface is far more problematical. F501 lies immediately beyond the western edge of the chamber. This feature has undergone various interpretations and this reflects the rather unsatisfactory conditions of recovery. Originally, this feature was seen as part of the robber trench, the first in a series of steps leading down into the body of the chamber. The outline of the feature was noticed and planned after the removal of the robber trench backfill, F142 (see D490). Excavations began in the belief that the feature belonged to the robber trench but was suspended once we realised it could belong to an earlier pre-mound phase. The remaining make-up was removed and the surface of the buried soil exposed. F501 lay within the western extension of Brown's trench which itself had cut down onto the surface of Horizon 5. At this point the feature was re-investigated and appeared to confirm to the shape of a posthole (see N300/15). Further cleaning and the ultimate excavation was suspended until Horizon 7. Unfortunately, only a very shallow amount of fill survived at this horizon which was not particularly diagnostic. To confuse matters further a straight east-west gully, F216, lay directly along the line of the putative posthole.

In summary we do not know the precise stratigraphic position of this feature. It was cut by Brown and probably by the robbers. It can certainly be assigned to Horizon 5 but only tentatively assigned to Horizon 4. The position of this feature adjacent to the robber trench and on the edge of the burial chamber is, on balance, fortuitous; however the relationship with the gully is more problematical. The work I did on recleaning the scoop left by the excavator did confirm the shape and immediate relationship of the feature - the subcircular posthole cut the gully. The position of such a posthole at the apex of the burial chamber is possibly significant, given the other structural features associated with the burial rite. However, a note of caution should be added since we do not know the strict stratigraphic order from which an association can be built, indeed the backfill was critically dissimilar to the sandy, yellow fills of F214 and F215.

#### 3.8.2.8

Three other features were seen cutting the Horizon 4 surface and these concentrated in a small area around the north east corner of quadrant S, F193, F194 and F196. Originally interpreted as graves and a posthole, only F194 from this set was investigated in any detail. Careful excavation through a number of definition spits exposed the disturbed character of the feature, the 'fill' was very confused and riddled with recent animal burrows. All these features were re-identified as burrows.

### 3.8.3 *Horizon 4, Mound 5* (see 3.6.3)

### 3.8.4 *Horizon 5 Mound 2 Zone*

#### 3.8.4.1

Within the buried soil profile under Mound 2, the context beneath Horizon 5 was seen as a distinctly darker brown layer - F206. On average this layer was approximately 0.10m thick and in plan was not as consistent as the preceding layer of buried soil. Although locally well preserved on the southern and western sides of the plateau it was generally not visible in section on the east side. Those areas where the layer was preserved also coincided with the irregular lines of ploughmarks which cut this surface. Each quadrant surface was carefully cleaned at this stage to expose any features such as the ploughmarks but no horizon photographs were taken and there was no contour survey. The perimeter of the buried soil was not planned but it closely follows the line of the preceding horizon. In the centre of the plateau the broad rectangular cut of Brown's trench had disappeared, only the features cut down into the subsoil survived (the central chamber and the entrance trench).

#### 3.8.4.2

Thirty five separate lengths of ploughmarks were recorded cutting this surface - in quadrants R, S, M and N [N303/29]. The greatest concentration was retrieved from quadrants R and M. All the ploughmarks follow the same general alignment, NW-SE, and these can be matched with another incomplete set, running in the same direction under or at Mound 5. The ploughmarks were defined in two stages - in plan on the surface of the quadrants and later in plan beneath the baulks, there was no trace of the marks in section. In retrospect, our excavation methodology and experience naturally influenced the recovery of these ephemeral ploughmarks. In quadrant R, a greater concentration of marks was discovered beneath the baulks than in plan, suggesting that some were either unrecognised, or removed before the horizon surface was cleaned.

Very few marks cross the quadrant boundaries but where sufficient evidence was recorded it is possible to project the lines of associated marks. All the marks were recorded as F195, but only one context per quadrant was allocated to their fill; the four contexts are - R 1517; S 1531; M 1574; N 1575. A selection of marks was excavated in quadrants R, M and N. Apart from N, where only an isolated mark was excavated, the other marks selected for excavation were adjacent to each other which enabled the excavator to set a series of section/profile lines transversely across all their axes. Pollen samples were taken from the fills of each excavated mark and a single 5 ltr flot sample was taken from the *combined* fills of the marks in quadrant M. A uniform loose, mid-brown fill was described from each of the excavated ploughmarks. The remarkably straight ploughmarks were consistent in shape - generally a shallow U profile and width 0.10 - 0.15m, but their depth varied according to local conditions of preservation. The shape of the cuts would be consistent with a flat based ard point. The association of closely spaced (0.30 - 0.40m apart) and straight ploughmarks in the same alignment would suggest a degree of organisation and control. They run slightly tangential to the line of gullies seen over the surface at Horizon 7, but which presumably mark significant land division.

### 3.8.5 *Horizon 5 Mound 5 Zone*

#### 3.8.5.1

A dark brown layer similar to that beneath Horizon 4 under Mound 2 (F206) was reported under Mound 5 - F391. Visually it was identical in colour and texture to F206 and shared other similar characteristics - irregular surface coverage and depth and it was cut by another group of ploughmarks [N344/7]. However, a greater range of features cut this horizon surface and included the corner of an enclosure, a pit and a set of unusual 'stakeholes'. One quadrant was also chosen for horizon photography to illustrate the quality of the horizon definition. Quadrant Q was photographed in two parallel 'bites' each 4.50m wide from the western edge of Int.41. Q was chosen because of the clear surface detail. Except W and X (Int.12) the surface of each quadrant was

carefully cleaned to expose any features in contrast to the Mound 2 zone the perimeter of the buried soil plateau was planned along with the other features on A1 sheets according to the modular template.

#### 3.8.5.2

A dispersed and irregular group of ploughmarks - F392 were recovered from the surface of quadrants Q, R, S and V. The ploughmarks did not exhibit the same degree of patterning as those beneath Mound 2. However, the majority of the marks did follow the same or similar NW-SE alignment but another set of marks were scored across these tangentially in a NNE-SSW direction. This other set were only visible on the north side of the plateau in quadrants Q, R and S. Again a single context number was allocated to the fills of the marks in each quadrant, irrespective of their alignment - Q 1787; R 1779; S 1792 and V 1793 [N344/13]. None of the marks were excavated since they were far too irregular and narrow (<0.03m wide). They were removed as the horizon spit was excavated and were clearly no deeper than 0.02m. Our principle record of these stains are a set of photographs (NMB) taken before removal using the tower or photopod.

#### 3.8.5.3

None of the ploughmarks overran the backfill of the enclosure gully (Structure 22) seen on this surface although they did follow the general NW alignment of the northern arm. Only the northern arm, F393, was seen clearly on this surface, the southern return of the structure, F122 still lay hidden beneath the baulk of the trailing quadrant - V. There is no doubt this entire structure belongs unequivocally to this Horizon. The piecemeal discovery of this structure is reflected in part by the various feature numbers allocated to it but it also reflects the character of the gully. F122 describes the N-S line of the structure as it runs up through quadrants V and W; F393 describes the E-W line from quadrant Q into R, the junction of these features lies along the Section R-S, F122 was cut by the central burial/robber trench F390/417 and later by F11, a Longworth and Kinnes trench. Apart from severely truncating the fill and shape of the gully, the eastern edge of F122 had been totally destroyed just south of F390/417. However, some backfill did survive on either side of this burial/robber trench. On the subsoil floor two sets of tentative postholes were planned. To the south a set of nine stakes were defined apparently randomly spaced but to the north a set of six stakes were set in pairs. This whole group of stakeholes was allocated a single feature number - F523 and each stain was given a separate context number and excavated. Although varying in width between 0.05 - 0.12m the shape of the excavated holes were consistent and suggested a narrow stake with a tapering point had been driven directly down into the subsoil. It was only in the NE corner of this enclosure that any structural details were exposed, the excavation of the remaining lengths of gully failed to reveal any further detail. The structure was not excavated until Horizon 7 but the pattern of backfill was remarkably similar within both F122 and F393. A lighter brown sandy fill on the gully floor was overlain by a darker red-brown fill, compact and relatively rich in finds and not dissimilar to the contexts of the buried soil at Horizon 4. Does this suggest deliberate backfilling (?). It would imply this enclosure was seen as a topographic feature on the surface of the buried soil. The structure had a consistent U shaped profile .20 - 0.30m deep and 0.70 - 1.00m in width. Before F122 was excavated at Horizon 7 the true line of F10 (another Longworth and Kinnes trench) was cut back to the current quadrant line W-R, this operation included removing part of the fill of the gully. A separate context, 1835, was allocated to the fill, but in retrospect the context describes the fill of both F122 and a later ditch, F126, which lay along this section line. Apart from isolating the finds from the upper position of this profile there is no secure way in retrospect of separating the finds into their distinct feature group. Finally the variable width of the structure planned on the horizon surface does not reflect its original shape, the variation was caused by over-vigorous cleaning of the surface.

#### 3.8.5.4

F393 was cut by a large oval pit, F426, [N400/9] although this too was only excavated at Horizon 7; the shape and position of the feature suggested it may belong to the group of graves scattered around the perimeter of the plateau. Any finds recovered from the fills of features only excavated later at Horizon 7 were recorded to their specific context (see Grave Report for details of F426).

### 3.8.5.5

South of F426 were a group of dark subcircular stains - F416 [N359/8]. These concentrated in two groups around the ploughmarks, but with no unequivocal stratigraphic relationships with the marks. Only two stains out of the group of over fifty were excavated. A box section cut across these two stains illustrated the flat bottom and shallow character of their profiles. The evidence suggested they were the base of stake or post holes rather than vegetation stains. However they remain a group of enigmatic stains since they do not conform to any coherent pattern. This concentration of stains is unique to this and any other horizon. The only coincidence they have is that they overlie the line of an earlier ditch complex (F117/126/128).

### 3.8.6 Horizon 6, Mound 2 and Mound 5 Zone

Sandwiched between the base of Horizon 5 and the undisturbed surface of the subsoil was the lowest context, the surface of which was Horizon 6. This context was rather heterogeneous in character and was composed of mixed yellow subsoil and brown buried soil deposits.

The body of the horizon was very stony reflecting a sudden increase in the density of gravel and pebbles. A few features were seen on the surface of Horizon 6 but the overwhelming majority lay on the surface of Horizon 5. The Horizon 6 deposits were similar in character to the basal layers of the modern ploughsoil exposed during the excavations of Int.20 and Int.32, where an analogous gravelly 'horizon' lay just above the clean subsoil. Horizon 6 was recorded mainly in section. No horizon photographs record the surface and only context numbers were allocated to this deposit in each quadrant. Mound 2 Horizon 6 was described as F213, Mound 5 as F412.

On the surface of Horizon 6 Mound 2, however, were the faint outlines of a few features:- F216, F217, F218, F219, F220, F221, F222, F223 and F225 - these features were prominent either because of their very dark fill, e.g. F221, F222 and F226 or their peculiar character. F218 and F219 were prominent hearths packed with burnt flint.

## 3.9 The Definition and Recording of Horizon 7

### 3.9.1 Procedures

#### 3.9.1.1

The subsoil surface of Horizon 7 exhibited the same varied character as Int.32, 38 and 39. Localised patches of clean, smooth sand were surrounded by dense patches of gravel. Surface discolourations were usually well defined but within the gravel e.g. quadrant R Mound 2 Zone, features were difficult to isolate. Not since Horizon 2 had the whole of the intervention surface been at the same horizon. However, even across this unified surface a varied topography was evident. Subcircular plateaux of subsoil survived in the Mound 2 and Mound 5 Zones where the surface had been protected by a cushion of buried soil. Within the Adjacent Zone the subsoil surface was lower and had clearly been truncated. Visually the plateau of subsoil within the Mound 2 zone was the most prominent since it had been left isolated, surrounded by a shallow quarry ditch.

#### 3.9.1.2

The concentration of features within the three zones directly reflects the height of the preserved subsoil surface. The greatest cluster and range of features were therefore limited to the plateaux of subsoil beneath the buried soil. Within the Adjacent Zone truncation of the subsoil had certainly removed features. Unfortunately it is the shallow features - postholes, cremation deposits - which have been selectively rubbed out, the deep and often larger features - pits - have probably survived but no positive features survived on the subsoil surface. A few features exposed at Horizon 6 were left on shallow pedestals e.g. F225, F219 and F218, and others appeared to be physically sitting on the subsoil surface, e.g. F230. However, the vast majority of features were cut at various depths down into the subsoil. The majority of the features contained only a single context, occasionally new contexts were discovered and planned and actually within the feature but if these were only

discovered in section there was no plan of their shape. All the features were excavated at Level D and only in a few instances were more refined techniques employed, e.g. F225 cremation. All the contexts were subject to a rigorous sieving programme as a check on the quality of our excavation and in order retrieve a full assemblage. Sieving varied according to the size of deposit, generally smaller deposits were totally sieved but a 1:9 sampling template was introduced for the larger deposits, i.e. those belonging to ditches/gullies and pits. The 1:9 array could either refer to a bucket or wheelbarrow load (see context card). Contexts were also targeted for environmental evidence so a 30g pollen sample was recovered from virtually every context. Macroscopic plan remains were recovered in flot samples and these samples varied in size depending on the volume of the deposit. The optimum size was 10 ltr. 'Grab' sampling was employed for the retrieval of flot samples. Selection was by visual identification of macroscopic remains seen during excavation. One exception to this rule was the recovery of a flot sample from a visually sterile deposit F383 1760. The excavator believed it was prudent to recover at least one flot sample from the fenceline structure (S7), (this was later supplemented by a second taken from an apparently 'richer' fill F511 1950). Kubiena and Monolith tins were generally not recovered from this horizon or from features cutting into this horizon. However, it is clear that some tins driven in at our stations *did* continue down into the subsoil. Both the major east-west gullies F216 (Mound 2 Zone) and F117/126/128 (Mound 5/Adjacent Zone) were sampled in section to answer particular research questions (derivation of contexts). Occasionally samples for radiocarbon dating and chemical analysis were pulled from the deposits. Samples for chemical analysis were taken from the deposits which were thought to be cremation. These samples have been colour coded on the feature lists.

The majority of the excavated features were postholes but the class range also included features described as pits, cremations, scoops, slots, gullies hearths, burrows and no features. The division of features into these classes was not always clear cut, for examples features described as coops could, in fact, be truncated postholes or pits. Thus the division of features into classes reflects not only their shape and profile but is a function, at least to some degree, of their extant state of preservation. Features were only described as burrows or 'no features' if the evidence was unequivocal. It is worth emphasising that animal burrows (rabbits and mole holes) have disturbed almost every deposit particularly those beneath Mound 2. Burrows can be seen scored across the surface of the subsoil on the Horizon photographs.

#### 3.9.1.3

The three zones within Int.41 were excavated separately. Work began on the Mound 2 zone before progressing south onto the Adjacent Zone and finally onto the Mound 5 zone. The surface of the Adjacent Zone had weathered for over a year before it was excavated immediately after their buried soil cover had been removed. Almost all the features were excavated by experienced supervisors (AJC, KHS, SC, ACE, SK and MRH), the latter also controlled a group of students excavating features at the southern end of quadrants T and Y during one summer season - 1988.

South of the Mound 2 complex it was not easy to separate the features into groups belonging to either the Adjacent Zone or the Mound 5 zone. A few features ran without any respect across the boundary of these zones, e.g. F117/166/128. In art the explanation lies in the absence of a quarry ditch around Mound 5. Since the majority of features are relatively shallow, this would have provided a convenient sterile boundary. Also the contrast in the concentration of features beneath and adjacent to Mound 5 is not as clear cut, indeed remarkably the quality of feature preservation between quadrant Y and the Mound 5 plateau is broadly comparable but the Horizon 7 surface beneath Mound 5 is only raised on a slight plateau above the surface of quadrant Y. Where the trenches of Int.12 cut into the subsoil, on the SE corner of the plateau, the boundary between the zones has been destroyed.

#### 3.9.1.4

Another group of features which were only defined at this horizon belong in retrospect to earlier horizons - a grave F486 from quadrant S, securely belongs to the Horizon 4 surface and some features that were defined at an earlier horizon were not excavated until Horizon 7. These fills would have been truncated but within the perimeter of the Mound 5 zone this includes -F122, F124, F393,

F426, F486 and F523. Only those features first seen at this horizon within the Mound 5 zone will be discussed in any detail. The features belonging to the Mound 5 zone are those sealed beneath the buried soil marked by the perimeter at Horizon 4 and this includes the large E-W ditch complex F117/126/128 which is cut by a number of later features east of the plateau. F129, F130, F508 which is cut by a number of later features east of the plateau. F129, F130, F508 and F395 lie outside the perimeter or projected perimeter and will be discussed as an element of the Adjacent Zone. In 1970 one of the Longworth and Kinnes trenches (5/1). Int.12 remained unexcavated. Unfortunately the proximity of the central burial deposit (F390/417) and the early cleaning out of its backfill had subsequently caused severe and prolonged erosion. Features were left on small raised platforms. There are no distinct core areas identifiable on this plateau. Features are generally scattered and there is a suspicious scarcity of excavated features from Int.12.

### 3.9.2 *Horizon 7 Mound 2 Zone*

#### 3.9.2.1

The subsoil plateau beneath the buried soil was described as 1624. No feature number was allocated to the horizon but on the floor of the empty quarry ditch (still part of this zone) a similar subsoil was described by a number of different context numbers. Only those quadrants which fell on the surface of the plateau were photographed on the Horizon shots. The floor of the quarry ditch was not recorded photographically. Apart from the disturbance caused by the large scale burrowing the centre of the plateau had been punctured by an oval trench containing the rich Early Medieval burial, subsequently visited by both a team of robbers and B.Brown. Only Brown's eastern entrance trench had cut into the subsoil but it became more pronounced as it reached the edge of his deep oval trench which included a short flight of steps. There is no doubt that the burial chamber destroyed a number of features but perhaps we are relatively fortunate because it appears to have been cut through a relatively sterile area avoiding an important group of features just to the east.

#### 3.9.2.2

A total of 202 features were identified and investigated on the subsoil surface and although a few of these had been noted at Horizon 6 their full extent was only unequivocal at this Horizon. F501 survived from Horizon 5. Postholes were the dominant class at 72%. Out of the 145 postholes only two stakeholes were described - F234 and 285 but this class of feature was not very easily defined because of the varied state of preservation, generally the diameter of these stakeholes were smaller than the majority of postholes. One posthole discovered within a shallow scoop - F294 was not allocated a separate feature number by the excavators and so has been counted twice. Finally, the total also includes one feature which was not excavated - F366 which was cut by the northern edge of Brown's entrance trench, this had weathered away before it could be investigated in detail.

#### 3.9.2.3

A set of 24 scoops were defined (12%); 12 burrows (6%); 8 pits (4%); 3 hearths; 2 cremations, and one each of the following - a 'groove', a gully, a turf and finally a 'no feature'. The Horizon surface was constantly monitored as it weathered and any new features were added to our corpus, under these conditions approximately twenty features were discovered during our reconnaissance. Apart from F378, F379 and F357 all the features were excavated separately but it was necessary to excavate this small group together to establish their stratigraphic order.

#### 3.9.2.4

On the plateau surface the features are clustered in three main areas and in each of the areas there is a mixture of feature types.

The 3 'core areas' on the plateau are:

1. Down the east side of the plateau (quadrants H, J, HN, JO, N, O, S and T).

- 2 In an arc on the SW corner of the plateau (quadrants Q and R).
- 3 Within the NW corner (quadrant GM).

Outside these core areas are a scatter of features - primarily postholes which implies their distribution reflects an original pattern. The most significant core area is No. 1 on the east side. This area contains by far the densest concentration of features within Int.41. In this area two unequivocal structures of different character were defined - the fence line (S7) runs N-S in a line down the east side of the plateau and apart from two slight interruptions the structure is continuous. The breaks in the line were caused by the cut of a later gully F216 (no trace of postholes could be seen within the fill of F216 nor on the floor of the gully) and a burrow F194 which had been excavated through into the subsoil from Horizon 4. The fenceline is composed of thirty-nine small postholes set at an approximate interval 0.35 - 0.50m apart. Along the fenceline there is no unequivocal evidence for deliberate replacement or renewal of the components although it is just possible that the small knot of postholes F378, F379 and F357 may represent localised replacement. The posts appear to have been driven directly into the subsoil since there are no diagnostic postpits and only one possible post pipe may have survived (see F511). These posts show no significant variation in size along the length of the structure. Indeed the scatter of posts on the plateau and along the fenceline make it difficult to choose exactly which features belong to this structure. The features selected for the fenceline were chosen by mapping/projecting a continuous line along the slight arc of the structure. The southern end of the structure can be picked up in the SE corner of Int.41 quadrant Y. We earlier noted another possible group belonging to the same structure from quadrant S at Horizon 1. The stratigraphic relationship of the fenceline on the core area allows us to isolate at least two elements in the phasing of the structure, with a certain degree of confidence the hearth F219 sealed the fence and although not as secure the tentative evidence suggests that the E-W gully F216 is later.

### 3.9.2.5

A second structure - S8 a roundhouse was defined immediately east of the fenceline. This roundhouse is composed of a circular setting of 7 postholes set at regular intervals around the circumference which measures a maximum of 9.00m. At the SE corner two larger and more substantial postholes lie just outside the perimeter and suggest a porch construction for the entrance. Within six of the nine postholes were traces of post ghosts - F221, F222, F263, F264, F265 and F267 [N331/8] [N331/9]. Together with the stains we retrieved a relatively rich assemblage of finds [N334/0], particularly from the darker fills which made up the majority of the ghosts. Just inside the porch and continuing the line of the circumference was a small feature which was interpreted as a cremation - F270 [N331/1] [N331/14]. This contained an unusual deposit of sticky clay but no visible bone [N341/2]. The deposit is identical in character to a definite cremation - F225 on the SW corner of the plateau. Inside the perimeter of the roundhouse and slightly off-centre to the north is a large suboval hearth - F220 [N323/32]. This hearth had been constructed *in situ* rather than dumped since surrounding the concentration of burnt flint and charcoal was a smudge of reddened subsoil. This hearth had been cut and partially excavated by B. Brown. From his description of the excavation in 1938 there is strong circumstantial evidence to suggest that the exception faience bead came from this hearth. If so it may provide a broad date for the whole roundhouse structure.

### 3.9.2.6

Out of the total of 145 postholes 27 contained evidence of post ghosts. All the ghosts were defined in section and often in plan, and our recording provided evidence for the diameter, length and the ultimate angle of the ghost. Often the fill of the post stain was a very dark brown and compact fill but other ghosts are less distinct and can only be read in section by a slight colour variation e.g. F241. In both instances, it is the shape of the fill that is crucial because postholes can anyway contain more than one context, e.g. F307, 33. The postholes that contain evidence of ghosts are F221, F222, F226, F238, F239, F241, F263, F264, F265, F267, F284, F289, F290, F291, F302, F315, F333, F341, F342, F344, F349, F353, F356, F363, F369, F501 and F511 [N330/6]. The ghosts from F369 and F511 were not given separate context numbers and indeed the ghost in F511 fills the whole cut. In this instance the subtle colour and texture of the deposit suggests a post (compare fills of posts belonging to fenceline S7). Overall the depth of a ghost varied between 0.05 - 0.47m and not



surprisingly the depth is a function of the size of the original posthole. In no instance was there any evidence for packing stones surrounding/supporting the posts. No elaboration was recorded from any of the other postholes which did not contain ghosts. Overall it appears that the sand provided adequate support to anchor the posts. Where no ghosts survive the post must have been driven directly through into the subsoil and probably removed before rotting. Over the plateau and indeed over the whole intervention there is little or no evidence to suggest that any posts were re-cut. The only exception may be the superimposition of F357, F378, F379 along the axis of the fenceline. Even in the Roundhouse there is no evidence for re-cutting (this may have significant implications for assessing settlement patterns at Sutton Hoo). The evidence provided by the shape and dimensions of the postholes suggests that the posts were small, on average between 0.20 - 0.30m in diameter and would have only penetrated the subsoil to a depth of 0.10 - 0.20m.

### 3.9.2.7

The class of features designated as scoops show a much wider size range than the postholes, F269, one of the largest scoops is 5.20m x 3.00m but F387 was only 0.21m in diameter. Generally the scoops are shallow features without a deep or distinct cut and consequently they cannot be tied to a specific functional class, such as postholes. Presumably they are the truncated remains of a range of features - postholes, pits, burrows or even stone-holes. Scoops can be divided into three groups, the first group were situated on the perimeter of the subsoil plateau and run down the inner edge of the quarry ditch F153. Coincidentally these scoops are the largest of their class F269, F271, F272 and F308 and are opposite each other at the corners of the plateau. Although F269 runs down onto the floor of the quarry ditch and therefore could originally have been an exceptionally deep feature (over 0.60m deep to the plateau surface), it was *not* sealed by the buried soil and its position and shape strongly suggest that it is a small patch of remnant quarry ditch fill that should have been removed at Horizon 3.

The second group of scoops lie beyond the perimeter of the plateau but still within the circumference of the quarry ditch. These features F502, F503, F504, F505 and F506 are in comparison much smaller and were visible on the floor of the ditch. The third and largest group lie distributed around the plateau itself - F286, F287, F292, F293, F294, F306 and F422 lie within and around core area 2; F513 and F514 within core area 3; but F314, F359, F364, F387 and F396 are scattered away from any core area. The finds assemblage associated with this class of feature is varied and shows no consistency. Possible loom weights and daub were retrieved from F271 and F308 respectively. Small flecks of cremated bone from F286 and a concentration of charcoal from F271, F272 and F506 but the shrapnel from F271 presumably derives from a deep burrow!

### 3.9.2.8

Few pits were recognised from the Mound 2 Zone. This class of feature exhibited a size range similar to scoops but with a more regular and deeper shape which varied from 1.40m in diameter and 0.12m deep (F71) to 3.55m diameter and 0.67m deep (F330). Only one pit, F71 was located in the quarry ditch. This feature had been exposed beneath F42 back at Horizon 2 and may belong to the N-S run of quarry pits along the western side of Int.41. If it is associated with these other pits which have been identified as quarries for Mound 5 then we have a clear stratigraphic relationship between Mound 2 and 5. On the subsoil plateau the pits belong either to core area 1 - F243, F257, F268, F311 and F330, or core area 3 - F235 and F516. The largest pit F311/330 has been described, rather unsatisfactorily, as a tree pit. Although this pit complex did contain distinct backfill - very clean yellow sand and various brown siltsand fills, it certainly did not conform to the model of backfilled tree pits identified from Int.39. The very clean, sandy deposits require explanation since they were not encountered in the fills of other features at this horizon and would not normally accumulate during the routine silting of an exposed pit. Coincidentally the darker brown fills were remarkably rich in finds both environmental - charred nut shells and charcoal, and prehistoric - ceramic and flint, providing an assemblage of Beaker pottery in association with two arrowheads of similar LN/EBA tradition. A few fragments of cremated bone remain undated but suggest the feature was deliberately backfilled, rather than left to weather. F235 in core area 3 contained a similar varied assemblage (Beaker ceramics and nutshells) but in association with a concentration

of small stones on the floor of the pit [N381/24]. No independent structural evidence was discovered within the pit fill to account for this exceptional concentration of stones, presumably these were also deliberately deposited within the pit.

#### 3.9.2.9

Sandwiched between two linear features F216 and F258 was a subsquare pit [N323/17] which we initially interpreted as a grubenhaus - F257. This very shallow feature - only 0.09m deep - was remarkable and unique at this horizon since it contained the fragments of 3 ship rivets [N330/24]. None of the rivets were *in situ* (!), but their apparent isolation should not be confusing since this area had continuously produced a pocket of rivets from Horizon 1 and right through the mound make-up. This feature must have been cut either through the robber trench or through the mixed mound make-up which may also have contained outcast from the robber trench or Brown's spoil. Although suspected within the disturbed character of the make-up during the excavation, no definite feature could be distinguished on this area until Horizon 7. The pit itself had clearly not targeted the central burial and so the only other favourable explanation is that it belongs to a warreners trench dug into the mound after the robbing. A dark brown stain along the western edge of the pit F261 was originally described as a posthole belonging to the grubenhaus. This feature sat on the backfilled pit and the firm, smooth texture of the make-up suggests it is a turf rather than a posthole, which was incorporated within the backfill of the pit.

#### 3.9.2.10

The four slots are distributed in core areas 1 and 3, the same core areas as the pits. Indeed they share a number of common characteristics - deep cuts, steeply sloping sides but the slots were defined as a different class primarily by their narrow rectangular shape [N330/28]. In this class the best example is F258 - 2.30m long, 0.40m wide and 0.10m deep, which divided into two smaller slots of roughly equal length. The narrow flat floor and almost vertical sides were well preserved beneath a gravelly backfill which contained a significant concentration of stones. Although no evidence of posts were discovered within or at the base of the fill, it is possible that posts sat on a horizontal timber along the floor of this slot. Before F311 was joined to the pit complex (F330) it was seen as the western but-end of a subrectangular structure whose northern side was described by F258. This relationship was not confirmed because of the presence of the pit complex but in retrospect the association of these two features merits further attention, indeed are F313 and F331 further elements of this structure? The remaining three slots F237, F242 and F361 were all isolated on the subsoil plateau and cannot be matched with any potential structure.

#### 3.9.2.11

Only three hearths were discovered on the plateau F218, F219 and F220 and these also belong to core areas 1 (F219, F220) and 3 (F218). The maximum diameter of the hearths is 1.40m (F218) but they were generally shallow and no deeper than 0.13m (F219), indeed they sit on rather than cut the subsoil surface. Apart from F220 which was seen beneath Brown's entrance trench F4, the remaining hearths survived on shallow pedestals of sand from Horizon 6. A degree of structural detail was excavated from the fill of these deposits. The bed of F219 was composed of a mass of small branches up to 0.05m long and 0.02m wide, over this lay a mixture of flint pebbles and more charcoal [N355/35]. Many of the flint pebbles had shattered under the heat into fragments and tiny spalls, a few sherds of pottery were recovered. Detail of the structure was recorded photographically (see N335). Remarkably no burnt sand was associated with this hearth and there was no visible reddening of the surrounding subsoil to suggest the fire had burnt *in situ*. In contrast F218 and F220 undoubtedly burned *in situ* since the adjacent sand has been scorched (?oxidised) but in contrast these hearths did not provide the mass of charcoal debris associated with F219. Burnt flint was common to all three hearths and a degree of selection was introduced for the recovery of these finds. It was totally impractical to recover all the flint spalls which had broken off the lumps of calcined flint. The fragile lumps were lifted off the hearths carefully to avoid further shattering but only fragments larger than 0.01m in diameter were recovered from F219 and 220, and fragments larger than 0.005m from F218. F220 lies within the roundhouse (S8) and must belong to this structure. There is no doubt this class of feature would have been obliterated if it had not been protected by

the band of buried soil.

#### 3.9.2.12

F225 in Core Area 2 was the only feature to provide unequivocal evidence of pre-mound cremation. This feature also survived on a small pedestal from Horizon 6 and had been drawn in section (R-M) before excavation [N405/34]. The details of the feature are recorded in the Grave Report, but they can be summarised [N405/19] - a concentration of cremated bone, included recognisable anatomical pieces, a scatter of ceramic sherds and lumps of discoloured (green-brown) clay, were capped by a dump of fired clay (red). [N406/11] The lumps of discoloured clay were unusual against the background of predominantly sandy deposits retrieved from the overwhelming majority of features [N406/15]. The association of the exceptional clay deposit with a cremation in F225 [N406/26] was the basis for the identification of other features as cremations. These other cremations did not contain obvious fragments of cremated bone instead lumps of thick clay were recovered. The only example from the Mound 2 Zone was F270 which (?significantly) lay within the perimeter of the roundhouse (S8) inside the porch.

#### 3.9.2.13

The burial chamber had cut the only gully on the plateau (F216) into two roughly equal lengths. This feature had been discovered at Horizon 6 but the fill was lowered to the surface of the subsoil at Horizon 7. The lower height of the subsoil on the eastern side of the plateau has resulted in a narrower gully (compare the widths of the gully either side of the chamber). The gully on the eastern side also peters-out, apparently before the quarry ditch F153 but this illustrates the gradual cut of the ditch on this side. The cut on the west side was more abrupt and the full section of the gully was preserved in the side of the quarry ditch.

#### 3.9.2.14

The gully divides the plateau into two, roughly equal areas north and south of the burial chamber. Indeed the position of the burial chamber directly over the gully may not be coincidental since the pattern is repeated on Mound 5 where the central burial lay over the NE corner of an enclosure (S22, F122.393). The gully F216 ran slightly diagonal to our site grid in an E-W line. On average the gully was 0.25m deep (from Horizon 6) and 0.75m wide. The same feature and context number was allocated to both sides of the gully but the western side was quadranted. No post ghosts were seen in the backfill, or in plan along the floor of the gully, however a lighter brown sandy fill was sealed by a very dark brown deposit along the western side. This darker fill (1276) was very similar in character and texture to the make-up of the buried soil at Horizon 4, it also contained a similar concentration of finds, including a fragment of cremated bone.

#### 3.9.2.15

On the west side a number of environmental samples were taken (pollen, flot, Kubiena and monolith) to provide an objective analysis of the fill. Once the gully had been excavated a narrow groove, F500, could be seen scored along the northern edge of the gully. This feature was unique on the Horizon 7 surface and was only seen along the western length of the gully. Although interrupted, it runs for 6.00m between the quarry ditch and posthole, F501, it was only a maximum of 0.10m wide and 0.03m deep [N381/32]. The groove runs slightly diagonal to the line of the gully but must be associated with the gully. The precise stratigraphic relationship of these features is ambiguous. It is doubtful whether we could have picked up a cutting relationship. We must assume they are either contemporary or that F216 is later. On balance, I would suggest they are contemporary, armed with this relationship the grooves must be a constructional element of the gully - perhaps the base of a retaining wall for a bank, or the base of spademarks driven into the subsoil to mark the proposed line of the gully. There was no sign of any bank on the adjacent subsoil surface (make-up or concentration of stones) or within the buried soil, nor did the character of the gully backfill provide any evidence for the line of an eroding bank, (perhaps the condition of the finds assemblage may provide a clue).

### 3.9.2.16

The remaining class of features - burrows (F227, F229, F240, F244, F245, F256, F282, F322, F334, F337, F533 and F538) and 'no features' F262) were recognised during their excavation. Once their character was established these burrows were usually abandoned, although their shape was recorded on a hachure plan. The number of features described as burrows do not illustrate, to any degree, the massive disturbance caused by animals on the subsoil surface (see Horizon 7 quadrant photographs). The fills of most features had been disturbed by burrowing animals. In contrast, the absence of 'no features' does reflect the success we achieved in recognising the genuine archaeological features. There were very few ephemeral geological features on the plateau.

### 3.9.3 *Horizon 7 Mound 5 Zone*

#### 3.9.3.1

For a variety of reasons the count of features in this zone is more complicated than the Mound 2 zone. Although the percentage of each class of feature gives a very good reflection of the ratio of features it should be emphasised that the list is not an exact count, in different quadrants a feature may be given more than a single feature number. In practice this situation applied to gullies within the large E-W ditch complex - F117/126/128. It should be noted that some features were only defined beneath the horizon surface and therefore, do not appear on the pre-excavation horizon map (D916).

#### 3.9.3.2

Once again the most numerous class of feature was the posthole. A total of 84 (17%) postholes were distributed over the subsoil plateau. The densest concentration is centred on quadrant R and spreads out to the edges of Q and S respectively. No structures were recognised. The total number of postholes includes nine examples recorded as ?postholes (F427, F428, F453, F471, F472, F479, F483, F521 and F582); two stakeholes (F456 and F526) and a *group* of postholes (F523) belonging strictly to Horizon 5.

The postholes range in size from 1.00m - 0.10m in diameter and in depth between 0.40m - 0.03m. These values are rather extreme and are the exception rather than the rule. A quick visual run through the data suggests that the average diameter range was between 0.25 - 0.35m and the average depth 0.20 - 0.30m, very similar in size to the majority of postholes on the Mound 2 subsoil plateau. Only seven postghosts were tentatively identified within the fill of the postholes (some criteria as Mound 2 applied) and these were scattered across the northern side of the plateau, (F454, F457, F458, F461, F522, F543 and F551). Again the majority of stains were a very dark brown colour and were relatively rich in finds and plant macrofossils (charcoal!). Suspicious stains from F477 1893 and F481 1897 may in retrospect be further examples of ghosts but they have not been considered here. A particularly large lump of charcoal was discovered within the fill of F551 [N422/2]. This charcoal lump was semi-circular in section with a diameter of 0.10m, the tapering point suggests it may be the tip of a post. It was associated with a deposit of burnt sand but the character of the fill and adjacent subsoil does not suggest that it was fired *in situ*. The surface of the excavated feature was clean subsoil and had not been subjected to any heat. Although relatively stony the fill of F451 and F489 was not structured in any order to suggest packing. The dimensions of the ghosts illustrates a more restricted range than the wide variation in the dimension of the posthole, but is broadly similar to the average size of the postholes, in diameter the ghosts range from 0.30 - 0.10m and in length from 0.30 - 0.03m.

#### 3.9.3.3

A relatively rich finds assemblage was often discovered within the fill of the ghosts but this was not exclusive since a number of other postholes were also rich (F454, F457, F458, F466, F543, F544, F545, F549, F552 and F574). The character of the assemblage was prehistoric (ceramic, flint, burnt flint) and included plant macrofossils. These deposits were usually targeted for floatation samples and macroscopically the dominant component was carbonized nuts. Even different species of nut

were noticed from F544. On balance my impression was that a slightly more varied assemblage of finds was recovered from the group of postholes in this zone. A large lump of corroded metal (?prehistoric) was retrieved from F552 (*this needs conservation*); fragments of soft white cremated bone from F549, one large piece was 0.06m long; a group of burnt flint and burnt flakes from F453; and a deposit of clay from F458 which may be another possible cremation deposit, (at present this feature is described as a posthole).

#### 3.9.3.4

A set of nine scoops was excavated, distributed in two groups, one pair on the south side of the plateau, quadrant V (F431 and F432), and the second group in a band across the northern side, quadrants Q, R and S (F455, F460, F462, F474, F482, F498 and F547). These scoops were a variety of shapes and were defined by the same set of attributes (Mound 2 zone). Generally, they are large and shallow, on average 0.10m in depth (range 0.34 - 0.01m). F482 was only seen sitting on the subsoil surface so no hachure plan was drawn once it had been removed. One exceptional concentration of ceramic sherds, over 60 fragments, were retrieved from F460 (see N421.2).

#### 3.9.3.5

The pits were cut deeper than the scoops. Only three pits were excavated F468, F473 and F480. F426 belongs to Horizon 5. Pits F468 and F473 lie adjacent to each other just north of the centre, in quadrants R and S, and were 0.49m and 0.62m deep respectively. The assemblage from all pits was very similar in character to the group of 'rich' postholes and is composed of plant macrofossils (nuts), burnt flint, ceramic and fired clay fragments (F468). Within the backfill of F468 a distinct, dark brown stain, F485, was described as a turf.

#### 3.9.3.6

Three cremation deposits were isolated over the north side of the plateau in quadrants R and S - F497, F548 and F566 [N424/32] [N419/32]. The deposits were composed of a very dense clay, greeny-brown in colour within small subcircular features [N426/32]. No bone or cremated remains were visible in any of these deposits. F458 contained a similar deposit of clay, but only as a small component of the fill was described as a posthole. Two inhumation burials, F124 and F486 excavated as this horizon belong in retrospect to Horizon 4 and are discussed in full detail in the Grave Report.

#### 3.9.3.7

F445 was the only 'natural' feature that had been planned on the surface. It lacked a regular shape and the stain retained moisture and was similar to the features of geological nature from Int.32 and 39. The fill was a coarse sand, equivalent to the surrounding subsoil and was not discoloured, nor did it contain any visible components, it was not excavated.

#### 3.9.3.8 *The Large Ditch*

##### 3.9.3.8.1

The work of Longworth and Kinnes (Int.12) had clearly illustrated the complex nature of the broad E-W 'ditch', scored across the southern side of the plateau. Within F10 the ditch complex had been excavated to reveal three gullies but in F13 it had only been defined in plan and not excavated. The definition surface of F13 was c. 0.20m lower than the subsoil surface of our Horizon 7. F10 had conveniently split the whole complex into two discreet lengths. Sections were laid out across either end of the ditch (D2150 and D2310) and the fill was taken down in plan against these sections. Rather than rely on the results of Longworth and Kinnes' work, the excavators (AJC and SK) felt a thorough re-evaluation of the ditch was necessary using both horizontal and vertical controls. Once the evaluation was complete a major difference was visible in the shape of the sections at either end. At the east end, the profile of D2150 was deep, a few gullies had been discovered in plan and excavated but the section provided a more detailed picture. We had missed the line of one gully

(F562). On the west side the backfill of the ditch had been removed between the western edge of the intervention and D2310 to reveal two parallel gullies, here the section had a broad profile.

#### 3.9.3.8.2

Between the section lines careful stratigraphic excavation using the water spray to provide controlled conditions successfully identified all the components of the complex. Except for a small length of hachuring (A4), all the pre- and post-excavation drawings were completed on A1 but not according to the modular set (see F117 feature package for layout and recording for each component). Apart from F117 the shape of each excavated gully was drawn on a set of hachure plans but in order to achieve the best definition of a fill it was occasionally necessary to lower the surface into which the fill had been cut. Additional sections were also cut across the fill of the gullies at various points in order to map any variation in their profile. Generally, as we moved west toward F10 the overall profile of the complex became broader and more shallow as the gullies began to diverge.

#### 3.9.3.8.3

The latest features of the complex are F562 and F583, no direct stratigraphic relationship separates these features and there are strong arguments to suggest they are contemporary. F562 is a gully, 1.20m wide and 0.50m deep that runs E-W against the norther edge of the ditch complex. Only 13.00m of this gully was excavated but there is no doubt that it continued east beyond D2180 (this was one of the features not recognised in plan at the east end when the original pilot section was cut). The western end coincides with the eroded edge of F10, the Longworth and Kinnes trench. The gully became gradually shallower toward this western end and there was clear evidence to suggest the gully butt ended approximately at the junction with F10 - the sides were merging against a shallow sloping floor. The overall shape and appearance of the gully with a narrow flat base and steep, almost vertical sides suggests this may be a palisade slot, but there was no evidence on the floor or within the fill for any postghosts, indeed the fill was relatively homogenous and did not contain the mottling which was characteristic of the earlier gullies (see later). A typical range of prehistoric finds - ceramic and flint were supplemented by the exception discovery of metal (bronze?) droplets to complete a varied assemblage. A remarkably similar assemblage was also recorded from the earlier gullies. In plan the southern edge could only be defined after a spit of 1217 (F117) had been removed.

#### 3.9.3.8.4

F583 runs along the southern edge of the ditch complex in an E-W direction and in plan the northern edge of this gully could only be defined after a spit of 1245 (F126) had been removed. This gully was 0.7m wide and 0.33m deep and ran for a length of 14.00m between the edge of the intervention, where it was cut by a pit F559, and F10 where the gully butt-ended. The line of this gully is rather eccentric. On the western side it follows precisely the line of an earlier gully (F584) before diverging south as it enters F10. There is no evidence to suggest only this gully was cut further south but it is surely no coincidence that both F583 and 562 butt-end opposite each other and implies that the gap between these gullies was important to maintain. Similarly no traces of postghosts were recognised within the backfill or on the floor of the gully, and the shape of the feature with a narrow flat base and steep sides is closely comparable with the character of F562.

#### 3.9.3.8.5

The remaining fill on the horizon surface belongs to the broad line of a ditch, recorded as F117, F126 and F128 within different quadrants. The original shape and dimensions of this ditch were lost in the cut of the later gullies (F562 and F583) but from the surviving evidence (section and plan) it was relatively broad, 2.00m and deep 0.50m with gradually sloping sides. The fill of the ditch was unique and cannot be paralleled anywhere else on the intervention or the site. 1217 was a very coarse sandy fill which contained localised bands (0.01m thick) of iron/ manganese panning. In section these were visible as horizontal bands of dark brown concretions but in plan they were streaked. One of the patches of panning was cleaned and photographed [N404/22] as a typical

example of the deposit. This fill could only be efficiently removed with a mattock but it provided an excellent trowelling surface and a dramatic contrast with the soft sandy fills of F562 and F583. It was not possible for the excavators to determine whether the panning had accumulated within the fill, the evidence appeared ambiguous. The distribution of the panning in broad horizontal bands was relatively uniform which suggested leaching had occurred only within the ditch, but this distinct panning was limited to this fill alone. On balance this material would seem to be bank make-up which had been thrown back into the ditch. The coarse and abrasive nature of the sand component must reflect the leaching processes that had begun during the time it stood as a bank but continued within the backfilled ditch. The excavations could not indicate on which side the bank stood, the shape of the backfill was rather horizontal, with no clear tip, or weathering lines, and had been cut along the alternative sides by later gullies.

#### 3.9.3.8.6

Beneath F117 lay a continuous gully, recorded along various lengths as F561 and F568. It contained a set of structural components, F563, and this set of features is known as Structure 23. F561 described the gully from the eastern edge of the intervention, to the edge of F10, and from here as F568. At the western end, against the side of the intervention the gully is cut by a pit F559. The structure runs E-W following the line of an earlier gully and diagonally across the current site grid but against the northern side of the ditch complex. The structure was relatively shallow in profile at the eastern end but gradually increased in depth further west as the gullies of the complex slightly diverged. Although only surviving to a depth of 0.20m and a width of 0.50m the structure is clearly similar in shape to the other gullies of a later and earlier phase. Within the backfill narrow horizontal bands of panning were visible but these were not concreted (cf. 1217) and the fill remained relatively soft. Finds included more fragments of metal - ?bronze droplets. At the eastern end and at the base of the gully small subcircular stains were excavated. These were interpreted as spademarks rather than postholes. They eventually ran in an interrupted fashion all along the floor of F561 [N422/7]. The most convincing group lay at the eastern end of F561 up to the section line D2180 [N422/10] [N426/22]. Here thirty out of thirty-one planned were excavated (one was lost through erosion) and although a consistent D-shape they split into two sets, the east set had the arc of the circumference on the right, but in the western set the arc was reversed and on the left. These stains were very shallow, 0.05m deep but with a square profile, the diameter varied between 0.13 - 0.25m, and they were distributed at regular intervals between 0.15 - 0.20m to the centre of each cut. The pattern of the stains suggests that the base of the gully at least along this length was dug by individuals with a spade working away from each other. Various detail of the spademarks was captured by NMB using a medium format camera.

#### 3.9.3.8.7

At the base of the ditch complex lies another narrow gully F571. This gully was the first in the series of features later superimposed above and for that reason must originally have been one of the deepest. Although continuous it was not always possible to separate the side of the gully from later features (see plan D2367), and within F10 severe erosion since 1987 had obliterated the line and shape of the gully in the soft yellow sand. West of F10 the gully was recorded as F584, together with a small rectangular stain, the set of features are known as Structure 24.

The structure was almost 28.00m long and at the western end the gully was cut by F583 which continued presumably along an identical line. The gully runs along the centre of the ditch complex and is square in profile, 0.80m wide and 0.50m deep with steep subsoil sides and flat base [N430/29]. A small rectangular stain F581, 1.60m long and 0.60m wide was originally interpreted and excavated as a grave [N430/31]. Both the subrectangular shape and the fill, which contained lumps of concreted subsoil, were diagnostic of inhumations. Surprisingly the 'feature' was clearly 0.20m deep before excavation was abandoned (no hachure plan drawn), it was clear to the excavator that the stain was just a localised variation within the backfill. There were no post stains within the fill or on the floor of the gully.

#### 3.9.3.8.8

Within F10 Longworth and Kinnes successfully established the nature of the ditch complex. The current excavation added more detail to the picture and we are able to pick out a number of common elements. The ditch complex is composed of at least four phases (refer to 1:50 plans D2366, 2367, 2368 and 2369), each phase is identified by the construction of gullies and a single ditch along broadly the same E-W line. In the final phase it is strongly suspected that F562 and F583 are contemporary. It is remarkable that the size and shape of the *gullies* remains constant during the four phases and it is only in phase three when a broad ditch is cut along the line that the continuity is interrupted. Our overall impression of this rich palimpsest of features is one of continuity. Such a dense alignment of gullies has not been recognised or suspected anywhere else on the site and suggests the ditch complex marks an essential axis of land division that survived for a relatively long period. There are no other features on Int.41 which we can identify as being recut along the same axis. The discontinuity of the ditch complex in Area B (Int.13-16) to the east and Area A (Int.11) to the west illustrates the divergence of the gullies across the heath and emphasises the strategic line of the complex running beneath Mound 5 [N432/29] [N432/3] [N427/8].

#### 3.9.3.9

Apart from the components of the large E-W ditch complex no structures were defined at this horizon. There are various patterns of postholes which do show a degree of alignment but none are convincing. Included in this set is a short row of postholes, F429, F430 and F441 which run parallel to the ditch complex and may be a continuation of a fence line discovered in Area A (Int.11) which ran E-W along the axis of the ditch. Furthermore, no core areas were defined. In part this may be a reflection of the deep cut of the Longworth and Kinnes trenches since these trenches were cut at least 0.20m deeper than the Horizon 7 surface. F9, F12 and F41 were cut 0.50m deeper and only the extremely deep features would have survived, there would be no trace of the majority of postholes.

In comparison with Mound 2 at the same horizon fewer features were defined on the plateau, a total of 118. A few of these were truncated features from Horizon 5 and included a set of equivalent features. The difference between these zones is also reflected in the restricted range of feature classes. Hearths, slots, and burrows were not identified in the Mound 5 zone. However, allowing for the destruction within Int.12, the predominance of postholes in both zones is obvious (71% Mound 2, 72% Mound 5).

#### 3.9.4 *Horizon 7 Between the Mounds*

##### 3.9.4.1

This definition was broadly equivalent to that at Horizon 2 and although the subsoil had weathered for over a year a single trowelling cleaned off the accumulated debris. Consequently the distribution of features follows a broadly similar pattern to Horizon 2. Remarkably a few features survived from Horizon 1 (F60, F61 and F66 [latter equivalent to F46]) but the majority survived from Horizon 2. Plans were traced from the preceding horizon except where the outlines of features had radically altered shape, this particularly affected the features beyond the NE corner of the Mound 5 subsoil plateau, e.g. F395, 400 (compare horizon plans D227 with D916). At Horizon 7, F82 (a pit) had been renamed F508, but F82 was retained to describe a grave beneath the pit. To this corpus of features was added a set of new features only defined at Horizon 7 - (F399, F406, F409, F410, F429, F437, F442, F443, F444, F517, F528, F529, F530, F531 and F585) and a further set seen beneath the horizon surface (F82, F424, F435, F556, F557, F558, F559 and F560). Those contexts and features that did not survive and so were not planned at Horizon 7 (F62, F65, F67, F83, F84, F87, F118, 1268 (F132), 1176 (F394), 1121 (F395), 1180 (F395), and 1181 (F395) included a few that were excavated at the earlier horizon (F56, F57, F112, F113, and F114). At the SE corner of Mound 5 were two pits F129 and F130, these had been incorporated into the discussion of the Horizon 2.4 surface of the Mound zone but the exact position of these pits in relation to the Mound and buried soil in particular, remains enigmatic. They were excavated only at Horizon 7 and in retrospect it is prudent to describe them in detail at this horizon and in this different zone. Within the backfill of each pit lay a grave, the components of the graves (body, coffin, find complexes etc) are not discussed or listed in the indexes of features belonging to this horizon (see Grave Report for comprehensive feature list of grave components). All the features listed on the index were



investigated but a few features planned on the horizon surface had disappeared before they could be excavated (F90, F91, F97, F99, F119 and F121). Under excavation it was not possible to distinguish F59 from F405. On the horizon surface the only direct equivalence to be drawn was between F58 (quadrant Q) and F125 (V).

#### 3.9.4.2

A total of 86 features were described on this Horizon surface and although the same range of feature classes were identified their structure was different. Postholes, pits and scoops account for 80% of the total feature population. All the features were scattered over the zone and this includes an isolated group in the extreme NW corner of the intervention (F68, F69 and F70). The majority of the features are concentrated in the SE corner - quadrant Y. No clear core areas could be identified although the concentration of features in this SE corner is exceptional and comparable in quality and quantity to the preservation beneath the buried soils. After the excavation of Sector 1 and Sector 5 it may be possible to include this as another core area.

#### 3.9.4.3

The class of postholes which together number 43 (50%) illustrates the relatively good state of preservation in this area. There are very few postholes beyond this area and we may suggest the former presence of a buried soil in quadrant Y which protected these features until relatively recently. The postholes range in diameter from 1.20m (F57 and F530) to 0.08m (F102) and in depth between 0.88m (F89) to 0.03m (F585) but these figures are exceptional and an average would provide a clearer indication of the predominant class size. A visual assessment of the figures (see list) suggests an average diameter of between 0.20 - 0.30m and a depth of 0.15 - 0.25m. It should be noted that the majority of features had been truncated to a varying degree by the second clean of the horizon surface. Truncation varied between a depth of approximately 0.05 - 0.20m. No stakeholes were identified although it is clear the dimension of some postholes would fit this ill-defined subclass of feature.

Six of the postholes were recorded as ?postholes where the evidence provided by the feature shape and character of backfill were not convincing (F64, F66, F97, F99, F404 and F530). A few postghosts were seen within the fill of these postholes. These ghosts were again defined by the contrast in the colour and occasionally texture of backfill, they were seen most clearly in section (see F56, F57, F70, F89, F101 and F115). One possible addition to this list is F134 (1810) described as a pit but which contains a suspicious pipe stain. The fill of the pipes varied in colour between a dark and light brown (F56, F70 and F89 belong to the former group; F57, F101 and F115 to the latter). Two of the darker pipes F56 and F70 were relatively rich in finds and visually comparable as a group with other rich pipe fills seen beneath both buried soil complexes. Possible packing around the pipes were identified by a concentration of stones from F101 and F115 although in comparison with other sites this attribute remains unconvincing at Sutton Hoo. Only F530, up against the southern edge of Int.41, was not excavated in full.

#### 3.9.4.4

Fifteen pits were excavated (17% of the total population). These have been split by association into two general groups - an eastern group running down the east edge of the Mound 5 subsoil plateau - F129, F130, F131, F133, F134, F394 and F508; and a second group running down the west edge of the same subsoil plateau and across the north edge - (F395, F407, F437, F556, F557, F558, F559 and F560). No pits were recognised in the arc around the southern edge of the subsoil plateau.

**(NOTE: THESE QUARRY PITS WERE RE-EVALUATED DURING LATER ANALYSIS IN 1991; see section 7.243 below)**

The eastern group were seen as a separate unit by mapping, they were also relatively shallow (see pit dimensions list) and most significantly were associated with burials (inhumations). However, F131, F134 and F394 did not contain burials, but F134 and F394 are smaller in size and certainly do not belong to the western group. The graves were apparently cut through the backfilled or

partially backfilled pits (see Grave Report).

The western group are deeper and may be associated with quarrying possibly for Mound make-up [N426/8]. Down the western side the series of pits run in a straight line NNE-SSW slightly tangential to the axis of the site grid. Only the pits at the northern end of this run were completely excavated. The other pits were only excavated up to the edge of the intervention. At the north end the line of the pits is matched by two shallower features F57 (described as a posthole) and F71 (described as a pit). The shape of both these features has been severely truncated, reflecting the impression that the band of subsoil between the two mounds has been subject to severe truncation. Indeed F71 lay beneath F42, the outer cut of the Mound 2 quarry ditch and may suggest a unique stratigraphic link between the construction of Mound 2 and Mound 5. At the extreme south end of this line another quarry pit, F437, later defined in Int.44 as the butt-end of a similar quarry system, had cut another possible Mound 5 quarry pit F560. The series of pits lay beneath a remarkably uniform fill, variously described as F58, 116 and F125 1244. The excavators noted that the fill of this definition spit was similar in nature to the fill of F42, and had possibly derived as a result of a relatively recent ploughing regime. Remarkably all the pits respected the position of each other and there is no doubt they are all broadly contemporary, they were either dug at one time or their position was still a recognisable feature in the landscape. On the *subsoil* surface only a narrow berm separated each pit. This pattern would continue even if we included F57 and F71 in the discussion and, I suspect, projected their dimensions onto the turf surface. Stratigraphically this line of pits are relatively late in the sequence; they have cut the large E-W ditch complex (F117) and the enclosure (S22) which were sealed beneath horizons of the buried soil. (A similar pattern is noted for the eastern group of pits where a few also fall across the backfilled ditch).

The two pits which lie outside the north side of the plateau cut another ditch F61, but this has no stratigraphic relationship with the buried soil. Both pits (F395 and F407) were completely excavated; they are both remarkably large by Sutton Hoo standards. Generally the character of backfill of this western group was diverse. Apart from F557 there was no clear indication of deliberate backfilling within any of these pits. The upper layer of F557 - 2046 was distinctly sandy and similar in character to the adjacent subsoil [N421/12,13,15,16]. fills from other pits contained lenses of coarse washed sand (F556, 2037, F407 1184) suggesting that erosion was relatively severe once the pits were dry [N415/8-12]. In contrast the dark brown and silty fills from F395 2018 and F559 2043 also occurred on the floor of the pits but must have derived from a different source and under different conditions (?in water) than the coarse washed sand. A concentration of stones as a component of the pit backfills was noted in F557 2038, F558 2039 and F559 2040 and remarkably a few live worms were pulled out of 2040! The finds assemblage from *all* the pits contained the usual range of prehistoric debris. Exceptional finds were the organic stains of animal and possibly human remains within the backfill of the pits on the eastern side - directly associated with burials, but one exceptional discovery of *bone* from F395 did not belong to a grave within a pit.

Surrounding the arc of pits beyond the NE corner of the Mound 5 subsoil plateau were a scatter of features described as scoops (F132, F400, F401, F402, F403, F405, F406, F409, F410, F411 and F436) representing 13% of the total population. Archaeologically these appeared to have been severely truncated and could represent the abbreviated remains of different feature classes. Although they were various sizes and shapes, as a group they are significantly shallow, ranging from 0.30m (F436) to 0.04m (F132 deep. One of the scoops, F400, was initially treated as a grave but the fill bottomed-out at a depth of only 0.16m with no trace of a grave. F411 contained a concentration of charcoal and burnt debris (flot sample), but the majority of scoops remained rather enigmatic and without a particular character.

### 3.9.4.5

The remaining classes of features which included a ?Hearth (F34); a No Feature (F59); a Gully (F68); a Ring Ditch (F113); a Slit trench (F399); Natural (F442); two Burrows (F408 and F104); five Graves (F114, F424, F82, F435 and F517); two Ditches (F60 and F61); and finally a Definition Spit (F58/125) account for the final 20% of the total population. The graves and ring ditch are discussed in detail in the Grave Report. Two of the feature classes - the ?Hearth and Gully are only tentatively identified. The ?Hearth, F34, was identified by the excavator since it contained a deposit of burnt

debris which was broadly similar in character to F551 (Mound 5 Zone Horizon 7). There was no evidence for any *in situ* burning within or adjacent to this feature and I would question the interpretation of this feature as a hearth. In retrospect it would fit conveniently into the class of postholes.

F68 was one of the three features excavated in the NW corner of the intervention. The excavation of F68 remains incomplete since only the SE corner lies within the intervention. Although described as a gully, there is no evidence to suggest the precise shape or dimensions of this feature. The description of the feature was offered by the excavator who projected the profile and shape of the excavated portion.

From the total feature population only F442 and F59 remained unexcavated. The latter could not be distinguished during excavation from F405 but F442 was left as a moisture stain and was assumed to be geological in origin. Both F60 and F61 were described as ditches but in shape, size and profile are virtually identical to a set of gullies excavated at Horizon 7 within both the Mound 2 and Mound 5 Zones. Unfortunately, the shape of F399 also provided contradictory interpretations (see Grave Report), it was seen by the excavator and Director as an empty grave but was similar in shape to slit trenches excavated within Int.44 (F70 and F110).

#### 3.9.4.6

At this stage structures were only identified by the association of features. In the SE corner of the intervention, in quadrant Y, an irregular line of postholes (F100, F102, F103, F105, F106, F107, F108, F109, F110, F111, and F120) belong to the fenceline (S7). These postholes are smaller and not as deep as the set across Mound 2 Zone but continue the line of the structure after a sterile gap of approximately 31.00m. The exact components of this fenceline in quadrant Y are difficult to establish given the scatter of small postholes along the line of the structure and selection was on the rather arbitrary basis of the 'best fit'. The centre of the postholes are regularly set at approximately 0.50m intervals, reflecting the pattern established on Mound 2.

A second tentative structure was identified by the excavators within this scattering of postholes - F112, F115, F101, F98, F94 and F95. An alignment of four deep postholes F98, F112, F115 and F101 marked the eastern edge of this structure and included a possible entrance way between F101 and F115. No other components of this 'Roundhouse' were recognised, certainly F34 cannot be seen as a hearth. No structure number was allocated to this group of postholes.

A few of the pits lie across the boundary of the buried soil and subsoil plateau - F395, F129, F130 and F508. The stratigraphic order of these pits remains ambiguous since the evidence for a convincing stratigraphic relation was not clear, for example F395 was recorded as sealed by the deposits of buried soil. On the western side the association of buried soil and pits is less equivocal with the line of pits lying slightly tangential to the arc of buried soil.

#### 3.9.4.7

In the Adjacent Zone the structure of the different feature classes is radically different from the structure described on either of the subsoil plateaux - pits are more dominant 17% (Mound 2 - 4%: Mound 5 - 3%), and postholes are less populous 50% (Mound 2 - 72%: Mound 5 - 71%). Although the discrepancy in the percentages as totals for each population may reflect a pattern of functional variability, it is strongly suspected that the postholes in this zone have been lost by erosion and truncation. We can predict the original distribution of postholes on the zone surface if we believe the fenceline structure (S7) continued south of the Mound 2 plateau. If we ignore all the postholes in quadrant Y, which were a remarkably preserved set, the lack of postholes in the remainder of the zone is obvious and they account for only 35% of the total posthole population (i.e. 65% or 28 postholes survive in Y alone). Not only have postholes been lost but attributes which characterise this class of features would also have been severely truncated leading to the tentative identification and the description of a few scoops. Concurrently, we can also establish a drop in the number of postholes containing postpipes (6) (which often belong to the upper half of the features fill) and it is no surprise that only a few postholes contain the exceptional rich darker brown fill which

characterise the majority of the pipes.

### **3.10 The Definition and Recording of the Early Medieval Graves**

#### *3.10.1 Procedures*

##### *3.10.1.1*

The excavation of Int.41 (Sector 2) was conducted between August 1986 and June 1989. This report is concerned with presenting the results of the excavation of the burials from Int.41. The burials are either inhumations or cremations but the scope of this report also covers those features which were recognised on the surface of the horizons as burials and excavated as such, but which were empty. Although they are a significant part of the burial rite, the complex central burials from beneath Mound 2 and Mound 5 are not included in this section (see 7.1 and 7.2). The child's burial, also a "mound" (Mound 20) is however referred to in this report.

##### *3.10.1.2*

Graves had already been excavated from beneath the turf by Longworth and Kinnes (Area A and C) but in contrast to Zone F (Int.32), we could not necessarily expect 3-dimensional body stains. Indeed the destructive nature of the thick sward of bracken which had invaded the turf and sub-turf levels had already been noted (Int.33). The bracken root system seemed to favour the rich organic resources provided by the body stains. Finally, the excavation afforded an opportunity to record the relationship between the burials beneath the Mounds and the diverse inhumation cemetery which was predicted to lie around the mounds. This relationship had not been studied to any extent by the earlier excavators. The excavations of Mound 1 were confined to the perimeter of the barrow and the work of Longworth and Kinnes was on a relatively small scale with limited objectives (Longworth & Kinnes 1980:7).

##### *3.10.1.3*

The evidence for this report has been provided by the excavation records and from my own experience of supervising the work on Int.41. Only a very cursory assessment of the finds recovered from the burials has been attempted. Most of my attention has been focused upon the feature packages which contained the context records, drawings and diary notes of the excavation. I have not integrated the photographic records into the report. However, the photographic coverage is quite comprehensive and record shots have been taken at recording intervals as the excavation of the burials progressed. Since their excavation, all the complex burials have been allocated structure numbers wherever relevant. I will refer to the feature and structure numbers for each burial. This report does not aim to be a critique of the excavation methods employed to dig the burials. Our methods have become more standardised but it is worth emphasising that it is still necessary to have a flexible approach, since it is difficult to predict the geometry of each burial. Following my critique of the methods used to excavate the burials from Int.32 (Copp 1986 Y8) a set of recommendations were put forward by the director. These were adopted for Int.41 and modified during the course of the three years. The framework provided by these recommendations were primarily developed for use inhumation burials. For the smaller and less complex cremations a standard level D recovery level was employed. During the first eighteen months of the excavation, when work was concentrated on removing Mound 2, work progressed carefully and slowly. This response was in part due to the lack of experience in the workforce, including the supervisors, but our major objective was to locate and define at the earliest horizon any feature including burials dug into the Mound or the associated terrain.

##### *3.10.1.4*

Burials were seen cutting the surface of various horizons (see 3.3). Out of the seven horizons defined over Int.41 suspected burials were recognised at every horizon except horizon 0, the turf surface! They were defined by a variety of attributes against the appropriate horizon surface. At the lowest level of our recording hierarchy is context recognition. There were four categories of context

recognition for the burials. These categories were:

- A. Distinct colour variation exhibited by the fill.
- B. Incorporation of distinct components (e.g. lumps of subsoil, concentration of bracken).
- C. Differential drying of the fill i.e. moisture retention or deficiency.
- D. Textural variation.

Feature recognition i.e. identification of a burial depended on identifying an appropriate shape or cut for the burial. For the inhumations, a subrectangular shape is standard. The confidence with which these features were excavated as burials relied not just upon the surface indications afforded on the horizon surface. As contexts were removed within the feature a regular monitor was kept of the shape of the hole and the shape of the backfill. Reading the geometry of the feature was essential in understanding the archaeology. The burials were not always seen on a horizon surface. It is suspected that some burials were cut by later features. The cut for Burial 46, F424 and Burial 47, F435 had been screened from the horizon surface by the fill of later pits, (F130 and F133 respectively). Inversely, it is also strongly suspected that some burials had been cut through pits - Burial 41, F82 and Burial 49, F517 cutting F508 and F129. At the junction of the fills between the burial and the pit Kubiena boxes were driven in. This should provide independent confirmation of these relationships. The archaeological evidence from F517 is unambiguous. In this inhumation grave the body lies above the floor of the pit F129. On balance it is reasonable to assume that F82 and F517 were cut from an horizon surface and consequently they have been included in the tabulated set of burials defined on an horizon surface. There is no evidence to suggest that burials were cut through only partially silted features (but see 3.10.1.5 and 3.10.3.4). Two of the three burials discovered by Longworth and Kinnes in 1970 had already been completely excavated by them: Grave 1 (F588); Grave 2 (F590). These cannot be assigned to a specific horizon. However, Grave 3 (F154) was only partially excavated by Longworth and Kinnes. The western end was left untouched and intact from the horizon surface. This has allowed us to establish the horizon and assess the recognition of the burial.

#### 3.10.1.5

The burials that have been tabulated as individual features are grouped into three sets. The first set are the burials that were empty (this includes both inhumation and cremation), the second set are the burials that were inhumations and finally the third set were cremations. The fill of all the burials recognised on the horizon surfaces exhibited a distinctive colour variation. The shape of the feature was also a significant attribute for the burials that were inhumations and to a lesser extent for the burials that were empty. From this latter group all were suspected inhumations apart from F27, a possible cremation. In contrast the shape of feature was not an important attribute to record for the set of genuine cremations. Generally, the cremations were recognised by a combination of distinct texture and variation in the colour of the fill against the horizon surface.

The incorporation of distinctive lumps of bedded subsoil into the backfill of the feature had been noted as an attribute of the fill quite specific to burials, particularly inhumations. Burials are often cut through soft sandy subsoil and into bands of bedded subsoil. These broken lumps of bedded soil are incorporated into the backfill of inhumation burials. There are many examples from Int.32 where the fill of inhumation burials contained these lumps (e.g. F39, F40, F146, F154, F163, F166, F235) and they can also be parallel from the fills of the central burials beneath Mounds 2 and 5, Int.41. On the horizon surface only two features F54 and F426 contained similar subsoil lumps and surprisingly both were empty burials. None of the genuine burials from Int.41 exhibited this attribute. Other distinctive components which were noted from the fill of the burials were very limited in range. Pebbles were concentrated over the surface of the suspected cremation F27 and a concentration of bracken on F54. Under the dry conditions prevailing during the summer seasons of excavation on the soft well drained subsoil, the recognition of features including burials has often relied upon the differential drying of their fills. Three burials exhibited a differential drying stain: F124, F399 and F123. All were initially recognised as inhumations but only F124 contained a body. The impression that feature cuts are easy to recognise is incorrect and does not take account of the desperate effort invested in achieving a readable horizon surface. Apart from the environmental problems outlined above, fills may often be difficult to separate from the adjacent surface. Burials, whether cremations

or inhumations were backfilled almost immediately. Often the colour and even texture of the fill matches the surrounding surface. Even on the subsoil surface of Horizon 7 the true outline of F486 was not correctly defined, the sandy yellow backfill at the north end could not be distinguished from the subsoil until the surface had weathered over a few weeks. The outline of F86 and F154 on the buried soil surface was difficult to follow since redeposited buried soil had been thrown into the upper fill of the burials. Many of the graves had also suffered from localised animal disturbance. Their burrows and the upcast produced by the tunnelling had mixed the backfill and had destroyed edges. The mixing can be very distracting when the strong yellow subsoil sand has been scattered across the surface.

### 3.10.2 *Empty Graves*

#### 3.10.2.1

Apart from F193 all the features originally designated as burials whether as cremations or inhumations were excavated. The features that were subsequently designated as not being burials were empty; they did not contain a recognisable cremations deposit or a body stain. At the outset the majority of these empty burials were thought to be inhumation graves. F27 was the only cremation initially identified in this group. All the empty graves were subrectangular in shape and were initially convincing as graves on the original horizon surface and generally remained convincing during excavation. These features were recognised across a variety of terrains and at different horizons. In some instances it became clear from the character of backfill that a grave was not genuine (i.e. contained no body). During the excavation of F194 from the Horizon 4 surface a great amount of animal burrowing was uncovered. Not only were individual burrow runs clear but bedding debris - leaves and bracken - were exposed. There was no doubt that a burrow complex of recent origin had caused the original surface stain. F193 belonged to the same class and was not excavated.

#### 3.10.2.2

Few of the empty graves were shown to have been spurious. Most of the them were unequivocal in size and shape: they were clearly negative cuts with steeply sloping sides and flat floors. They usually contained no finds apart from the residual and ubiquitous scatter of flint and flint debris. Some may have been slit trenches dating to the Second World War. Two features which had been so identified were sub-square and produced some spent bullet cases (F28, F29). Similar empty subrectangular features have been uncovered in Int.44 (F70, F110). F70 contained an ammunition bullet clip but no spent cartridges and exhibited tool marks probably from an entrenching tool. It is possible an analogy that F123, F127, F54/146 (S21) and F399 are also Second World War slit trenches. If they can be grouped together they must certainly be very late in the archaeological sequence. F54/146 (S21), was seen at Horizon 1 cutting the latest filling of the Mound 2 quarry ditch F42. No tool marks were observed during the excavation of these features. Although possibly belonging to this group F426 is not so conveniently classified. The feature is slightly larger and deeper but the sides are not cut as steeply. There is no doubt the feature *was* cut through the buried soil of Mound 5 and deliberately backfilled with the same material. The shape of the feature and its position near the central burial F390/417 of Mound 5 does suggest this pit may have been an attempt at robbing the central Early Medieval cremation. F140 and F144 were unconvincing as graves during their excavation. There was no confidence expressed that any of their edges were genuine. Even after enhancement with water and very careful cleaning the situation did not improve. These features were abandoned after consultation (with MOHC and AJC). F140 was considered to be a non-feature; F144 was described as a possible burrow. F27 originally identified as a cremation, was another burrow. The concentration of pebbles which marked the nucleus of the feature were superficial. They were removed to expose a burrow. The origin of the stones is a mystery, presumably the rabbit did not create this burial alone! There are two possible explanations, they may be a dump of stones from Basil Brown's sieving operations in 1938, or they were collected from out-cast from the slit trenches.

### 3.10.3 *Inhumation burials*

### 3.10.3.1 Method of excavation of inhumations

A variety of methods was employed to excavate the graves. Without going into detail on an individual basis, a number of factors account for this variation. Although a standard recording system for graves was introduced following our work on Int.32, over the three years that Int.41 was excavated the system developed further. Also excavators have adopted slightly different approaches within the recording system to overcome particular situations. Finally, the implementation of certain sampling strategies had a significant impact upon the excavation of the graves. Contexts were allocated to the various backfills within the grave. The body and grave cut were given separate feature numbers. The body was recognised by its shape, and any colour/texture variation on the body surface was recorded by context. Drawings of the body or grave were completed using a planning frame. The frame was located on a mini grid of 6" nails using the Psion to anchor the position of each nail. Within the confines of the grave the surveying wand was too clumsy. After the outline of the grave fill had been defined on an horizon surface subsequent recording levels within the grave were established either by spit depth (usually 0.10m), or context (the appearance of new context). At this point a new colour coded overlay plan was drawn. Since some graves were not recognised on the horizon surface (e.g. F82, F517) the levels at which planning began may only have occurred well into the backfill of the grave. Only longitudinal sections were drawn through the grave fill. These were drawn before the trailing side of each level was lowered onto the cumulative section. The majority of the sections were drawn through the fill and onto the surface of the body. At this level the section was abandoned and the body stain was exposed and excavated in plan. At a rather late stage in the excavation of Int.41 (January 1989) sections were cut through the backfill and through the body stain onto the floor of the grave, with the object of recording the contact of the body with the grave floor. If a time lapse had occurred between the grave being cut and the insertion of the body this should be reflected in the weathering/erosion of the grave floor. This approach was only applied to grave F124 (S13). The only other grave to be excavated after this was Burial 49, F486. This grave was slightly more complicated and required complete excavation in plan. Within the graves organic shapes other than body stains were not recorded in a standard manner. The organic stains from Burial 41, F82 were allocated feature and context numbers (F507, F509) but the stains from Burial 49, F517 were only allocated individual find numbers.

### 3.10.3.2 Method of excavation of cremations

Although not tabulated the excavation records for the cremations are more limited and uniform. This reflects in part the lower recovery template employed during excavation (generally Level D recording, only F225 was dug at Level E). The cremations were excavated during a relatively limited timespan and by fewer people. Generally the cremations were uncomplicated features containing no more than two contexts and were cut into the subsoil surface. Slightly greater attention was lavished on F225. Initially we attempted to remove the features, including the cap of fired clay which overlay the deposit, in a single lump by cutting a box section around the feature. However, because of the fragile and unstable nature of the subsoil this method was abandoned. The feature was then dug in plan at Level E. The cremated bone fragments were allocated find numbers and plotted on a 1:1 plan.

### 3.10.3.3 Sampling

#### 3.10.3.3.1

From the analyses of the graves and associated body stains of the earlier excavations of Int.32 the Leverhulme Trust Projected (LTP) developed a set of analytical procedures which were implemented for Int.41. A systematic sampling array was set out over the grave (Appendix B). The array was set out at 0.10m horizontal intervals along a longitudinal axis and across two transverse axes. On the vertical plane sampling was to be at 0.05m intervals. Once the body was exposed the organic stain was to be sampled at regular intervals of 0.10m.

#### 3.10.3.3.2

The varied archaeological terrain of Int.41, which contained Mounds, quarry ditches, and buried soil

plateaux within a flat setting, would offer an opportunity to sample graves from a variety of micro-environments. This variation was not present on Int.32 where all the graves were recovered beneath a ploughsoil belt and directly cutting the subsoil. An attempt was made to sample the graves from each terrain. Only the burials assumed to be inhumations were selected for sampling by the LTP. Unfortunately, these graves did not always contain bodies. Out of the nine burials sampled, five contained bodies. In two instances the sampling was abandoned before the grave was completely excavated. Although there is no written explanation it would appear the sampling was suspending on Burial 42, 43 F86 because of the problems of visibility caused by the burrows. F399 was abandoned after the first series of samples were retrieved following consultations with AJC and MOHC (we decided that a grave from this terrain had already been sampled). Only three out of the seven different archaeological terrains contained burials with bodies which were successfully sampled for the LTP - a grave cutting a prehistoric feature Burial 12, F114; three graves cutting the buried soil Burial 40, F81; Burial 42,43, F86; Burial 45, F154: and a grave cut by a pit Burial 47, F435. Although the body stain from grave Burial 45, F154 was sampled this did not include any of the backfill.

#### 3.10.3.3.3

Body stains that were sampled for the LTP were divided into small units approximately 0.10m in length, each unit was sampled. The main point of this strategy was to remove 30g samples at regular intervals. More than one sample was taken from each anatomical portion. Sampling was not always a straightforward process. The body and coffin stain, F147, from grave Burial 12, F114 could not be separated. The presumed body stain F418 from grave Burial 47, F435 was not articulated and because it was so incomplete the whole stain was removed as a single find and sample. Sampling was specifically targeted onto the stain and not the skeleton thus the soft bonemeal accompanying the stain of F152 within grave Burial 40, F81 was left and removed later, anatomically.

#### 3.10.3.3.4

From the remaining set of burials that were thought to be inhumations the sampling array was more limited. Only one 30g pollen sample per context was removed from the backfill of each grave and occasionally the excavators sampled for macroscopic remains (10 ltr Flot). Only three contexts, which belong to the backfill of the grave, were not sampled for either pollen or flot, 1322 (F140), 1362 (F144) and 1515 (F193). All these burials were empty and F193 was not excavated.

#### 3.10.3.3.5

The body stains were also sampled in a slightly different fashion. Once the body was allocated a feature number and the stain a context number the body stain was recorded and removed. The body was divided into general anatomical portions depending upon the detail visible within the stain. Each portion was allocated a separate find number, lifted and removed. Only in exceptional cases was more than one context number allocated to the body stain. The body stain F499 from Burial 46, F424 was allocated two context numbers, one for the body stain (1917) and one for the bonemeal (1928). Although unsuccessful, the excavator attempted to remove the stain against the bonemeal to expose the skeleton. F499 is the only body stain that was allocated a set of context numbers. If bonemeal or bone was present when the body was removed then a skeleton record sheet Y3.1 was filled out but often bonemeal was only visible during the actual removal of the body stain. During removal, the anatomical portion that was being lifted would be allocated a single find number. However, after cleaning off the stain from any bonemeal the find would split into two distinct groups. A new finds number would then be allocated to the bonemeal. All the bonemeal fragments from the single anatomical portion that was lifted was kept together as a single find (Appendix C).

#### 3.10.3.3.6

The division of the body stain into anatomical portions and the lifting of the portions was generally a straight forward process. The removal of the bodies F148 and F149 from Burial 42 and 43 F86 was more complicated. Three different sets of people were involved in dismantling the bodies. Parts of the bodies and the suspected extra portions were removed by ACE during routine excavations of the



grave. Once the full body tableau was exposed MJ and JR removed portions of F148. The remaining portions of F148 and all of F149 were removed over three months after the tableau had been exposed, by AJC and KD.

#### 3.10.3.3.7

Part of the dismembering process involved the recovery of pollen samples from the localised region of the stomach. Three 30g pollen samples were recovered from the localised region of the stomach. However, the exact position of the stomach was not easy to locate. Apart from the uniformity of the body stain both in colour and texture it was not always possible to be confident about even the posture of the body - was the body lying on its front or back? This uncertainty was reflected in the recovery of only one 30g pollen sample from the 'stomach' of F499 from Burial 46, F424.

#### 3.10.3.3.8

None of the fills belonging to the cremations was sampled for the LTP. Sampling, therefore, was according to context. The fills and cremation deposits were sampled for chemical analysis and occasionally pollen. Apart from 2052 (F566) all the fills from the cremations were kept. Generally the fills were of limited volume and rather than rely on purely macroscopic inspection of the fills during excavation the fills were kept for laboratory analysis. We need to establish whether our identification of the sticky, clay deposits as cremations can be supported independently.

#### 3.10.3.4 *Burial Rite*

##### 3.10.3.4.1

Burial by inhumation was within subrectangular graves. The bodies survived as a crusty organic sandy stain, dark red brown in colour. The graves contained the bodies of single individuals except for Burials 42, 43, grave F86 which contained bodies of at least two people. Apart from Burial 12, F114 all the bodies, according to the length of the body, were of adults. F114 is thought to have contained the stain of a small child (F147), but unfortunately this could not be distinguished from the organic stain of the coffin (apparently MOHC identified the head at the west end of the grave - see 7.1.3. Generally the bodies were exposed on the floor of the grave where they exhibited a range of postures and orientation. The bodies lie on their side, front or their back in both extended and flexed postures. However, both F147 and F418 were so badly preserved that it was not possible to ascertain their posture. Only a small fragment of organic stain (F418) was recovered from the grave F435. This body was certainly *not* articulated or complete (in the site notes this stain is recorded as a 'human leg'). There were no coffins/containers associated with the bodies or graves apart from the child's grave Burial 12, F114. The absence of coffins reflects the burial situation where the bodies were not interred in containers. Careful excavation of all the burials failed to locate any of the diagnostic organic stains associated with the containers.

##### 3.10.3.4.2

The burials exhibited a range of ritual processes, illustrated by the situation of the body in the grave and by the nature of the accompanying organic stains. Decapitation is clearly witnessed by F555 (F486, Burial 48) where the head has been placed near the ankles of the corpse. Similar severe trauma was also recorded from the graves F81 and F86. The heads of F152 and F148 (F81 and F86 respectively) appear to have been detached before burial. The head of F152 had been detached and turned through 180° so the neck was against the west wall of the grave, and the head of F148 was similarly detached so the crown of the head was in contact with the floor of the grave.

##### 3.10.3.4.3

Burial posture is another attribute which may illustrate ritual character: F524 (F517, S17) lies in an extended posture apart from a dramatic bend at the neck. It is possible that the neck was bent to fit the body in the grave but the accompanying extra collar of organic staining at this point requires explanation. Apart from the thickening at the neck, the stain was a slightly different colour and

texture from the body. It was also possible to remove the collar to expose the line of neck vertebrae. The evidence supports the impression is that the stain may represent a wood/rope collar that had been attached to the neck. The neck stain was allocated a separate feature number F525 and removed as a single find. (See report by T O'Connor .....).

#### 3.10.3.4.4

At either end of the grave F86 (as the final tableaux of the body stains F148 and F149 were being exposed, extra pieces of human body were uncovered. These extra pieces were noted both by the excavator (ACE) and by the specialist who supervised the removal and analysis of F148 (Appendix D). At the feet of F148 extra rib pieces were identified and extra jaw fragments were recovered from the north end of the grave against the north wall. Further study of the bone fragments from this grave are required to assess the status of this extra body. It is clear they do not belong to an articulated individual. F86 is not the only grave which contains evidence of extra organic stains. Very distinct stains were recovered from Burial 49, F517 and Burial 41, F82, but in these instances the stain was clearly incorporated as part of the backfill thrown into the grave. The extra pieces of body from F86 are thought to have been deposited when the two complete bodies were interred (F148 and F149).

#### 3.10.3.4.5

Ten separate organic fragments were recovered from Burial 49, F517. These fragments were recovered as separate finds from the fills of F517 (1961 and 1974). The fragments were between 0.035 - 0.007m long with a diameter of 0.002 - 0.005m. They were generally set horizontally within the fill of the grave. Surrounding each soft stain was a dark brown organic envelope. The soft cone of the fragments had rotted but still retained its structure. The fragments may represent pieces of decayed animal horn. Macroscopically, they do not appear to be consistent with a human body stain. The fragments are distributed throughout the backfill of the grave, and appear to have derived from a localised source. F517 cuts through a pit F129, and within the pit two fragments of identical horn were recovered. It is possible that the fragments may have derived from a single cone of horn deposited within the backfill of F129. However, it is just as clear that the grave (F517) was dug through the pit before the horn cone had rotted to a sandy organic stain. The survival of organic objects is generally so poor that it would be exceptional for the horn fragments to survive the trauma of being redeposited after any length of time.

#### 3.10.3.4.6

A second set of organic stains were recovered during the excavation of Burial 41, F82. Only two stains were recovered and both were given separate feature numbers F507 and F509. These stains were distinct from the horn fragments discovered within F517. Their colour and texture was very similar to the organic stains of the bodies. There was no conclusive proof that the stains were human, and no bone/bonemeal was visible during removal. The body stain (F510) that lay on the floor of the grave (Burial 41, F82) was complete apart from a length of the left femur just above the knee joint. No localised animal activity was seen in the vicinity of the knee which would account for the absence of leg stain. It was certainly not caused by over vigorous excavation. Coincidentally the organic stains F507 1938 was recovered almost directly above the gap in the body stain. The organic stain is also generally the right size and shape to fit the missing gap in the body stain. The stains are separated by a depth of almost 0.50m of backfill! From the evidence it is impossible to ascertain whether these organic stains were deliberately incorporated within the backfill.

#### 3.10.3.4.7

Only one grave incorporated a set of deliberately deposited artifacts. This grave, F114, is assumed to contain the burial of a child within a ring F113. The whole complex has retrospectively been designated Mound 20. Apart from the indistinct coffin, three metal finds were recovered, an iron spear head (Find 36522), a bronze buckle (36523) and a bronze pin (26524). There are no specialist reports available on these metal finds to date. The size of the objects appeared to reflect the age of the person buried in the grave. Presumably it was also a reflection of the status of that individual. Any other finds recovered from the burials are of a ceramic, flint and bflint debris.

#### 3.10.3.4.8

Potentially inhumation graves could be encountered at any horizon. The excavation of Int.41 has shown that the majority of the inhumations were revealed on the Horizon 2/4 surface around Mound 5. Even at this horizon, which coincided with the surface of the buried soil, there still remained a small group of burials that had not been defined (F486, F82, and F517). The latter two features had cut earlier pit fills, and in retrospect more attention should have been lavished on the careful cleaning of these pit fills to identify the cut lines of the graves. The discovery of F486 only on the subsoil surface of Horizon 7 certainly illustrates the difficulty in mapping the location of all the inhumation burials. Presumably this grave cut the buried soil horizon (2/4) but no trace of this cut was recognised during the recording of this surface or subsequent horizons within the buried soil.

#### 3.10.3.4.9

Apart from a few obvious exceptions, the graves were all of a relatively standard depth between 0.50 - 0.70m deep. The data has been retrieved from the site drawings and the maximum depths of the graves has been illustrated. Two of the grave cuts had been rather severely truncated (up to 0.15m) by continual re-cleaning of horizon surfaces (F486, F124). One of the shallowest graves F435 was only discovered within the limits of a later pit, F133, which had truncated the full profile of the grave. The profile of the other grave that had been cut by a pit, F424 survived since part of the grave cut lay beyond the perimeter of the later pit F130. One exceptionally deep grave F82 stands out. At a depth of nearly 1.10m it is almost 0.40 deeper than any of the other inhumations. The four graves either cut by or cutting a pit also appear to have originally been dug deeper than the remaining group F82, F424, F517 and F435. This variation is not a function of the geographical position of the graves, since there are examples of shallow graves adjacent to the deeper set and generally the subsoil surface around and beneath Mound 5 is relatively flat. Finally, it is also possible to use the chart to predict the approximate depth at which a body stain will appear. Again the highest and lowest point of the body stain AOD has been charted. Although this would tend to give a false impression of the thickness of body stain present in the graves it was clear that most of the bodies were lying horizontal on a flat grave floor. I have attempted to illustrate the vertical body space. All the bodies except one would have been contacted within 0.40m of the horizon surface and most within 0.30m. Again the one exception to this pattern was the body F510 from the grave F82. This body is a remarkable (and uncomfortable) 0.75m below the surface of the cut!.

#### 3.10.3.4.10

There is no evidence for any of these burials having been robbed or ransacked. Apart from the two graves which may have been cut by later pits none of the graves was cut by later features. The problem of defining intercutting features on the horizon surface has been outlined earlier. If we cannot establish the relationship of features on the horizon surface then we must rely on careful inspection of the fills during excavation. It is essential that we position our section lines with respect to the axis of the pit and grave. This is extremely difficult and can only be based upon very flimsy evidence. Even the axis of the most clearly defined grave may need to be altered as the excavation of the backfill progresses. It was luck that the sections laid out across the pits F129 and F508 coincided roughly with the position of the graves F517 and F82 respectively. The evidence that the pits were cut by each grave could be seen in these sections. At the junctions of the two features, pit and grave, Kubeina boxes were driven across the fill (F129/517 Find 41384); (F82 F508 Find 41032) and those will provide an extra objective assessment of the fills. There is supporting evidence, especially from the position of the body above the floor of the pit and the recovery of organic stains from both the pit and grave fill of F129 and F517 that confirms their relationship.

#### 3.10.3.4.1

Both F435 and F424 were cut by pits F133 and F130 respectively. The only recorded basis of this judgement was the variation in the composition of the fills between the graves and the later pits. Although this is a valid archaeological judgement the situation demands a means of independent confirmation.

#### 3.10.3.4.1

Further uncertainty surrounds the interpretation of the postures of the body stains within the graves. Only very crude assessments of the body posture are possible. Apart from the position of the head, there are very few attributes which can be recorded on the remainder of the body which would illustrate unambiguously whether the body is laying on its front or back. Even if the head is articulated with the body, the head may be twisted in different direction. There is no direct relationship between the position of the head and body. It is really only the evidence provided by the shape of the pelvis and the identification of the knee caps which provide unambiguous evidence. These crucial anatomical features cannot always be isolated. The post-depositional decay of the body stain should not be underestimated, particularly if we are going to rely upon the position of the body to read ritual trauma. The attitude of the head at the end of the neck would appear to be the most susceptible to post-depositional movement. Unless we model the decay trajectory of the bodies using case studies, it is difficult to assess the likely movement of anatomical positions. It is difficult to believe that post-depositional movements of the body account for the exceptional position of the head of F152 and F524. However, it probably does account for the unusual position of the pelvis and leg stains of F510 from grave F82 (Burial 41).

#### 3.10.3.4.1

None of the body stains were established with vinamyl. All the bodies were removed during routine excavation. The cemetery was not presented as a formal public display and no replicas were moulded of any of the bodies. However, the body from grave F154 was selected for detailed 3-D recording. A 3-space tracker machine was brought out by a team from IBM Winchester (P. Reilly, A. Walter) and the outline of F55 was digitised. Readings were taken across the surface of the exposed body tableau and also of the negative imprint of the body on the floor of the grave after it had been dismembered.

#### 3.10.3.4.1

The preservation of the bone and organic stain varies within each grave according to the localised environment. Bone preservation is best on the underside of the exposed body surface. Generally the heavier and larger bones are preserved - skull, femur, articular ends - together with the teeth. The detail preserved in the organic stain can be quite exceptional; even individual rib bones could be seen in the chest cavity of F542 in grave F124 (Burial 44). Further attention was lavished on photographically recording the very well preserved feet stains of this body. Specialist reports on the body stains F148 (F86) and F55 (F154) have been written. These are of rather limited scope but do illustrate the potential for further study. The record sheets (Y31) provide the basis for any further research and an essential archive of each surviving skeleton.

#### 3.10.3.4.15

The LTP has successfully sampled four of the genuine inhumation burials from a very limited archaeological terrain. Two of the graves cut the buried soil (F81, F154); one of the graves cuts a large prehistoric palisade complex (F114) and finally the fourth grave is cut by a pit (F435). No detailed report has been received on the results of these analyses.

### 3.10.4 *Cremations*

#### 3.10.4.1

All the cremations are unurned and apart from F144 and F192 which had been incorporated into Mound make-up, the cremation deposits have been recovered from small shallow features. The distribution of the cremations reflects their conditions of preservation. They have only been recovered from beneath the buried soil platforms of Mound 2 and Mound 5. Disturbance of the buried soils during cultivation or Mound building has apparently destroyed all but the basal layers of these deposits. F225 was rather better preserved than the remaining group and appears to have incorporated at least within the Horizon 6 surface of the buried soil.

#### 3.10.4.2

The interpretation of the deposits as cremations is only tentative. Apart from F225, no other feature from this group contained visible bone fragments. The cremated bone fragments were associated with a thick heavy clay deposit. This deposit had a greeny-brown tinge and it is the texture of this cremation which could be matched from the remaining group of features. Confirmation that the clay deposits are cremations must await chemical analysis. Since the deposits are limited in volume it would appear they have either been severely truncated or that the full cremation was not buried.

#### 3.10.4.3.

There are no grave goods associated with cremations. The usual range of residual prehistoric finds were recovered from the fills of the cremations. Again F225 is the exception to the rule since fragments of a fine ware vessel (broken urn?) lay scattered within the cremation deposit and were sealed by a large lump of fired clay. The date of the cremations has not been established. There is no reason to believe they need necessarily belong to a single chronological phase. No cremations were seen cutting the make-up of either Mound 2 or Mound 5. The incorporation of two possible cremation deposits would indicate they are earlier than the two Mounds. One of the cremations, F270, lies on the perimeter line of the Roundhouse, (S8), immediately inside the porch. Is this coincidental or is there a direct relationship with the building?

#### 3.10.5      *Definition, Excavation and Recording of the Burial beneath Mound 2* [see 7.1]

#### 3.10.6      *The definition and recording of Mound 5* [see 7.2]

#### 3.10.7      *Comment*

Apart from the complex central burials beneath Mound 2 and Mound 5, the burial rite encountered on Int.41 is either inhumation in graves or unurned cremations. Allowing for the erosion of the subsoil surface which has already been documented archaeologically, all the inhumations originally buried were recovered. The erosion has not been severe enough to have removed any graves. However, shallow cremations between the Mounds have almost certainly been destroyed by Mound-building episodes and continual erosion of the subsoil.

No satellite or secondary burials whether inhumations or cremation were found *in situ* in the Mounds. There are no inhumations which have been sealed by Mounds. Cremations were recovered only from beneath the buried soil. It is just possible that F225 with its elaborate fired clay cap which survived actually within the horizons of the buried soil may have been deliberately sealed by Mound 2.

Although only a small area around Mound 2 has been opened, there is no evidence for any inhumations. All the graves are distributed around the north, east and south sides of the Mound 5 buried soil plateau.

The inhumations from Int.41 are the second large group of burials recovered from Sutton Hoo (Int.32), the first being Vol 8ii. Various parallels can be drawn between these groups. In both groups the bodies survive as rich organic stains. My impression is that bone/bonemeal survival visible beneath the stain is better from Int.32. This may reflect the current environmental regime. Int.32 is beneath a modern ploughsoil and Int.41 is beneath an acid turf heath. Generally the range of postures is similar, but the group from Int.32 display a greater variety and a less restrained manner. There are body stains in sitting postures, tucked postures and with extended arms above the head which are not reflected by the Int.41 group. Both groups display evidence for ritual trauma. This is particularly evident in the disarticulation of the head and the accompaniment of organic objects with the bodies. The presence of organic stains within the *backfill* of the grave is limited to the Int.41 graves, and it is worth mentioning that it is only from the graves which cut pits or vice versa that

the organic stains are recovered. Apart from the child's grave F114, none of the bodies from Int.41 were interred in coffins or containers. Again this contrasts to Int.32 where a greater number of bodies were in coffins.

Detailed analysis of the skeletal population has not been completed but it is reasonable to accept that most of the inhumations contained adult burials. The only clear exception is the child burial from the ring ditch (Burial 12, F114) Int.41. The range of burial style was more varied, with burials cutting pits and pits cutting burials, burials within ring ditches and burials cutting buried soil platforms. To some extent the complexity of the burial style may reflect the destructive ploughing over the subsoil surface of Int.32. No cremations or ring ditches were discovered in Int.32.

Discussion of the burials from Int.41 has obviously focused on the genuine graves. However, our excavations have clearly shown that there are two categories of slit trench. Their presence can be very misleading if we are trying to map the distribution of the cemetery and are likely to be encountered by future excavators. These slit trenches split into two groups. The first group is sub-square in plan and contains a vast number of spent bullet cases. These have been discovered only from the prominent Mounds, in this case Mound 2. They were initially discovered on the Horizon 1 surface and if the cuts are not clear the presence of bullet cases located by metal detection are an obvious indication. The second group is subrectangular in plan and does not contain a concentration of bullet cases. This group is more likely to be identified on the horizon surface as inhumation graves and again they are visible on the Horizon 1 surface. The character of both sets of features is similar with steep sides, (occasionally undercut) tapering to a slightly rounded base. Very careful excavation may reveal the cuts of trenching tools (Int.44, F70). Even the geometry and character of the fill is similar to the genuine inhumations. There is no obvious method apart from excavating to separate the slit trench from the set of genuine graves.

### **3.11 Comment on the Excavation and Recording of Int.41**

#### **3.11.1 Mound 2**

Mound 2 was an imposing mound containing a large volume of make-up. From Horizon 2 over 9,500 wheelbarrow loads of make-up were removed off the mound. The evidence provided by the current excavations suggests that its shape had altered dramatically - make-up had slumped into the surrounding quarry ditch and three or more recent episodes of trenching had been cut across the body of the mound. Within the disturbed make-up very limited structural or constructional detail could be observed. While this could be in part the result of our methodological approach and the recent disturbances, I suspected the mound was not built in a structured fashion. Subsoil and turf debris was thrown together onto the buried soil. Any post-constructional detail (e.g. turf capping) would have been lost amongst the loose and turbulent nature of the latest horizons. I do not feel that the later trenches have destroyed significant structural components.

The result of the three main trenching exercises C19th?, 1938 B.Brown, 1942 Army - was to distribute finds and make-up over the body of the mound. Within the swirl of this loose heterogeneous dry sand it was always difficult to pick out the true line of the features. Under particular circumstances, the distribution of particular finds species may be indicative of the extent of the feature. Localised concentrations of bullet cases do reflect the pattern of slit trenches and I strongly suspect the distribution of rivets within the 'make-up' of the various horizons does reflect the line of the robber trench rather than just the dumps of upcast.

#### **3.11.2 Mound 5**

In contrast Mound 5 was physically extinct. Above the plateau of buried soil only a loose subsoil scramble was recorded which cannot be interpreted with any confidence as make-up. There are no slit trenches or robber trenches, instead the plateau is a relatively flat and thick band of ancient soil.

Archaeologically, we can infer the previous existence of a mound. How else can we explain the presence of a buried soil plateau, a rich burial and a set of satellite inhumations? There are two possible data sets which we can use to determine the original dimensions of the mound.

Unfortunately, the evidence from either set produces slightly different results but together they do imply the presence of a former mound. The presence of pits around the perimeter of the extant buried soil does suggest they are quarries for a mound (See 7.2.3). These can be matched with a set of pits surrounding Mound 6 which certainly did provide make-up for Mound 6. Alternatively, we could follow the arc of a possible palisade planned in quadrants Q and R which could mark the perimeter of a smaller mound but one which is symmetrical to the principal cremation and which would allow room for a group of radial inhumations to be set around the mound. Although on the surface of the ancient soil they are all cut through into the subsoil, there is no evidence from the character of their backfill, or the depth of their cut, to suggest the graves were dug through mound make-up. Indeed some graves, e.g. F82, were cut to a relatively extreme depth suggesting they were cut from the surface of the ancient soil. The position of the inhumations is also crucial; they are not randomly scattered. All of the graves (apart from Mound 20 and the 'empty' set) were cut through the ancient soil and respect the position of the central burial and by inference the lost Mound. The make-up of this mound has disappeared, and it cannot be isolated within the spread of topsoil or on the ancient soil surface and yet the ancient soil is comparable in its depth and character with that beneath Mound 2. How was the make-up removed with such precision?

### 3.11.3 *Features beneath the Mounds*

At Horizon 7 there were two distinct areas which corresponded to the division of the intervention into Zones. These areas are defined by the concentration of features and the quality of preservation. The presence and structure of various feature-classes suggests that features have been differentially preserved beneath the thick layer of buried soil. The genuine hearths and cremation deposits which are known to be shallow and susceptible to erosion only survive beneath the buried soils. Another character of the subsoil plateaux is the predominance of postholes (72% Mound 2 zone, 71% Mound 5 zone, but only 50% in the Adjacent Zone). In the latter zone the quality of preservation measured by the presence of postpipes and the retrieval of a rich environmental and finds assemblage is of a lower order. On a subjective note, beneath the buried soils the shapes and profiles of the excavated features appear to be sharper and the stratigraphic relationships (which features overlap) are clearer. The impression is that better preserved features often contain distinct fills, at least in their upper portion (e.g. compare upper fill of F216 with F60/61 or F393 with F60/61). Although the structure of the feature-classes are similar (i.e. proportions of each class) we can also identify variation between these subsoil plateaux. Mound 2 Zone did contain three core areas but none were recognised on Mound 5. These core areas were defined by a combination of factors rather than any one component - the density of features, the presence of hearths, a range of feature classes and the presence of a recognisable structure. It is likely that the Mound 2 core areas stand out more because of the presence of the shallow quarry ditch beyond the perimeter of the mound. This contrast is lacking from the Mound 5 Zone which has also been severely cut by the trenches of Longworth and Kinnes (Int.12).

### 3.11.4 *Features outside the Mounds*

Outside the protection of the buried soils, differential preservation of certain feature classes is suspected, and so the recognition of structures is more fortuitous and depends on the components and position of the structure. For example, in the band of subsoil running between the two subsoil plateaux no structures were recognised, so even if we projected the deep postholes of the Roundhouse (S8) over this area we would not have detected this structure. Why has this area been subjected to more extensive erosion than quadrant Y where shallow postholes of the fenceline survived? Both these areas have been ploughed (combined evidence from Horizon 1 and 2) but I would suggest that a buried soil may have covered quadrant Y until relatively recently. No buried soil was seen outside the Mound plateaux during excavation but if there was a buried soil here, we could predict a concentration of finds from the definition levels in this area. We would certainly need to be more cautious now when turf-stripping the adjacent area in Sector 1.

Ignoring the two Early Medieval Mounds and the scatter of inhumations, the nature of the settlement defined by the character of the features is domestic. At Horizon 7, the majority of the features are prehistoric, certainly pre-Early Medieval, but a few features of Early Medieval date are suspected. They belong to a single class of feature - the quarry pits. We can identify a relatively wide range of

domestic activity on an apparently large scale, perhaps even with a ritual element. For example, within the circumference of the Roundhouse (S8) one of the features contained a cremation, it is also suspected that specific deposits were being deliberately backfilled into various features, particularly postpipes (see later). Running across all three zones were gullies (including F60 and F61 described as ditches). The number of gullies in the zones increased to the south; a single gully ran across the Mound 2 plateau (F216), two gullies across the Adjacent Zone (F60 and F61) and a palimpsest of four gullies across the Mound 5 plateau. They share a number of common characteristics - they are roughly parallel to each other and follow a general E-W alignment and apart from F60 and F61, they ran beneath buried soil plateaux which are later covered by Early Medieval mounds. The shape of these gullies in plan and profile appears to be similar, implying a similar function. Evidence of land boundaries was also provided by the long and presumably continuous fenceline (S7), but this runs transversely N-S across the line of the gullies. The NW corner of a later enclosure system (S22) was excavated beneath the centre of Mound 5 but the components - narrow gullies, was identical to the earlier gully system

The disturbance of the pits surrounding Mound 5 strongly suggests they are quarries and the amount of make-up they provided for the Mound could be established and projected from the turf surface. However, it is not clear over what area of buried soil the make-up was spread. The distribution of the quarries and the shape of the buried soil could provide a relatively accurate picture for the Mound (see Mound 6, Vol 5i) without taking account of the archaeological evidence recovered at Horizon 1 and 2: the arc of fenceline) or the post depositional/mound transformations which have removed all evidence for the Mound (?ploughing) and which may have preserved a significantly larger platform of ancient soil. All of the deep pits were cut through horizontal bands of concreted subsoil. These lumps must have provided a proportion of the make-up but none were recognised in the backfill of the pits.

Any future analyses of the various classes should be aware of the attributes which characterise a particular class. Features were separated into classes depending on the shape (profile, dimensions) and character of backfill (pipes, burnt debris), but there is no doubt that in each class, particularly at the lower end where attributes were not distinct, a feature could belong to more than one class. The choice depended, to a large extent, on the personal experience of the excavator and is usually described on the feature card and index by a ?suffix. Furthermore, I suspect the array of attributes which determine each feature class varied depending upon the predominant state of preservation i.e. beneath the buried soil or within the Adjacent Zone.

### 3.11.5 *Recommended Analyses*

The stratigraphy and association of features will provide a broad framework for the analysis of activity phases but further detail will be generated by the current finds work.

#### 3.11.5.1 *Dating*

Broad chronological groups should be identifiable but may be restricted to the features with a rich assemblage. A strong Beaker element in the ceramic assemblage was recognised during the excavation of all three zones.

#### 3.11.5.2 *Prehistoric Ritual*

The 'ritual' nature of some deposits was recognised by a combination of context attributes and rich finds assemblages (which also includes the macroscopic environmental remains). In this sense the term 'Ritual' is only used to isolate a group of exceptional fills. Although the study below is limited to the Mound 2 Zone, it contains elements which occur in the Mound 5, and to a lesser extent in the Adjacent Zone and illustrates a possible direction for more detailed analyses. Deposits which are described as 'ritual' are very dark brown/black in colour, they contain a relatively rich assemblage and they occur in a limited number of features, here primarily in postholes; macroscopically they can be matched with deposits from hearths. Within the postholes these rich deposits have usually been recognised as postpipes but the concentration of finds alone suggests the stain is not the *in situ* decayed post. Instead the evidence suggests the posts were removed to be replaced by a specific



deposit rich in finds and environmental debris. It is not surprising that these deposits have been the target of environmental sampling. The nature of these deposits, I would suggest, needs characterising because they are exceptional in terms of the density of finds, including environmental evidence and I suggest in terms of their quality. The distribution of these deposits show a strong localised concentration on the east side of the subsoil plateau coincident with Core Area 1 and specifically with the Roundhouse (S8).

This group of features is exceptional since the backfill from the majority of other postholes is sterile. To illustrate the contrast in the character of the fill between different groups of postholes and in order to isolate further specific attributes for future study, I analyzed the components of the backfill from the postholes of the fenceline (S7) on the Mound 2 plateau. The fenceline was chosen as a convenient unit of study because it contains many postholes (39) and covers a long N-S transect down the eastern side of the plateau. The fill of each posthole was scored for particular components. Various components were chosen - presence/absence of charcoal; presence/absence of finds (did not include burnt flint which is ubiquitous and not specific); and the presence of pebbles. Selection of these components was subjective but did follow guide-lines established during excavation. In general, the impression was that these components would isolate this group of postholes independently from their association on the subsoil surface. The presence of these components for each feature are annotated on the drawing. All components are relatively scarce when compared to the association of these components in other postholes and classes of feature but the distribution of charcoal is particularly interesting. The absence of charcoal (74% of posthole population along fenceline) contrasts strongly with those postholes which contain 'ritual' deposits (which includes F511 belong to the fenceline, see centre of run), and to a lesser extent the majority of all other feature fills. At the north end of the structure a group of seven adjacent postholes contain charcoal - these may have become backfilled in a different manner to the majority of postholes. Even those posts under the charcoal-rich hearth (blackened-in) were sterile. In this localised area, the lack of contamination from later deposits provides a measure of stratigraphic integrity.

This example clearly illustrates the potential for future analysis. It may certainly be possible in future to isolate particular groups of features which do not have any stratigraphic or mapping associations. Whether this example is valid depends on the results of a larger scale analysis, but the purpose of this example was to emphasise the unity of this group of postholes which belong to the fenceline and to contrast then with the 'ritual' deposits.

### 3.11.5.3 *Finds Distribution*

The majority of finds (ceramic, flint and burnt flint) are relatively ubiquitous but certain species of finds e.g. metal finds and bone, have a limited distribution. Within the assemblage of metal finds we can isolate various groups.

E.M. Finds: This includes the scraps of objects deposited with the two principal burials beneath Mounds 2 and 5. None of these were *in situ* but it is essential to reconstruct the original composition of the burial and if possible their position within the burial. A larger number of ship rivets were scattered widely across the body of Mound 2 and into the quarry ditch. The distribution of these finds is particularly significant since they follow the line or projected line of the robber trench. They also occur at various levels within the quarry ditch which suggests some of the robber upcast has run into the ditch, if not deliberately deposited in a partially silted ditch. The discovery of a few rivets even at Horizon 7 does suggest the upcast from the robber trench was disturbed by later intrusions. Prehistoric Metalwork: the distribution of bronze droplets and slag has been illustrated by CLR. Slag and a few ?iron objects occurred as a closed group on the surface of the Mound 2 buried soil. A second concentration of metal-work (bronze droplets) occurs in the SE corner of the Intervention. These were distributed within different gullies of the main E-W ditch complex. Modern metalwork: the third group of metal finds can be very closely and confidently dated to the Second World War (1942). Bullet cases, mortar bombs and shrapnel were concentrated over the surface of the early horizons. Mound 2 was a particular focus for army activity, at least three slit trenches were dug into the western side of the Mound. At a lower level a few scraps of shrapnel were discovered at Horizon 7 but these must have derived from the action of animals burrowing through the surface.

#### 3.11.5.4 *Bone*

Bone and organic stains were recovered from the inhumation and quarry pits, cremated bone from cremation deposits (see F225), but overall fragments of bone and flecks of cremated bone were retrieved from a wider range of features across different zones. Flecks of cremated bone were recovered from F311 1182; F286 1657; F330 1701 1795; F549 2027 and bone from F395 1921 and F143 136.

### 4. **MODELLING THE SEQUENCE (MRH)**

#### 4.1 **Evidence for Strata Formation Processes**

No new analysis has been carried out at present; but the reader is referred to the publication in Bulletin 7 (1990: 22-25) of the results of a pilot scheme to test the recovery of artefacts in the overburden and its implications for their deposition history.

#### 4.2 **Evidence for the sequence from stratigraphy**

Int 41, though containing nearly 600 features, gives remarkably few opportunities to observe direct stratigraphic relationships between negative features cutting each other and therefore the possibilities of establishing a relative sequence for the *prehistoric* period, our concern here, are limited. Nevertheless, a few key relationships do exist and provide the backbone of the sequence. In building this sequence, relationships which belong entirely to the Anglo-Saxon grave-digging and barrow-building episode of Sutton Hoo have not been taken into account: only when Anglo-Saxon features directly affect the positioning of prehistoric features have the former been included in the simplified diagram.

The sequence of intercutting features on Int 41 can be conveniently divided into two parts: a southern area (the Mound 5 zone) and a northern area (the Mound 2 zone). These two areas will be described here in turn.

In the southern area, the gullies F393 and F122 which form an angle in the south-western corner of Mound 5 are cut by a number of Anglo-Saxon features, namely the cremation burial (F417) and robber pit (F390) central to Mound 5 and the quarry pits F58 and F426. Similarly, the gully F61 to the North of Mound 5 is cut by two Anglo-Saxon quarry pits, namely F395 and F407. By extension, the gully F60 to the North of F61, similar in appearance and orientation to F61 and seen to be cutting an earlier feature (F405) - a characteristic of these gullies is indeed that they are pre-Saxon but almost invariably not earlier prehistoric features - can be said to be contemporary.

In summary, the latest pre-Saxon features in the Mound 5 area are F60, F61, F122 and F393, all gullies either linear or forming an enclosure. Finds ascribe them to the Iron Age.

At the earliest end of the spectrum, the ditch system known as structure 23-24 (comprising features F117, 126, 128, 561, 563, 568, 569, 571, 581, 583, 584) can be clearly seen as cut by all later features, namely the Anglo-Saxon quarry pits of Mound 5 (F125, 426, 129 [with grave 517], 130 [with grave 424], 131, 133 [with grave 435], and the grave F113 within the ring-ditch F114 known as Mound 20. More importantly, this ditch system can be demonstrated as being cut by other prehistoric features: it is cut by the Iron Age gully F122 and by a fence-line comprising postholes F100-111 and 120. We shall see, on Mound 2, that this fence-line, known as structure 7, pre-dates Iron Age features. A few other features cut the ditch system (F112, 121, 132) but offer little support.

In summary, the earliest feature complex in the southern area is the ditch system known as structure 23/24 whose latest recut (F562) pre-dates the fence known as structure 7 which itself is earlier (on Mound 2) than the Iron Age gullies. The finds from the ditch complex indicate a late Neolithic-early Bronze Age (Beaker?) date, those of the fence-line a Bronze Age date.

Structure 23/24 was recut many times. The earliest features are "gullies" F571 and F584, followed by "gullies" F561 and F568 (F561 containing, amongst others, a Beaker fine ware sherd and 2 metal

residues), cut by ditches F117, 126 and 128 (F117 also producing 2 fragments of metal residue) finally superseded by "gullies" F562, 569 and 583 (F562 producing one further example of metal residue).

Apart from the relationship between principal structures - the late Neolithic-early Bronze Age ditch system, the Bronze Age fence-line, the Iron Age enclosure - no other meaningful links exist for the majority of features exposed in the Mound 5 area, particularly its central-northern part, rich in features, became but relatively untouched by later Anglo-Saxon activities. These pits, scoops and postholes, although occasionally cutting each other (F459 cutting F460 with food vessels, F551 cutting F498 also with food vessels, F473 containing Beakers cut by F552, F468 also Beaker cut by F485, 543, 544 and 545, finally F480 cut by F549 and 550) offer little to refine the stratigraphic sequence. Only when their contents and possibly also their horizontal spatial relationship are taken into account will it be possible to slot some of them into a relative sequence.

In the northern area (Mound 2 zone) stratigraphic relationships between *prehistoric* features are similarly confined to major structural events, leaving the vast majority of pits, scoops and postholes revealed on the platform of subsoil visible at Horizon 7 and protected by the buried soils of Horizons 4-6 unrelated, except spatially or through the contents of their assemblage. But again, the major events can be put into order.

The quarry ditch F42/F153 that surrounds Mound 2 delimits the extent of the surviving subsoil plateau. It also cuts four large pits, F269, F271, F272 and F308 situated at each corner of the mound, in the NW, NE, SE and SW. Their position as well as the contents of their assemblage (pit F269 producing, amongst others, 5 sherds of Roman or post-Roman pottery) singles them out as not being prehistoric but probably belonging to the Anglo-Saxon phase of barrow building, perhaps as marker-pits dug prior to the cutting of the ditch proper.

Two features are demonstrably the latest prehistoric elements of the stratigraphic sequence on Int 41's northern area: they are firstly the gully F216 running NE across the centre of Mound 2, cut by the quarry ditch F42/F153 and by the central burial chamber F162 as well as F500 and F501 and subsequent robber trenches and excavations F4, F135, F142, F150-151 and F157. The other late prehistoric feature is a hearth, F219, already visible at Horizon 6, which overlay three postholes of the fence-line known as structure 7 (F375, 376, 377). The finds from the gully F216 and hearth F219 place them in the Iron Age.

The fence-line, structure 7, provides the link between earlier prehistoric features and the latest (Iron Age) ones. Indeed, it is sealed by the hearth F219 and cut by the gully F216 and itself overlies a number of earlier features, namely F361, F314 and F313. The latter two (F313 and F314) are closely connected to the complex of features that comprise the tree-pit F330 and F311, extremely rich in material belonging to the Beaker period. Indeed, feature F313 cuts F330 and itself contains Beaker finds, while F314 is cut by F315, a posthole also containing Beaker material. Therefore, the fence-line, structure 7, can be declared as post-Beaker and pre-Iron Age and the pit complex F330/311 and surrounding postholes, amongst which F313, 314, 315, as belonging to the Beaker period.

The above observations are the sum total of informative stratigraphic relationships visible on the Mound 2 platform. A number of other features cut each other - eg F294 being cut by F420-423, or F218 being cut by F514-516 - but these offer little insight into the main sequence.

It will be noted that no direct stratigraphic relationship exists between the roundhouse known as structure 8 (comprising postholes F221, 222, 263, 264, 265, 267, 358 and 360, the hearth F220 and, more problematically, feature F270 described as a cremation) and any other structure or pit complex. It is mainly a consideration of spatial relationships and assemblage contents that would lend support to the suggestion that the roundhouse is of Beaker date. Indeed, assuming that the posts of the roundhouse represent an inner load-bearing ring, it would mean that both the Iron Age hearth F219 and the post-Beaker fence-line (structure 7) are too close (1m) to the western side of the roundhouse to be contemporary. Since structure 8 cannot be later, it has to be earlier. Further, the position of the tree-pit complex F330, rich in Beaker residues, lying 5m to the South-West of the roundhouse

would accommodate the notion of a "clean" roundhouse with rich deposits nearby, but not cheek by jowl. A more careful investigation of the finds belonging to the elements of the roundhouse may perhaps shed further light on the proposed Beaker date for structure 8: it has - as would be expected - produced remarkably few finds, namely a few fragments of burnt flint, a handful of flint flakes and only 6 sherds of ceramic (1 each from postholes F222, 263, 265, and 2 pottery sherds and a piece of fired clay from F267; none has been identified so far). As for the central hearth (F220), it contained burnt flint only.

In summary, the northern area is able to provide the main elements of a stratigraphic sequence, as in the southern area. These elements are, from earliest to latest, a series of features with Beaker residue, including possibly a roundhouse (structure 8), superseded by a fence-line (structure 7), itself cut by a gully (F216) and overlain by a hearth (F219) of Iron Age date, finally cut by the quarry pits and central burial chamber/Mound 2. As to all the other features of the northern area, it is to assemblage contents and horizontal spatial relationships that we must turn to slot any further elements into the main sequence. In particular, it will be noted that the earliest phase of occupation at Sutton Hoo, namely the middle to late Neolithic period, is *not* represented stratigraphically on Int 41, but only through assemblage contents.

Before closing the section examining stratigraphic relationships, a few comments must be made regarding the stratigraphic position of the *buried soils* and their relationships to prehistoric features, as well as to the ploughmarks, vegetation marks or cultivation marks observed within them.

In short, three horizons of buried soil were observed on each Mound, Horizons 4 (top), 5 (middle) and 6 (bottom). For Mound 2, they respond to feature numbers F158, F206 and F213 respectively, for Mound 5 to feature numbers F224, F391 and F412 respectively. The cultivation marks were given feature number F195 on Horizon 5 of Mound 2 and feature numbers F392 and F416 on Horizon 5 of Mound 5.

Partly for reasons of logistics, partly because it proved extremely difficult to see the mid-brown fills of features against the mid-brown background of the buried soils, it was decided to remove the entire contents of the buried soil platforms without attempting to establish from which Horizon prehistoric features were cut. Only when all the buried soil had been removed and the subsoil plateaux at Horizon 7 were revealed were features identified and recorded. Thus nearly all the prehistoric features are recorded as being "sealed" by Horizon 6, whether this was the case in reality or not; there are a few exceptions such as the potentially important observation that remnants of the Iron Age features F216 and F219 were already visible on Mound 2 before the removal of Horizon 6 and that the Iron Age feature F122 was visible at Horizon 2/4 on Mound 5 and its companion feature F393 was revealed at Horizon 5 on Mound 5.

From these observations, and also taking into consideration the date and distribution of prehistoric finds in the buried soils, one could suggest that, of the three horizons recognised on Mounds 2 and 5, the first two (Horizons 6 and 5 or F213 and 206 and F412 and 391 respectively) represent a first pre-Iron Age soil and then an Iron Age soil, whereas the last horizon (Horizon 4 or F158 and F224 respectively) represent an Iron Age horizon ploughed in Roman or post-Roman times. Indeed, all the finds of Roman or post-Roman pottery found in the buried soils stem from Horizon 4 of Mound 5 or from Horizon 4 of Mound 2 (one exception being one sherd assigned to Horizon 5 of Mound 2). Further, all the Iron Age pottery so far recognised in the buried soils of Mounds 2 and 5 belongs to Horizons 4 and 5, with only one sherd assigned to Horizon 6 of Mound 5 and 2 sherds assigned to Horizon 6 of Mound 2.

The ploughmarks recognised on Mound 2 (F195), the ploughmarks (F392) and cultivation marks (F416) visible on Mound 5 are firmly sandwiched between Horizons 4 and 5, which precludes a post-prehistoric date for them, since they are sealed by the last buried soil Horizon and cut into Horizon 5. A post-Beaker date must be assumed, since the cultivation marks F416 override the backfilled ditch complex (structure 23/24). If Horizon 5 is acceptable as being of Iron Age date, then the ploughmarks and cultivation marks on Mounds 2 and 5 must be Iron Age or later. Their alignment is not parallel to the linear gullies and enclosure gullies recognised as being of Iron Age date, but neither do any of them cross these boundaries, thus making possible the assumption that

the two systems existed concurrently.

In summary, the stratigraphic sequence on Int 41, partly illustrated by additional information from assemblage contents and horizontal spatial relationships can be pieced together in the following way:

The first (Middle-Late Neolithic) phase of occupation at Sutton Hoo is not represented stratigraphically on Int 41. The second (Late Neolithic - Early Bronze Age) phase is represented by the ditch complex of the southern area (structure 23/24), the pits and postholes around F330 in the northern area, probably associated with a roundhouse (structure 8). Beaker elements are prominent in this phase. Horizon 6 of the buried soil sequence must be in place at this stage. The third (Bronze Age?) phase consists of a fence-line (structure 7) which cuts the entire ditch system. The fourth (Iron Age) phase consists of an enclosure and linear gullies as well as a hearth which cut or supersede the fence-line. Horizon 5 of the buried soil sequence as well as the ploughmarks and cultivation marks within it can be ascribed to this phase. The fifth phase describes the last buried soil horizon (Horizon 4), ploughed in Roman or post-Roman times. Finally, in phase 6, Mound building results in the cutting or quarry ditches and pits, including the cutting of 4 "marker pits" at each corner of Mound 2.

#### Stratigraphic Relationships - South Area of Int 41

IA	F61 is cut by F395 (quarry) F61 is cut by F407 (quarry)  F117 is cut by F109, 110, 111, 120 (fence) F117 is cut by F113, 114 (Mound 20) F117 is cut by F112 F117 is cut by F121 F117 is cut by F132 F117 is cut by F131 (quarry) F117 is cut by F133/435 (quarry & grave)
IA	F122 is cut by F390 (AS cremation)  F126 is cut by F122 (IA enclosure) F126 is cut by F125 (quarry) F128 is cut by F129/517 (quarry & grave) F128 is cut by F130/424 (quarry & grave)
IA	F393 is cut by F58 (quarry) F393 is cut by F426 (quarry)
pre-IA	F405 is cut by F59, which has no finds F405 is cut by F60 (IA gully)  F427 is cut by F390 (AS cremation) F428 is cut by F390 (AS cremation)  F436 is cut by F34  F442 is cut by F124 (AS grave) [no finds]  F445 is cut by F122 (IA enclosure) [no finds]  F457 is cut by F456
Food V	F460 is cut by F459

BEA F468 is cut by F485, which has no finds  
F468 is cut by F543 (BEA)  
F468 is cut by F544 (BEA)  
F468 is cut by F545

F473 is cut by F552

F480 is cut by F549  
F480 is cut by F550

F498 is cut by F551

F520 is cut by F518

Sequence is:

F117 is cut by BA fence F109-111 + 120 and cut by Mound 20 (F113-114)  
F126 and F128 are cut by IA enclosure and by AS quarries  
IA enclosure F122/F393 is cut by AS burial F390 and pit F426.

Stratigraphic Relationships, North area (omitting quarry ditch) in Int 41

IA F216 is cut by Mound 2 chamber  
F216 is cut by F501 (AS feature)

F218 is cut by F514, 515  
F218 is cut by F516

F219 is over F375, 376, 377 (BA fence)  
F219 is over F353

F257 is cut by F261

F286 is cut by F216 (IA gully)  
F286 is cut by F500 (AS groove)

F294 is cut by F420  
F294 is cut by F421  
F294 is cut by F422  
F294 is cut by F423

F311 is cut by F341  
F311 is related to F330

BEA F313 is cut by F321, F381 (BA fence)

F314 is cut by F380 (BA fence)  
F314 is cut by F315 which has Beaker

BEA F330 is cut by F313  
F330 is cut by F331  
F330 is related to F311

F357, F374, F378 cut each other (BA fence)

F361 is cut by F371, 372 (BA fence)  
F361 is cut by F511 (BA fence??)

BA fence is cut by F216  
BA fence is under F219

Sequence is:

AS Burial chamber cuts IA gully F216  
IA gully F216 cuts BA fence-line Structure 7  
BA fence-line Structure 7 cuts postholes F313, F314, F361  
Posthole F313 cuts Beaker treepit F330/311

#### 4.3 Evidence for Sequence and Date from Finds

##### 4.3.1 Evidence for sequence and date from finds recovered in prehistoric features

All together, 591 features were identified, recorded and excavated on Int 41. Of these, 366 or 62% can be regarded as belonging to the prehistoric phase of occupation of the area. A list of these 366 prehistoric features has been compiled, but it is assumed that this list will be subsumed in the feature index for Volume 4. 140 features, or 24%, are treated as belonging to the early-medieval phase which, for the sake of simplicity, also includes the episodes of robbing and excavation (by Basil Brown) of these early medieval features. Finally, 85 features or 14% are considered recent or modern features: they include disturbances, slit-trenches, trenches by Longworth and Kinnes in the 1960's, rabbit burrows and features which turned out not to be features.

Thus, the greater part of features excavated on Int 41 are prehistoric. The same applies to the finds recovered on Int 41: the finds index contains some 43-700 records of "finds" (including soil or organic "samples"), the vast majority of which are prehistoric in date. Prehistoric burnt flint, flint and ceramic alone amount to c. 30.7K or 70% of the total assemblage recovered.

Since we have established that the greatest proportion of features on Int 41 is prehistoric, as is the vast majority of finds recovered, it should be possible to match the two and come forward with a phasing of the prehistoric features according to the presence of prehistoric find types found in them. But this task is not as straightforward as first envisaged, as only 10% of all the finds were actually recovered from the prehistoric features themselves. The remaining 90% stem from other deposits, which can be grouped into the following broad categories:

	<u>K</u>	
Finds from prehistoric features	4.2	10%
Finds from buried soils of Mounds 2 & 5	11.0	25%
Finds from EM features, robbings and BB excavations	6.5	15%
Finds from make-up of M2 (Horizons 2 & 3)	3.8	9%
Finds from topsoil, ploughsoil and Horizon 1	14.3	33%
Finds from modern intrusions, burrows, etc.	0.9	2%
Others, unaccounted, non-finds, etc.	<u>3.0</u>	<u>6%</u>
TOTAL	<u>43.7</u>	<u>100%</u>

Thus, most finds and particularly most prehistoric finds, stem from outside the features, especially from the buried soils of Mound 2 and Mound 5; the rest is redeposited in the make-up of Mound 2, the topsoil, ploughsoil and Horizon 1 or recovered from early-medieval and modern features that disturbed the prehistoric occupation.

Phasing the 366 features considered prehistoric according to the 4165 finds found within them must therefore be rather crude as most prehistoric features produce only a handful of finds each, quite often of no dating value whatsoever (soil samples, burnt flint or flint waste products). Using *abundance* of finds alone, it emerges that only 15 features out of 366 produced more than 50 finds: 9 are to be found in the Mound 2 area and 6 in the Mound 5 area. They are:

<u>Mound 2 Area</u>		<u>Finds</u>	
F216	The IA gully, running W-E across Mound 2	376	
F219	An IA hearth sealing the BA fence line	410	(366 Bflint)
F220	A hearth in the centre of the "Beaker Roundhouse"	128	(124 Bflint)
F330	A Beaker treepit to the SW of the "Roundhouse"	224	
F223	A pit (or posthole?) immediately to the S of pit F330	73	
F225	A cremation in the SW cluster of features, M2	88	
F294	A pit in the SW cluster of features, M2	105	(93 Bflint)
F235	A pit in the NW of Mound 2	63	
F68	The butt-end of a gully in the extreme NW of Int 41	71	
TOTAL		<u>1538</u>	
<u>Mound 5 Area</u>			
F117	Penultimate ditch, ditch complex	123	
F128	Penultimate ditch, ditch complex	53	
F393	An IA gully of enclosure in W of Mound 5	130	
F460	A pit in centre - NW Mound 5	107	
F468	A pit in centre of Mound 5	50	
F34	A hearth outside and to SE of Mound 5	628	(622 Bflint)
TOTAL		<u>1091</u>	
(Combined total of finds from the 15 abundant features in M2 and M5 area:		2629	
(Total of all finds from all prehistoric features:		4165	

These totals show that nearly two thirds of all the finds from prehistoric features emanate from only 15 rich features, the remaining third being spread thinly amongst the other 351 prehistoric features. Even amongst the 15 rich features, 4 features (F34, 219, 220 and 294) are hearths full of burnt flint with little other dating materials. Thus using abundance of finds alone to establish the basis of a phasing framework for the prehistoric features is insufficient as too few of them contain diagnostic (datable) artefacts. The next step is therefore to ascertain the *presence of independently dated*



*artefacts* within the presumed prehistoric features, regardless of whether abundant or not. This exercise has to base itself on two assumptions, namely that typological traits (of pottery mostly) are recognisable and datable, and secondly that the *terminus post quem* provided by this typological ordering is closely related to the date of use and deposition. Of course, this material may have been deposited much later and the risks inherent in such assumptions is acknowledged; but it seems the only way to proceed. The exercise has only been undertaken for the 366 features presumed prehistoric (ie all those features which, on the grounds of site geometry, stratigraphy or contents have no obvious reason to be thought later: early medieval quarry pits, ditches or graves as well as more recent features, which contain vast quantities of redeposited prehistoric material are excluded from this exercise).

Prehistoric features which contain a sherd (or more) of potentially datable ceramic are located on map 4.3.1.4 and can be conveniently divided into a Mound 2 group (35 features) and a Mound 5 group (40 features). They are listed below: noted are the number of finds records made within those features, the presence of ceramic and its date when known, as well as the presence of other potentially datable artefacts such as flint implements or metalwork.

#### Mound 2 Area

F219	Hearth, over BA fence	410 records incl. 366 Bflint, 17 ceramic (IA?)
F373	BA fence posthole	2 records incl. ceramic
F320	BA fence posthole	3 records incl. ceramic
F321	BA fence posthole	2 records incl. 1 ceramic (Beaker fine)
F328	BA fence posthole	2 records incl. 1 ceramic (Beaker fine)
F313	Posthole cut by BA fence	18 records incl. 8 ceramic (3 Beaker), 2 flint
F315	Posthole cutting F314 which is cut by BA fence	15 records incl. 3 ceramic (1 Beaker) and 1 flint scraper
F222	Porch, posthole of roundhouse	8 records incl. 1 ceramic (33604), 2 flint
F267	Porch, posthole of roundhouse	11 records incl. 3 ceramic (33610, 33967 and 1 fired clay), 1 flint
F263	Posthole of roundhouse	3 records incl. 1 ceramic (33617)
F265	Posthole of roundhouse	14 records incl. 1 ceramic (33753), 2 flint.
F268	Pit in roundhouse area	23 records incl. 6 ceramic, 1 flint.
F226	Scoop (or posthole?) SE of treepit F330	31 records incl. 21 ceramic (many Beaker), 2 flint, 1 seed
F258	Slot in SE of Mound 2	7 records incl. 2 ceramic, 1 flint.
F342	Scoop (or posthole?), E of treepit F330	28 records incl. 2 ceramic (Beaker rusticated?)
F311	Western half of treepit F330	26 records incl. 9 ceramic (8 Beaker), 1 flint. 1 cremated bone
F330	Treepit	224 records incl. 46 ceramic (mainly Beaker), 2 flint scrapers, 2 arrowheads, 3 flint., 3 shells

F331	Posthole cutting treepit F330	11 records incl. 2 ceramic
F223	Posthole or pit to S of treepit F330	73 records incl. 5 ceramic (3 Beaker), 1 flint scraper, 1 flot, 5 seeds
F281	Posthole in centre of Mound 2 (forming line with 277, 278, 279, 280)	5 records incl. 4 ceramic (3 Beaker rusticated? and 1 Iron Age)
F289	Posthole in centre - South of Mound 2	9 records incl. 5 ceramic, 1 flot.
F309	Posthole in centre of Mound 2	37 records incl. 28 ceramic (mostly IA, also (forming line with 290, Ardleigh sherd, BA pottery) and 1 flint 288, 540)scraper
F347	Posthole in S of Mound 2	5 records incl. 2 ceramic (1 Neol?)
F225	Cremation in SW feature cluster	88 records incl. 54 ceramic (34 fired clay, 20 BA pottery), 16 cremated human bones, also 1 clay, 3 charcoal and 12 soil samples
F294	Scoop or hearth in SW feature cluster	105 records incl. 93 Bflint, 2 ceramic, also charcoal and 2 flot.
F216	Gully through centre of Mound 2	376 records incl. 237 ceramic (30 fired clay, 207 pottery, mainly Iron Age), 2 flint scrapers, 2 retouched implements, 1 flint blade, 1 slag, 2 flot.
F217	Posthole in NW of Mound 2	8 records incl. 5 ceramic (1 Beaker)
F235	Pit in NW of Mound 2	8 records, inc. 5 ceramic (1 Beaker)
F218	Hearth in centre- of 1 slag, 1 flot	21 records incl. 1 ceramic (Peterborough North of Mound 2
F238	Posthole in N of Mound 2	16 records incl. 8 ceramic (3 fired clay, 5 pottery of which 1 is Iron Age), 1 flot
F241	Posthole in NE of Mound 2, near BA fence	10 records incl. 4 ceramic
F243	Pit, extreme NE of Mound 2	5 records incl. 1 ceramic, 1 flint scraper
F532	Scoop extreme NE of Mound 2	7 records incl. 1 ceramic, 1 flot
F68	Butt-end of a gully, extreme NW of Int 41	71 records incl. 45 ceramic (2 Beaker fine, 4 grooved ware?), 1 flot
F70	Posthole in extreme NW of Int 41	13 records incl. 5 ceramic, 2 flot

Total number of possibly datable features in Mound 2 area: 35 features (out of a total of 194 prehistoric features in the Mound 2 area).

#### Mound 5 area

F117	Ditch complex	123 records, incl. 42 ceramic (12 fired clay, 30 pottery incl. 1 BA), 1 flint arrowhead, 1 scraper, 1 knife, 2 metal finds, 1 flot
F126	Ditch complex	33 records incl. 4 ceramic
F128	Ditch complex	53 records incl. 22 ceramic (3 fired clay, 19 pottery incl. 1 BA, 1 intrusive Roman)
F561	Ditch complex	24 records incl. 5 ceramic (of which 1 Beaker fine), 1 flint knife, 2 metal finds, 1 flot
F562	Ditch complex	41 records incl. 165 ceramic, 1 flint scraper, 1 flint knife, 1 retouched ??? 1 metal find, 1 flot
F568	Ditch complex	18 records incl. 3 ceramic
F569	Ditch complex	11 records incl. 1 ceramic
F571	Ditch complex	10 records incl. 1 ceramic, 1 flint scraper, a flot, 1 seed
F122	Iron Age enclosure gully	40 records incl. 20 ceramic (2 fired clay, 18 pot incl. BA and IA sherds), 2 flot
F393	Iron Age enclosure gully	130 records incl. 85 ceramic (2 fired clay, 83 pottery incl. BA and IA sherds and 3 intrusive Roman)
F34	Hearth to SE of Mound 5	628 records incl. 622 Bflint, 1 quern fragment
F115	Posthole to SE of Mound 5	5 records incl. 1 quern fragment
F436	Scoop under hearth F34	8 records incl. 2 ceramic
F448	Posthole in extreme S of Mound 5	5 records incl. 1 ceramic
F64	Posthole to NE, outside Mound 5	5 records incl. 1 ceramic
F402	Scoop to NE outside Mound 5	11 records incl. 1 ceramic (BA fingernail impr.)
F405	Pit to N, outside Mound 5, cut by F60	12 records incl 1 ceramic
F489	Posthole immediately N of pit F498	2 records incl. 1 ceramic (Beaker fine)
F582	Posthole to E of pit F498	3 records incl. 1 ceramic
F573	Posthole to SE of pit F498	2 records incl. 1 ceramic
F496	Posthole to SE of pit F498	2 records incl. 1 ceramic
F473	Pit in centre of Mound 5	19 records incl. 7 ceramic (1 Beaker fine), 1 seed
F552	Posthole cutting pit F473	25 records incl. 5 ceramic, 1 metal find, 1 flot

F468	Pit in centre of Mound 5	50 records incl. 23 ceramic (15 fired clay, 8 pottery incl. 4 Beaker fine, a Iron Age ?? sherd), 2 seeds
F543	Posthole cutting pit F468	26 records incl. 7 ceramic (3 Beaker, 2 BA), 1 flint
F544	Posthole cutting pit F468	17 records incl. 6 ceramic (3 fired clay, 3 Beaker fine), 1 flint
F545	Posthole cutting pit F468	24 records incl. 17 fired clay, 1 flint
F547	Scoop to N of pit F468	3 records incl. 2 ceramic (1 Ardleigh sherd, 1 Roman intrusive)
F474	Pit in centre of Mound 5	7 records incl. 2 ceramic (1 Neol?)
F460	Pit in centre - W of Mound 5	107 records incl. 91 ceramic (incl. 42 food vessel), 1 seed
F458	Posthole to N of pit 460	10 records incl. 2 ceramic (1 fired clay, 1 pottery), 1 flint
F457	Posthole to N of pit F460	10 records incl. 4 ceramic (1 Iron Age sherd?)
F480	Pit in centre - N of Mound 5	20 records incl. 2 ceramic
F459	Cremation cutting F480	13 records incl. 5 ceramic, 2 cremated human bones
F478	Posthole to SE of pit F480	7 records incl. 2 ceramic
F481	Posthole to SE of posthole F478 (Possible line of postholes F565, F566, F478, F481)	7 records incl. 3 ceramic
F454	Posthole in NW of Mound 5	5 records incl. 1 ceramic, 1 flint
F56	Posthole outside Mound 5 to NW	20 records incl. 14 ceramic (10 fired clay, 4 pottery), 1 flint
F397	Posthole outside Mound 5 to W	5 records incl. 2 ceramic, 1 flint

Total number of possibly datable features in Mound 5 area: 40 features (out of a total of 172 prehistoric features in the Mound 5 area).

Thus, using the presence of possibly datable pottery, occasionally supplemented by other diagnostic finds such as flint implements, in features of the Mound 2 and Mound 5 areas, we arrive at a total of 75 prehistoric features with dating potential for the whole of Int 41. This represents still only 20% of the total prehistoric feature population, but provides the core elements of a sequence.

In summary, on the evidence of the datable ceramic in prehistoric features of Mound 2. the pit F330/311 and postholes F313, 315, 223, 226 and 342 nearby, as well as the roundhouse postholes F222, 263, 265 and 267 are all of earliest Bronze Age (Beaker) date, as is the butt-end of a gully in the extreme NW of Int 41. The appurtenance to this phase of posthole F217 is also clear, but pit F235 and hearth F218 nearby in the centre-North of Mound 2 are less unequivocal. The cremation F225 in the SW of Mound 2 can be ascribed to the Bronze Age. And the Iron Age phase comprises hearth F218, gully F216, postholes 309 and 281 (part of a diagonal structure in the centre-South of

Mound 2?) and 238.

On Mound 5 the ditch complex known as structure 23/24 can be shown to start in the earliest Bronze Age (Beaker phase) and a number of pits or large scoops in the centre-North of Mound 5 produced Beaker/Food vessel ceramic (F460, F468 cut by F543 and 544, F473, F498 and posthole F489 next to it). Two features, F547 and F549 are possibly Bronze Age cremations, while the gullies F122/F393 and perhaps some later postholes (eg F457) belong to the Iron Age. Finally, pit F474 needs re-investigation to ascertain whether its single sherd of Neolithic pottery can date the pit to this phase or not.

#### 4.4 Evidence for Sequence and Date from Context Description and Site Geometry

Excavators at Sutton Hoo became aware, over time, that certain soil colours of contexts contained within features tended to fall into categories of soil colour and that these colours consistently appeared to characterise certain types of features and phases of archaeological activity. Thus, pale buff-grey podsolized or windblown sands tend to fill the upper fills of Anglo-Saxon quarry pits and ditches; very dark "black" fills tend to be associated with gullies or palisades of the Iron Age period, and mid-brown fills would generally characterise earlier prehistoric ditches and pits. This "dating by colour" can be shown to be of some help in phasing features and such an analysis has been undertaken for the area known as Int 48 (see Vol. 6, Section 4.4). For Int 41, such an analysis has *not* been undertaken because, although the "phasing by colour" would generally ring true - eg the Iron Age gullies F216, 60, 61, 393 and 122 do appear as "black" against the mid-brown fill of the prehistoric ditch system F117/126/128 etc. [see photographs of Horizon 7 of quadrants L (N318/05), M (N318/14), Q2 (N373/04) V1 and V2 (N373/02 and 03)] cut by the paler quarry pits - it is a fairly coarse tool and would not help refine further the broad phasing already given by the stratigraphic sequence and the phasing from assemblages.

But another way of looking at the prehistoric feature population of Int 41 ins to include in the phasing those features displaying reasonably secure *horizontal associations* (ie features forming a recognisable shape in plan when joined together with features that contain some element of dating). It is tempting to indulge in join-the-dots games using the prehistoric feature map and any number of rectilinear or circular combinations of features could emerge if one stares long enough at it: examples of circular settings on the Mound 2 area could include F335, 336, 337, 344, 345, 346 and 347 in the centre-South of Mound 2 or F353, 362, 363, 368, 370 and 364 in the centre-North of Mound 2. Linear settings could be made out of F273, 274, 275, 276 in the extreme SE of Mound 2 or out of F237, 236, 284/285, 512, 513/514 and 283 in the centre-Northwest of Mound 2, or out of F239, 240, 368 and 370 to the East of the latter. On Mound 5, linear arrangements could be formed by joining F429, 553, 440, 430 and 441 (a line of postholes flanking the ditch system in the SW of Mound 5) or joining F565, F566, 478 and 481 in the North of Mound 5, or F491, 492, 576, 574, 495, 575 and 497 in the centre-Northeast of Mound 5; finally, in the centre of Mound 5, a right-angle is formed by the large postholes F463, 462, 427, 428, 438, 439, with a cluster of features (466, 467, 469, 518-521, 526, 527, 541) on the "inside" to the East. But these geometric ponderings have little to commend them, as the features could be part of other combinations. More secure are a few geometric arrangements associated with datable structures of feature clusters. These are (from latest to earliest):

Considered part of the Iron Age Linear System: the two parallel gullies F60 and F61 (parallel to the Mound 2 linear feature and stratigraphically in correct order); the posthole F523 within the enclosure gully F393/122 on Mound 5; the postholes F277, 278, 279 and 280 (which form a line with posthole F281 tentatively dated to the Iron Age); the postholes F290, 288 and 540 (which form a line with posthole F309 dated to the Iron Age). The latter two posthole settings form a parallel linear structure in the centre-Southwest of Mound 2.

Considered part of the Bronze Age fence line: the 54 postholes that transect the eastern side of Mound 2 and run southward to the East of Mound 5 over the ditch system (F90-92, 100, 102-111, 120, 247-253, 316-329, 348, 350-352, 354, 355, 357, 371-373, 375-377, 380-384, 511). Only 4 of these postholes (F320, 321, 328, 373) contained one pottery sherd each.

Considered part of the roundhouse in the North-East of Mound 2: a circular structure can be made out of the postholes F222 and F267 (the porch) and, anticlockwise, F265, 264, 263, 358, 360, 221 and 260. In its centre would be hearth F220. Stratigraphically less certain is the cremation(?) F270 and a pit F268. 5 out of these 12 features produced potentially datable ceramic finds.

Considered part of the ditch system running across the South of Mound 5: to the ditches and gullies F117, 126, 128, 561, 562, 568, 569 and 571 which produced potentially datable material, one must add the spade marks F563 and the gullies F583 and 584.

Taking these extra *geometrically securely associated features* into account, the total of datable features on Int 41 can rise to 146 (out of a total of 366 presumed prehistoric features) or around 40% of the prehistoric feature population on Int 41.

40% of the prehistoric feature population probably represents the maximum that can be reasonably expected of a palimpsest of negative features cut into the subsoil, mostly without obvious stratigraphic relationships. But, in a further attempt to phase the prehistoric features sequence, a *posthole analysis* for the postholes cut into the subsoil platforms surviving under Mounds 2 and 5 was undertaken. The reasoning behind such an exercise is as follows:

- only Mound 2 and Mound 5 postholes figure in the analysis as they are a large enough group (226 postholes) of a sufficiently uniform feature family to warrant such an exercise.
- Mound 2 and Mound 5 were chosen because it is only there that the subsoil platforms have not suffered from erosion, being protected by the mantle of buried soils, themselves caused by the mound make-ups.
- From the observations made on the *buried soils* of Mounds 2 and 5 and their superimposed respective horizons (Horizon 4 top; Horizon 5 middle; Horizon 6 bottom over subsoil), and from the distribution of a datable ceramic within these same horizons, it can be deduced that the original extant height of the ancient (= "buried") soil in prehistoric time is missing, having been reduced by ploughing in Iron Age and later (Roman) times. Evidence supporting this statement consists of the distribution of Iron Age pottery in the buried soils of Mounds 2 and 5 (all sherds in Horizons 4 and 5, 2 sherds only from each Mound in Horizon 6), the distribution of Roman and post-Roman pottery in the same buried soils (all sherds in Horizon 4, only 1 sherd in Horizon 5 of Mound 2) and the presence of ploughmarks and vegetation marks visible at Horizon 5 in Mounds 2 and 5 (F195, F395, F416) datable to a period no earlier than the Iron Age and most likely to be Roman (see Section 6, this volume). Therefore, it can be assumed that the height of the original ancient soil in Neolithic and Bronze Age times was higher than it was by Iron Age times. If this is accepted, then - if it were possible to reconstruct the hypothetical original ground surface into which postholes were cut - it should follow that the higher the reconstructed original ground surface, the earlier the posthole, and the lower the original ground surface the later the posthole.
- How could the hypothetical original ground surface be reconstructed? Again, the analysis rests on a number of assumptions, but if it can be achieved, then these postholes sharing the same hypothetical ground surface could be said to be more or less contemporary.

The hypothesis for the analysis is that postholes of different diameters and different depths (ie whose recorded bottoms occur at different heights AOD) once shared a common reconstructed ground surface, which varies in height according to the age of the postholes, even though they were all encountered at roughly the same height, ie at the top of the subsoil plateaux of Mounds 2 and 5.

For the analysis to work, a number of points have to be made. The first assumption is that there is a relationship between the size of the post given by its diameter and the depth that it is driven into the ground - ie a large post would need to be driven deeper than a thin one. To discover that ratio, first of all the surviving depth (ie to top of topsoil) of each of the 266 postholes on Mounds 2 and 5 was extracted from the records and an average calculated. The figures arrived at are the following:

<u>Posthole diameter</u>	<u>Average surviving depth</u> (from base to top of topsoil)		
20cm	12cm		
25cm	16cm		
30cm	16cm		
35cm	20cm		
40cm	20cm		
45cm	20cm		
50cm	26cm		
55cm	27cm		
60cm	27cm	}These last 4 sizes of "postholes" }(if such) have too few examples }(2 or 3 in each case) to give }reliable averages	
65cm	27cm		
70cm	33cm		
80cm	33cm		

Thus, it appears that for postholes between 20 and 40cm in diameter, the diameter should be multiplied by a factor of at least 2 (= ratio); for postholes of 45cm or more in diameter, the multiplying factor should be less, estimated at 1.5 (= ratio).

Thus, the formula for arriving at a hypothetical reconstructed ground surface would be:

diameter x ratio = hypothetical depth of posthole + bottom of posthole AOD = hypothetical original ground

Taking as an example posthole F221:

0.35m x 2 = 0.70m + 32.92 AOD = 33.62 AOD

In order to test whether the principle and the estimated ratios could be made to work, two test cases where the geometric horizontal association of postholes within a single structure was reasonably certain were tried, the first test case being the roundhouse located in the NE of the Mound 2 platform and the second case being the fence-line that runs N-S through the eastern part of Mound 2.

#### Test Case 1

Hypothetical height of original ground surface into which roundhouse posts were driven  
(Using estimated ratios to calculate depth of postholes)

<u>F No.</u>	<u>Diameter</u>		<u>Ratio</u>		<u>Depth</u>	<u>Base AOD of Post</u>	<u>Recons. Ground AOD</u>
F221	0.35	x	2.0	=	0.70	32.92	33.62
F222	0.40	x	2.0	=	0.80	32.83	33.63
F260	0.35	x	2.0	=	0.70	32.93	33.63
F263	0.50	x	1.5	=	0.75	33.01	33.76
F264	0.45	x	1.5	=	0.50	33.03	33.63
F265	0.70	x	1.5	=	1.05	32.65	33.70
F267	0.60	x	1.5	=	0.90	32.69	33.59
F358	0.35	x	2.0	=	0.70	32.97	33.67
F360	0.30	x	2.0	=	0.60	33.00	33.60

Although the diagram looks somewhat "craggy", the hypothetical original height of the ground surface once shared by the postholes of the roundhouse seems fairly well anchored around 33.63 AOD, with most postholes falling 4cm either side of this figure. The discrepancies (13cm and 7cm "too high") are postholes F263 and F265: they are very large postholes (50 and 70cm in diameter respectively) and therefore their diameter/depth ratio is not very reliable; also, being furthest North,

they seem to be located in an area where the ground naturally rises (cf. height AOD at which top of posthole was encountered).

## Test Case 2

Hypothetical height of original ground surface into which posts of Bronze Age fence were driven  
(From North to South)

<u>F No.</u>	<u>Diameter x ratio (=2)</u>	<u>= Depth</u>	<u>Base AOD of Post</u>	<u>Reconstr. Ground AOD</u>
<u>North Part</u>				
F384	.25	.50	32.99	33.49
F383	.20	.40	33.06	33.46
F382	.20	.40	33.00	33.40
F247	.20	.40	33.07	33.47
F248	.20	.40	33.08	33.48
F249	.22	.44	33.05	33.49
F250	.22	.44	33.05	33.49
F251	.20	.40	33.04	33.44
F252	.20	.40	33.03	33.43
F253	.23	.46	33.04	33.50
F348	.24	.48	33.01	33.49
F349	.30	.60	32.92	33.52
F350	.23	.46	32.99	33.45
F351	.21	.42	33.03	33.45
F352	.25	.50	33.04	33.54
F373	.30	.60	32.92	33.52
F375	.22	.44	33.01	33.45
F376	.20	.40	33.03	33.43
F377	.20	.40	33.00	33.40
F354	.30	.60	32.97	35.57
F355	.22	.44	33.07	33.45
F371	.30	.60	32.90	33.50
F372	.20	.40	33.01	33.41
F357	.25	.50	33.00	33.50
F319	.25	.50	32.96	33.46
F318	.25	.50	32.92	33.42
F317	.25	.50	32.91	33.41
<u>South Part</u>				
F316	.22	.44	32.89	33.33
F380	.20	.40	32.89	33.29
F320	.20	.40	32.91	33.31
F321	.25	.50	32.88	33.38
F381	.25	.50	32.89	33.39
F323	.20	.40	32.92	33.32
F328	.20	.40	32.91	33.31
F329	.20	.40	32.89	33.29
F324	.20	.40	32.92	33.32
F325	.20	.40	32.93	33.33
F326	.20	.40	32.96	33.36
F327	.20	.40	(32.83)	(33.23)



Again, the diagram looks somewhat craggy, considering that all posts are part of one single structure, a fence-line erected post-Early Bronze Age and pre-Iron Age. But most posts fall 5cm either side of a hypothetical original ground surface of 33.46 AOD in the northern part of Mound 2 and 33.33 AOD in the southern part of Mound 2. A number of reasons can be found to explain the lack of smoothness exhibited by the fence-line curve. It is suspected that it is mainly due to slight variations in excavation techniques, such as over-cleaning of the subsoil and over- or under-excavating the "true" profile of each posthole, resulting in differing diameters and depths.

The surfaces of the buried soil and of the subsoil of Mound 2 as well as those of Mound 5 and mounds further south are not level and were most probably not level in prehistoric and Anglo-Saxon times. It appears that the northern part of the area subsequently covered by Mound 2 was higher and that the ground gradually sloped South, South-East and South-Westwards. At Horizon 4 (the top of the buried soil) the highest points on Mound 2 occur in the NE at point J and in the SW and point M, forming a slight transversal central NE-SW ridge of 33.50m AOD, with the surface sloping gradually down from this ridge.

Further, the surface of Mound 5 to the South is on average 20-30cm lower than on Mound 2, with the top of the buried soil (Horizon 4) at c. 33.10 AOD and the top of the subsoil at c. 32.90 AOD.

Therefore, to estimate the hypothetical heights of original ground surfaces is a somewhat crude exercise, since no single figure can be given for a given phase: we have for example seen that the northern part of the fence-line has a hypothetical original ground surface of  $33.46 \pm 0.05$  AOD, whereas in the southern part it is  $33.33 \pm 0.05$ . Nevertheless, some figures can be put forward:

On Mound 2, it appears that the late Neolithic-Early Bronze Age ground surface was situated at a height of around 33.60 AOD (33.63 for the "Beaker roundhouse" in the NE corner of Mound 2). In the subsequent Bronze Age this ancient ground surface appears to have been lowered to c. 33.45 AOD in the northern part of Mound 2 and c. 33.35 in the southern part of Mound 2 (the figures for the Bronze Age fence centring around 33.46 in the North and 33.33 in the South). Present day top surfaces of buried soil horizons are then found between 33.50 (highest Horizon 4 in the North) and 33.30 (Horizon 4 in the South), between 33.35/33.25 (North) and 33.20 (South) for Horizon 5, between 33.30/33.20 (North) and 33.15 (South) for Horizon 6, and finally the top of the subsoil is encountered at 33.20/33.10 in the North of Mound 2 and 33.00 in the South of Mound 2. Two points are worthy of notice: first, that the ploughmarks F195 visible at Horizon 5 on Mound 2 have their bases between 33.15 and 33.20 AOD. Their date cannot be earlier than Iron Age and are most probably Roman or post-Roman. Secondly, that Horizon 6 appears to be the only remnant of unploughed remnant ancient soil.

The figures given above for Mound 2 can be summarised in the table below:

Mound 2 late Neol-EBA ground surface :	33.60 AOD
Mound 2 Bronze Age ground surface :	33.45 (N), 33.35 (S)
Mound 2 Buried soil at Horizon 4 (top) :	33.50/45 (N), 33.50 (S)
Mound 2 Buried soil at Horizon 5 (top) :	33.35/25 (N), 33.20 (S)
Mound 2 Buried soil at Horizon 6 (top) :	33.30/20 (N), 33.15 (S)
Mound 2 subsoil (top of) :	33.20/10 (N), 33.00 (S)
Buried soil at Horizon 4	= Iron Age ground surface? ploughed
Buried soil at Horizon 5	= Bases of ploughmarks at 33.15-33.20 AOD
Buried soil at Horizon 6	= Unploughed ancient soil, contains no late (IA & Roman) pot

It therefore seems correct that the higher the ground surface, the more ancient it was, the younger the lower. It follows that only very deep features from the earliest phases of occupation on Mound 2 could "bite" into the subsoil, whereas less substantial features of later phases (starting from a lower original ground surface) could be represented in the subsoil sample.

But we have seen that the figures advanced for hypothetical original ground surfaces are fairly crude with heights for features belonging to the same structure clustering 5cm either side of a given mean, with heights generally 10cm lower in the southern part of Mound 2 compared to those of the northern part, and finally that heights fluctuate within each horizon and on the subsoil, depending on location. Therefore, only very general trends, betrayed by substantial differences of height in hypothetical original ground surfaces, can be detected. Taking all these factors into consideration, the following figures will be used in analysis:

- Reconstructed heights of 33.58 AOD and upwards are considered high, and should denote an "early" (LN-EBA and earlier?) occupation.
- Heights between 33.40 and 33.57 AOD in the North of Mound 2 and between 33.30 and 33.50 AOD in the South of Mound 2 are considered medium heights and could denote appurtenance to any phase.
- Heights between 33.15 and 33.40 AOD in the North of Mound 2 and between 33.10 and 33.30 AOD in the South of Mound 2 are considered low and should describe a "late" (IA?) occupation.

In the following analysis, the postholes of Mound 2 are presented, giving the hypothetical original ground surface into which they were cut. First, those considered "late" - perhaps Iron Age - in the North and South of Mound 2 are presented, followed by those displaying a medium and high ("early") range of heights on Mound 2, first in the North, then in the South.

Posthole analysis: hypothetical reconstructed ground surface on Mound 2 platform

Below 33.40 on northern platform of Mound 2, N of IA gully ("late", possibly IA)

F No.	Diameter	Depth	Base AOD	Reconstr. Height of Ground
F283	.20 x 2	0.40	32.91	33.31
F369	.20 x 2	0.50	32.84	33.34
F284	.20 x 2	0.40	32.75	33.15

Below 33.30 on southern platform of Mound 2, S of IA gully ("late", possibly IA)

F No.	Diameter	Depth	Base AOD	Reconstr. Height of Ground
F534	.20 x 2	0.40	32.70	33.10
F535	.20 x 2	0.40	32.74	33.14
F537	.20 x 2	0.40	32.76	33.16
F288	.25 x 2	0.50	32.68	33.18
F540	.15 x 2	0.30	32.97	33.27
F419	.20 x 2	0.40	32.82	33.22
F420	.20 x 2	0.40	32.82	33.22
F303	.20 x 2	0.40	32.85	33.25
F347	.20 x 2	0.40	32.85	33.25
F344	.25 x 2	0.50	32.74	33.24
F333	.50 x 1.5	0.75	32.54	33.29
F335	.20 x 2	0.40	32.88	33.28
F387	.20 x 2	0.40	32.89	33.29

Above 33.40 on N platform of Mound 2, N of IA gully (very high values underlined)

F No.	Diameter	Depth	Base AOD	Reconstr. Height of Ground
F231	.30 x 2	0.60	32.88	33.48
F232	.30 x 2	0.60	32.85	33.45
F233	.35 x 2	0.70	32.87	33.57
F230	.50 x 1.5	0.75	32.78	33.53
<u>F217</u>	.55 x 1.5	0.82	32.87	<u>33.69</u>
F515	.30 x 2	0.60	32.95	33.55
F512	.35 x 2	0.70	32.71	33.41
F369	.25 x 2	0.50	32.84	<u>33.81</u>
<u>F365</u>	.65 x 1.5	0.97	32.84	<u>33.81</u>
F236	.45 x 1.5	0.60	32.83	33.43
<u>F238</u>	.60 x 1.5	0.90	33.05	<u>33.95</u>
F239	.55 x 1.5	0.82	32.75	33.57
<u>F241</u>	.80 x 1.5	1.20	32.92	<u>34.12</u>
F246	.20 x 2	0.40	33.13	33.53
F368	.25 x 2	0.50	32.96	33.46
<u>F370</u>	.55 x 1.5	0.82	32.77	<u>33.59</u>
F353	.35 x 2	0.70	32.85	33.55
<u>F362</u>	.35 x 2	0.70	33.04	<u>33.74</u>
F363	.25 x 2	0.50	32.95	33.45
<u>F254</u>	.45 x 1.5	0.60	32.99	<u>33.59</u>
<u>F255</u>	.35 x 2	0.70	32.99	<u>33.69</u>
F266	.35 x 2	0.70	32.89	33.59
F374	.35 x 2	0.50	33.07	33.57
F367	.20 x 2	0.40	33.05	33.45
<u>F356</u>	.35 x 2	0.70	32.96	<u>33.66</u>
F378	.30 x 2	0.60	32.93	33.53
F379	.25 x 2	0.50	32.94	33.44
F259	.30 x 2	0.60	32.95	33.55

Above 33.30 on southern platform of Mound 2, S of IA gully (high values underlined)

F No.	Diameter	Depth	Base AOD	Reconstr. Height of Ground
F228	.60 x 1.5	0.90	32.61	33.51
F281	.30 x 2	0.60	32.88	33.48
F280	.25 x 2	0.50	32.85	33.35
F279	.30 x 2	0.60	32.90	33.50
F278	.25 x 2	0.50	32.84	33.34
F277	.30 x 2	0.60	32.87	33.47

F305	.40 x 2	0.80	32.78	<u>33.58</u>
F307	.25 x 2	0.50	32.84	33.34
F310	.35 x 2	0.70	32.96	<u>33.66</u>
F309	.30 x 2	0.60	32.79	33.39
F290	.30 x 2	0.60	32.80	33.40
F289	.30 x 2	0.60	32.75	33.35
F291	.30 x 2	0.60	32.75	33.35
F295	.25 x 2	0.50	32.91	33.41
F296	.25 x 2	0.50	32.87	33.37
F421	.35 X 2	0.70	32.69	33.39
F423	.35 x 2	0.70	32.64	33.34
F297	.25 x 2	0.50	32.92	33.42
F298	.20 x 2	0.40	32.98	33.38
F301	.50 x 1.5	0.75	32.73	33.48
F300	.45 x 1.5	0.60	32.80	33.40
F299	.55 x 1.5	0.82	32.76	<u>33.58</u>
F302	.30 x 2	0.60	32.85	33.45
F304	.45 x 1.5	0.60	32.90	33.50
F346	.20 x 2	0.40	32.91	33.31
F345	.25 x 2	0.50	32.88	33.38
F343	.25 x 2	0.50	32.82	33.32
F341	.35 x 2	0.70	32.80	33.50
F340	.30 x 2	0.60	32.89	33.49
F339	.35 x 2	0.70	32.92	<u>33.62</u>
F338	.40 x 2	0.80	32.83	<u>33.63</u>
F331	.55 x 1.5	0.82	32.66	33.48
F332	.35 x 2	0.70	32.88	<u>33.58</u>
F336	.30 x 2	0.60	32.93	33.53
F386	.25 x 2	0.50	32.84	33.34
F388	.45 x 1.5	0.60	32.82	33.42
F276	.30 x 2	0.60	32.89	33.49
F275	.20 x 2	0.40	32.94	33.34
F274	.25 x 2	0.50	32.89	33.39
F273	.30 x 2	0.60	32.84	33.44
F226	.25 x 2	0.50	32.84	33.34
F342	.65 x 1.5	0.97	32.74	<u>33.71</u>
F312	.35 x 2	0.70	32.96	<u>33.66</u>
F313	.70 /.55 x	1.05 /	32.75	<u>33.80</u> /
	1.5	0.82	32.75	33.57
F315	.65 x 1.5	0.97	32.86	<u>33.83</u>

On *Mound 5* the same analysis was undertaken, having first established some known heights. They are:

On *Mound 5*, the top of the Buried Soil at Horizon 4 is c. 33.10 AOD  
the top of the Buried Soil at Horizon 5 is c. 33.00 AOD  
the top of the Buried Soil at Horizon 6 is c. 32.95 AOD

The denivellation between Mounds 2 and 5 is therefore quite marked, with Horizon 4 on *Mound 5* on average 30cm lower than on *Mound 2*, Horizons 4 and 5 each 25cm lower than those on *Mound 2* and the subsoil on average 20cm lower.

Using the same principle as on Mound 2 (the higher the reconstructed original ground surface, the more likely the feature is to be early), the following figures have been arrived at for the analysis of postholes on Mound 5:

- Reconstructed heights of 33.40 AOD and upwards are considered high and should denote an "early" (LN/EBA?) occupation.
- Heights between 33.20 AOD and 33.39 AOD are considered medium and could denote appurtenance to any phase.
- Heights between 32.90 and 33.19 are considered low and should denote a "late" (IA?) occupation.

In the following analysis the postholes of Mound 5 are presented, starting with those postholes whose reconstructed ground surface is below 33.20 AOD (therefore "late"), followed by those postholes with medium and high (therefore "early") values.

Below 33.20 on Mound 5 platform (very low values underlined)

F No.	Diameter	Depth	Base AOD	Reconstructed Hypothetical Ground Surface
F444	.15 x 2	0.30	32.61	<u>32.91</u>
F443	.25 x 2	0.50	32.45	<u>32.95</u>
F433	.20 x 2	0.40	32.60	<u>33.00</u>
F449	.20 x 2	0.40	32.75	33.15
F440	.25 x 2	0.50	32.64	33.14
F441	.15 x 2	0.30	32.68	<u>32.98</u>
F553	.25 x 2	0.50	32.65	33.15
F430	.20 x 2	0.40	32.64	<u>33.04</u>
F438	.25 x 2	0.50	32.45	<u>32.95</u>
F427	.20 x 2	0.40	32.77	33.17
F450	.15 x 2	0.30	32.77	33.07
F397	.20 x 2	0.40	32.56	<u>32.96</u>
F398	.20 x 2	0.40	32.71	33.11
F457	.45 x 1.5	0.67	32.48	33.15
F456	.10 x 2	0.20	32.71	<u>32.91</u>
F564	.15 x 3	0.30	32.81	33.11
F565	.15 x 2	0.30	32.81	33.11
F477	.15 x 2	0.30	32.82	33.12
F478	.25 x 2	0.50	32.68	33.18
F479	.10 x 2	0.20	32.92	33.12
F481	.20 x 2	0.40	32.78	33.18
F580	.10 x 2	0.20	32.86	33.06
F463	.15 x 2	0.30	32.85	33.15
F579	.15 x 2	0.30	32.82	33.12
F484	.20 x 2	0.40	32.78	33.18
F519	.20 x 2	0.40	32.64	<u>33.04</u>
F541	.20 x 2	0.40	32.64	<u>33.04</u>
F526	.15 x 2	0.30	32.45	<u>32.75</u>
F544	.30 x 2	0.60	32.58	33.18

F578	.15 x 2	0.30	32.87	33.17
F487	.15 x 2	0.30	32.77	33.07
F492	.20 x 2	0.40	32.65	<u>33.05</u>
F577	.20 x 2	0.40	32.57	<u>32.97</u>
F576	.10 x 2	0.20	32.88	33.08
F575	.10 x 2	0.20	32.88	33.08
F573	.10 x 2	0.20	32.90	33.10
F572	.10 x 2	0.20	32.90	33.10
F567	.10 x 2	0.20	32.88	33.08

Above 33.20 on Mound 5 platform (very high values underlined)

\* Very shallow, not a PH?

F586	.35 x 2	0.70	32.80	<u>33.50</u> *
F587	.35 x 2	0.70	32.60	<u>33.30</u> *
F528	c. .70 x 1.5	1.05	32.58	<u>33.63</u> *
F529	.60 x 1.5	0.90	32.59	<u>33.49</u>
F448	.30 x 2	0.60	32.67	<u>33.27</u>
F447	.45 x 1.5	0.67	32.62	<u>33.29</u>
F446	.25 x 2	0.50	32.73	<u>33.23</u>
F546	?		32.55	
F429	.35 x 2	0.70	32.50	33.20
F522	.65 x 1.5	0.97	32.39	33.36
F439	.25 x 2	0.50	32.72	<u>33.22</u>
F428	.55 x 1.5	0.82	32.76	<u>33.58</u>
F451	.45 x 1.5	0.67	32.71	33.38
F452	.25 x 2	0.50	32.73	33.23
F454	.25 x 2	0.50	32.70	33.20
F549	.35 x 2	0.70	32.63	<u>33.43</u>
F458	.45 x 1.5	0.67	32.80	<u>33.47</u>
F459	.35 x 2	0.70	32.73	<u>33.43</u>
F461	.35 x 2	0.70	32.64	<u>33.34</u>
F350	.25 x 2	0.50	32.88	32.38
F483	.40 x 2	0.80	32.83	<u>33.63</u> *
F476	.35 x 2	0.70	32.89	<u>33.59</u>
F464	.20 x 2	0.40	32.80	33.20
F465	.25 x 2	0.50	32.79	33.29
F466	.30 x 2	0.60	32.65	33.25
F467	.45 x 1.5	0.67	32.62	33.29
F518	.50 x 1.5	0.75	32.59	33.34
F469	.35 x 2	0.70	32.72	<u>33.42</u>
F520	.60 x 1.5	0.90	32.64	<u>33.54</u>
F521	.40 x 2	0.80	32.63	<u>33.43</u> *
F527	c. .55 x 1.5	0.82	32.52	33.34
F543	.60 x 1.5	0.90	32.61	<u>33.51</u>
F545	.35 x 2	0.70	32.81	<u>33.51</u>
F475	.30 x 2	0.60	32.85	<u>33.45</u>
F470	.25 x 2	0.50	32.70	33.20
F518	.50 x 1.5	0.75	32.59	33.34
F471	.25 x 2	0.50	32.88	33.38
F472	.20 x 2	0.40	32.88	33.28

F488	.40 x 2	0.80	32.84	<u>33.64</u> *
F489	.25 x 2	0.50	32.78	33.28
F490	.20 x 2	0.40	32.87	33.27
F491	.25 x 2	0.50	32.90	<u>33.40</u>
F582	.50 x 1.5	0.75	32.87	<u>33.62</u> *
F551 c.	.35 x 2	0.70	32.80	<u>33.50</u>
F552	.50 x 1.5	0.75	32.63	33.38
F574	.30 x 2	0.60	32.73	33.33
F493	.30 x 2	0.60	32.89	<u>33.49</u>
F494	.20 x 2	0.40	32.80	33.20
F495	.25 x 2	0.50	32.85	33.35
F496	.20 x 2	0.40	32.85	33.25
F554	.25 x 2	0.50	32.71	33.21

Once the data for postholes on Mounds 2 and 5 had thus been assembled, what remained to be done was to plot out the location of "early" and "late" postholes, to see whether any patterns emerged and to assess whether the plot corroborates the stratigraphic and finds-based sequence (Sections 4.2 and 4.3), or whether any discrepancies emerged. This plot reveals no obvious patterning of postholes into undetected structures, but also confirms the soundness of the general principle - namely that "high" features are generally "early" and "low" features are generally "late". Indeed, there are hardly any contradictions between the postholes thought to be "late" and vice versa: the two exceptions are the posthole F238 in the North of Mound 2 ("early" ground surface but Iron Age finds in it) and the posthole F347 in the South of Mound 2 ("late" ground surface but possibly 1 sherd of neolithic pottery in it). Otherwise, the findings are consistent both with the putative structure map and the sequence map (see *atlas*): a late (perhaps Iron Age) date could be suggested for possible structures in the centre of Mound 2 (posthole line F237, 236, 285, 284, 512, 513, 514, 283 in centre-North; diagonal parallel posthole lines 281, etc. and 309 in centre-South; less certainly, a possible circular setting in the South F344, 345, 346, 347, 335, 336, 337). An early date appears to be confirmed for the "roundhouse" in the NE of Mound 2, perhaps for a posthole structure around the "treepit" F330 and there also seems to be a high proportion of early postholes near the large (Early Bronze Age?) pits in the centre-North of Mound 5 (F464, 474, 468, 478, 498).

In conclusion, the results of a rather labourious *posthole analysis* are not entirely conclusive in themselves, but they do reinforce the findings of the stratigraphic and assemblage analysis. Moreover, the suggestions that high reconstructed hypothetical ground surfaces are early and low ground surfaces late appear sound. These findings will be of invaluable help when discussing the buried soils and evidence for cultivation beneath Mounds 2 and 5 (see Section 6).

#### 4.5 Evidence from Absolute Dating

At the time of writing, no C14 dating has been undertaken for the prehistoric features of Int 41, as it seemed more reasonable to advance the analysis of the prehistoric feature population as far as possible without wasting resources on inadequate samples. A list of charcoal samples available for prehistoric features (see below), shows which feature contains specific charcoal samples and where they are located. But, to this rather sparse list could be added all those features from which *flotation samples* of (mostly carbonised) organic material are available as they could also be submitted to C14 analysis once the macrobotanic material had been examined by Alan Hall (see Section 5.5).

The charcoal samples available for prehistoric features on Int 41 are:

##### Charcoal Samples Available for Prehistoric Features of Mound 2 Area (apart from all those available as flot samples)

F219	3 ch. samples 34101, 36437, 41379, (D1, D1, D12)
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F356	1 ch. sample 41911 (D10)	
F311	<u>1 crem. bone</u> 34419 (016)	
F330	1 ch. sample 41076 (D10)	
F281	1 ch. sample 36436 (D1)	
F225	<u>16 crem. bones</u>	3 ch. samples 41819-20, 41823-25, 41827-29 41826 (D10) 41832-3, 41839, 41841, 41843, 41846 41840 (D10) 41848, 41864 (all 0-24) 41913 (D10)
F292	1 ch. sample	38422 (D1)
F293	1 ch. sample	38421 (D1)
F294	4 ch. samples	38747, 39528, 41213, 41213, (all D10)
F296	1 ch. sample	38168 (D1)
F306	2 ch. samples	38710, 39574 (D10)
F216	2 ch. samples	30071, 40455, (D1, D10)
F286	1ch. sample	41912 (D10)
F238	1 ch. sample	41215 (D10)
F365	2 ch. samples	41182, 4183 (D10)
F368	1 ch. sample	41349 (D10)
F369	5 ch. samples	41515, 41517, 41518, 41519, 41914 (D10)
F512	1 ch. sample	41960 (D10)
F513	1 ch. sample	41377 (D10)
F515	1 ch. sample	41378 (D10)
F516	1 ch. sample	41376 (D10)

Charcoal Samples Available for Prehistoric Features of Mound 5 Area  
(apart from those available as flot samples)

(no charcoal, but flot, from ditch complex)

F122	1 ch. sample	41757 (D10)
F427	1 ch. sample	42624 (D10)
F34	1 ch. sample	39594 (D10)



F60	1 ch. sample	41806 (D10)
F492	1 ch. sample	42989 (D10)
F468	1 ch. sample	42635 (D10)
F476	1 ch. sample	42867 (D10)
F477	1 ch. sample	42866 (D10)
F478	1 ch. sample	42890 (D10)
F480	1 ch. sample	42893 (D10)
F522	1 ch. sample	42456 (D10)
F549	<u>2 crem. bones</u>	1 ch. sample 42987, 42988 (032), 42892 (D10)
F578	1 ch. sample	43489 (D10)
F455	1 ch. sample	42864 (D10)
F457	2 ch. samples	42632, 42633 (D10)
F459	1 ch. sample	42868 (D10)
F460	1 ch. sample	42891 (D10)
F56	1 ch. sample	26538 (D10)

It could be recommended that the following features be submitted to C14 analysis (if the samples turn out to be suitable):

- a. Flot samples for pit F235 in NW of Mound 2 and hearth F218 in centre-North of Mound 2 should be examined to ascertain whether they are Neolithic or Iron Age (more probably).
- b. Flot samples from the ditch complex (F117, 561, 562, 571, 583) should be examined to establish Early Bronze Age date and sequence (F571 earliest, then F561, then 117, then 583 and 562 latest) and to provide a database context for the metal found in F561, F117 and F562. No charcoal exists for these features.
- c. A large number of features thought to be of Early Bronze Age and Beaker date contain either charcoal or flot samples or both. C14 dating could be used mainly to confirm or disprove a proposed Early Bronze Age date. Features which could be thus tested are:

F220 (hearth in centre of "roundhouse"): flot sample; supposedly where B Brown's faïence bead was found in 1938.

F270 ("cremation"? at entrance of roundhouse): flot sample

F311/330 (treepit with Beaker material): charcoal and flot samples available. But risk of redeposition.

F460, 468, 478 (and F551, 552) (pits on Mound 5): flot samples/seeds/or charcoal available; to confirm Early Bronze Age date.

- d. Features F225 (on Mound 2) and F549 (on Mound 5) are thought to be cremations of Bronze Age date. The bones and charcoal samples could be examined.
- e. The features thought to be of Iron Age date (hearth F219, gullies F216, 60, 61, 122/393) are generally stratigraphically secure enough not to warrant confirmation of date through C14. Individual postholes (eg F512/513 or F281 on Mound 2), possibly part of Iron Age structures, could be submitted to C14 analysis, but it is doubtful whether this would be of any great assistance.

In conclusion, it seems that the best policy is to target one period of occupation, namely the Beaker/Early Bronze Age period rather than dissipate resources over a disparate variety of features and phases. Thus recommendations (b), (c) and (d) should be followed and suitable samples located and submitted to the BM laboratory. The justification for such a programme of C14 dating would be:

1. By far the most intensive period of occupation at Sutton Hoo is the Earliest Bronze Age (Beaker) period, witnessing large-scale settlement and land organisation. A faience bead and early metal work also feature in this period. Samples exist from a large variety of features in Int 41, 48, 55.
2. The dating samples are settlement-derived, not burial-derived. Although there is a risk in submitting inadequate samples, to obtain dates for domestic assemblages for the late Beaker period would contribute a valuable addition to the Beaker debate.
3. C14 dating at the BM could be a natural extension of the radio-carbon dating research programme carried out on British Beakers (Kinnes, et al, 1991: Radiocarbon dating and British Beakers: the BM programme. SAR 8: 35-76).

#### 4.6 MODEL of the Sequence

The analyses upon stratigraphic relationships, feature assemblages, horizontal feature associations and posthole depths all contribute to build the framework of a sequence. The earliest and first phase of occupation at Sutton Hoo, namely the *Middle to Late Neolithic* is not represented stratigraphically, nor as complete features in Int 41. Only witnesses to this occupation are sherds of Neolithic coarse bowls, Mildenhall ware and (later) Peterborough ware and Grooved ware which are found in the *buried soils* of Mound 2 and only in its western half. A few features (also located in the western half of Mound 5, ie F218 and F235) as well as one in the extreme NW (F68) and one in the centre of Mound 5 (F474) contain sherds of late Neolithic pottery. In the case of F218, a sherd of Peterborough (Ebbesfleet?) or Beaker ware (sherd No. 41682) is the only sherd found in this hearth which otherwise contained burnt flint, a flint core and a piece of slag (find no. 41748 in box M-4 [to analyse?]); its flot sample (Find no. 41630) revealed a small amount of hazelnuts as well as a single sloe stone. It is debatable whether this hearth belongs to the Iron Age or Beaker periods. In F235, a pit rich in ceramic finds, 4 sherds are reported as belonging to Peterborough ware (finds nos. 41131, 41133, 1472, 41477) in a ceramic assemblage likely to belong to a Beaker domestic facies [check assemblage] accompanied by burnt flint, flint flakes and a flint core; its flot sample contained a modest amount of hazelnut shells and acorn seeds (find no. 41007). In the extreme NW of Int 41, the butt-end of a gully (?) F68 also produced an assemblage rich in pottery, two of which are identified as Beaker fine ware sherds and four of which are Grooved ware sherds (finds nos. 28726, 28774, 28787 illustrated, and 287976 not illustrated) complemented by burnt flint and flint flakes. Nothing of import was noted in its flot sample (No. 26753). Finally, the occasional sherd of Neolithic coarse bowls is noted, eg one sherd (find no. 36595; check also the other sherd 36603 from this PH) from a posthole - F347 - in the centre-South of Mound 2, or in the shallow scoop F474 in the centre-North of Mound 5 (the assemblage is sparse with 3 burnt flints, a flint flake, a soil sample and 2 sherds of pottery, one of which is thought to be Neolithic coarse ware (find no. 43016). The other sherd is 43007, not identified.

The under-representation of Middle to Late Neolithic occupation elements on Int 41 appears to be due to a number of factors. Firstly, the analysis of other interventions at Sutton Hoo suggests that

occupation was sparser and less well defined than in the subsequent Beaker and Early Bronze Age phase. Secondly, and most tellingly, it appears that the original ground surface from which features could have been cut in the later Neolithic period would have been as high as that calculated for the Beaker phase (c. 33.60 AOD in the Mound 2 area) and c. 33.40 AOD in the Mound 5 area) but more probably higher and certainly not lower. Therefore, later Neolithic features would have had to be at least 60cm deep if they were to make an impression into the subsoil surface. Thus, shallow scoops or very truncated bases of postholes could be the remnants of much more substantial later Neolithic features but most of the fills and most of the features would have been "rubbed out" by later occupation and especially ploughing. The result of this is the presence of later Neolithic pottery in features of subsequent phases and in the spread (due to ploughing) of later Neolithic pottery in the western half of Mound 2's Horizon 4 and Horizon 5 buried soils.

It is important to establish the relationship between the later Neolithic and Beaker phases of occupation at Sutton Hoo, as much research has focused upon the association of Peterborough ware and Grooved ware with Beakers (particularly Cleal 1984, 1985, 1991, 1993). Although direct association cannot be ruled out (eg in the gully butt-end F68, where Beaker fine ware and Grooved ware is found closely associated), it would appear that the juxtaposition of Peterborough ware with Beakers is due to redeposition of later Neolithic material. This would probably fit the chronological framework better, since the Sutton Hoo Beaker assemblage is a Late Southern assemblage.

The second phase of occupation detectable in Int 41, loosely termed Late Neolithic/Early Bronze Age, but more correctly Earliest and Early Bronze Age, can be apprehended in a number of ways: stratigraphically, it predates the N-S fence line and the later (Iron Age) rectilinear W-E gullies and enclosure. The ceramic assemblages include mainly Beaker fine and domestic wares (sometimes associated with earlier Peterborough and Grooved ware), but also Food vessels (in F460 and F498 in the Mound 5 area). An analysis of the plant remains identified in flotation samples from selected prehistoric features (see Section 5.5, this Volume) shows that it is only in features belonging to this phase that charred remains of hazelnut shells and acorn seeds (Hall 1994) occur. Finally, a look at the relationships in plan of features thought to belong to this second phase reveal a few horizontal groupings: a roundhouse in the North-East of Mound 2, and a series of pits and scoops in the centre-North of Mound 5. The ditch system F117, etc. (structure 23/24) which consists of a series of recut gullies, is also thought to have started in this Earliest Bronze Age phase (gully F561, the second earliest containing Beaker fine ware). Finally, a lesser concentration of Beaker features exists in the NW of Mound 2 (pit F235, posthole F217, possibly the hearth F218) and a further gully with Grooved ware and Beaker assemblage exists in the extreme NW of Int 41.

An analysis of postholes surviving on the subsoil platforms of Mounds 2 and 5 suggests that the original ground surface from which postholes of the Earliest Bronze Age could have been cut was situated at around 33.60 AOD on Mound 2 and 33.40 AOD on Mound 5, ie between 15 and 30cm higher than the top of the buried soil encountered at Horizon 4 on Mound 2 (33.50 AOD at its highest, 33.30 in the South) and on Mound 5 (Horizon 4 being situated at 33.10 AOD). Therefore, the top of this ancient soil had been lost through a mixture of erosion or attrition by later occupants and ploughing in the Iron Age, Roman or early Saxon periods (see below and Section 6, this Volume).

This second phase appears to be the most intensive period of occupation witnessed at Sutton Hoo, on Int 41 (as well as on other Interventions), both in terms of numbers of features attributable to this phase and in terms of diagnostic finds. Apart from Beaker fine and domestic wares and other ceramics associated with this facies, the majority of flint implements would also fit a late Neolithic/Early Bronze Age spectrum (eg the scrapers 34699 from F223, 35695 from F315, 36264 and 36607 from F330, the arrowheads 36658 and 36659 also from F330, and the flint implements found in the various gullies making up the ditch system S23/24 [a scraper 41923 and a knife 42518 from F117, a scraper 42471, and knife 42489 and a further implement 41948 from gully F562, a knife 43467 from gully F561 and a scraper 43529 from gully F571]).

The occupation remains suggest the existence of a landscape beginning to be parcelled into units (the ditch system S23/24 and the gully butt-end F68 in the extreme NW of Int 41) within which a number of settlement foci (eg Ashbee's excavation under Mound 1 (Int 7), Int 55, possibly Int 48

and Int 32) established themselves. For Int 41, one focus survived on the eastern side of the subsoil platform protected by Mound 2: it consists of a porched roundhouse (S8) with central hearth (F220), with domestic debris accumulating in a former treepit (F311/F330) and nearby scoops and postholes (particularly F223, 226, 313, 315, 342) situated c. 5m to its South-West. Two other, but less well defined, foci could be postulated for NW of Mound 2 (pit F235, hearth F218?, posthole F217) and the centre of Mound 5 (scoops F468, F473 and associated postholes). This last focus appears to continue in the Early Bronze Age, with scoops F460 and F498 rich in Food vessels.

What was the nature of this settlement? The evidence for land division would at least suggest a settled community. But whether land divisions were created for an arable type of economy or mixed farming or even a pastoral system is more difficult to document. Very few charred cereal remains have survived: those identified in the flint samples (all near or in the roundhouse, ie in postholes F264 and F356, in treepit F311) show that *hordeum*, *avena* and *triticum* were available and consumed, but that does not, of course, prove that it was grown at Sutton Hoo (Hall 1994). What appears to characterise features of the Beaker period is the relative frequency of hazelnuts and acorns (the charred shells of the former and the charred seeds of the latter; no hazelnut kernels nor acorn cups have been spotted). This would suggest that hazelnuts were consumed and acorns procured for consumption, discarded remains being perhaps added to domestic fires as fuel. Acorns may, on the other hand, be linked with pig-keeping.

Hearths, or hearths' residue in scoops and pits, are quite frequent on Int 41. Not all of them are dated. At least one belongs to the Iron Age phase (F219), whereas one (F220) is in the centre of the roundhouse (F220), most likely (but not absolutely certain) to be of Earliest Bronze Age date. When excavated (in 1988) it produced only Burnt flint, its flint sample revealing nothing of import upon assessment. The segmented faience bead discovered in Basil Brown's excavation of Mound 2 on 7 July, 1938 in a "patch of black earth with many sherds of Bronze Age pottery" (*Sutton Hoo Ship Burial* Vol. 1, p.111, Fig. 61g) may possibly have come from this feature, encountered at a higher level and truncated by Basil Brown. It is recommended that this feature be submitted to C14 dating (see Section 4.5 and 5.3).

Other hearths or scoops with hearth remains (F34/436, F190/506, F218, F294) are less securely dated but, on balance, are more likely to belong to the Earliest Bronze Age (or perhaps the Bronze Age) phase rather than to any other phase of occupation at Sutton Hoo. The argument in favour of a second phase dating are rather weak and rest mostly on the fact that nothing noticeably late was found within them. F34/F436 produced a fragment of a quern (find no. 40292) and 2 sherds of pottery (finds nos. 40499 and 41514) which may repay closer identification. Similarly, the 2 sherds of pottery from F294 (finds nos. 39490 and 39491) so far unidentified should be re-examined. Finally, hearth F218, with its single sherd of Peterborough ware (find no. 41682), but its finds of slag and hazelnuts could place the contents either in the (Earliest) Bronze Age or possibly in the Iron Age phase.

The relative frequency of hearths or hearth residue suggested for the second phase of occupation on Int 41 would be compatible with a purely domestic setting, but the intermittent mention of slag or metal (bronze) fragments or residue from contexts of the second phase would suggest that some metal processing did take place at Sutton Hoo, albeit on a small scale. The contexts producing such residues are the hearth F218 (find no. 41748), the ditch system with gullies F117 (finds nos. 42468, 43173) F561 (finds nos. 43453, 43459) and F562 (find no. 41947) and a posthole (?) F552 in the centre of Mound 5 (find no. 43095).

In summary, the second phase at Sutton Hoo is a phase of intensive occupation in the Earliest Bronze Age: its occupants established linear boundaries and settled in timber structures, including a roundhouse; some of their rubbish ended up in pits, scoops and former treepits; they processed and consumed barley, oats, wheat, hazelnuts and acorns, perhaps kept pigs and had a number of hearths, some domestic, within structures - but perhaps also outdoor hearths where some small-scale bronze smelting took place. An element of ritual has been suggested by A J Copp to explain the wealth of finds found in some postholes (see Section 3.11.5.2, this Volume). However, this suggestion should be treated with some caution, for a number of reasons: firstly, it postulates that finds were recovered in the areas formerly occupied by post-pipes and that finds were deliberately placed in the space

once occupied by the post - a rather unusual case of *post hoc* ritual. Secondly, the "postholes" are those around the treepit F330 (F223, 226, 313, 333, 342). It is highly debatable whether any of these were postholes at all. The same can be said for posthole F238 in the North. The postholes belonging to the roundhouse (F263, 264, 267 and 222), while indubitably postholes, do not strike this writer as particularly rich, containing 1 sherd of pottery each (except F267 with 3 sherds), a few pieces of burnt flint and flint flakes as well as charcoal and a carbonised grain of barley in posthole F264. It would appear much more plausible to "explain" the relative wealth of finds in terms of backfilling of disused features or deliberate infilling of scoops which were never postholes. It would not be surprising that the features nearest to the roundhouse and pit F330, the scene of intensive activity, would receive a fair amount of refuse in their fills.

The third phase of occupation apprehended on Int 41 has been termed "Bronze Age" for want of a more precise definition. Stratigraphically, it refers to features that are either sealed by or cut by features of indubitable Iron Age date or that cut features of the previous Earliest Bronze Age phase. Thus the fence line (S7) running N-S through Int 41 is securely bracketed by these two events (see Section 4.2). A J Copp (see Section 3.9.2.4 and 3.11.52) suggests that this fence line was of a single build, with posts of c. 25cm in diameter set every 35-50 cm from each other and driven straight into the ground. It is possible that a stretch of 7 postholes in the North of the Mound 2 platform burnt down. There is hardly any evidence of post replacement (except possibly F378, F379 and F357). The finds yield from the fence-line is generally poor. This fence-line is seen to be part of a single enclosure running N-S through Int 41, turning West in Int 50, running westwards through Int 44 and 48 where, in the SW, it may begin to turn back northwards again.

The posts of the fence-line on the Mound 2 subsoil platform have been used to assess the possible original height of the ground, into which they may have once been cut (see Section 4.4, the Volume). A hypothetical ground surface height of 33.46 AOD in the northern part of Mound 2 and 33.33 in the southern part is suggested for the Bronze Age period. This height corresponds to the height of the top of the buried soil encountered at Horizon 4 on Mound 2 (between 33.50 and 33.30 AOD). But this buried soil is not an intact Bronze Age soil, as it seems to have been ploughed in later phases (see below). Nevertheless, it seems fairly certain that denudation of the soil cover had taken place after the Earliest Bronze Age phase, reducing the ground level by 15-30cm (from 33.60 AOD to 33.45/33.30). The suggestion of denudation, coupled with the nature of the fenced enclosure replacing linear boundaries, can hint at a shift to a more pastoral regime as well as perhaps the need for better defending parcels of land.

What happened within the fenced enclosure? And when in the Bronze Age did this fencing happen? Neither question can be answered with much precision or detail. A few elements may help with establishing a relative chronology. Firstly, it would appear that the oft-recut gullies of the ditch system S23/24 (predating the fence) continued in use for some considerable time after a start in the Earliest Bronze Age. Indeed, the later gullies of the system (F117, F128) have produced a few sherds of Bronze Age pottery, though rather nondescript and referred to as "BAUN" (Bronze Age, Unspecified) ceramic. Also, the excavations of Messrs Longworth and Kinnes in the 1960's of the same ditch system further West (Area A, renamed Int 11: Longworth and Kinnes 1980) have produced a few sherds of Ardleigh urn from the upper fills of their Ditch 1. Sherds of ceramic identified as belonging to Ardleigh urns have also been recorded in Int 41's finds index from features F547 in the central Mound 5 area and redeposited in the Iron Age features F309 (centre-South of Mound 2 area) and F393 (Iron Age enclosure gully in Mound 5 area). Secondly, it is not unreasonable to suggest that the two scoops with Food vessels F460 and F498 in the centre of the Mound 5 zone continue an earlier Beaker focus (F468, F473 and postholes F543, 544, 545, 552) and that any change in occupation would have occurred after Food vessels were in use. Further Early Bronze Age sherds from Mound 2 (finds nos. 13128 and 28644, both Food vessels - the latter from the buried soil F213 of Horizon 6; find no. 27831, a complete profile of a small Accessory vessel from the buried soil F206 of Horizon 5; finds nos. 22829 and 28467, two sherds of Collared Urn, the latter from the buried soil F213 of Horizon 6) could also be used to suggest that these Early Bronze Age finds represent a continuation of occupation from the Earliest Bronze Age and that change would have only occurred afterwards.

New to the repertoire of features excavated on Int 41 are a number of features referred to as

cremations. AJC refers to 8 features (F155, F192, F225, F270, F497, F548, F549, F566) as being possible cremations (F311, the treepit, also produced a single cremated bone). But of all these "cremations", only one (F225) is without doubt a formal Bronze Age cremation deposit. A further two (F155, found on top of the buried soil of Mound 2, and F549, in the North of the Mound 5 area) contained very few cremated bones. 4 "cremations" contained neither bone nor charcoal and were only identified as such by the presence of greenish clay lumps also found associated with the cremation F225: until these clay lumps are identified, the term "cremation" for these small holes with clay must be used with caution. Finally, one "cremation" (F192) with a ceramic base sherd and charcoal but no bone, must equally be treated with scepticism.

Substantial amounts of coarse ceramic executed in fabrics compatible with a Bronze Age date were recovered in the successive buried soil Horizons, occasionally in features and more frequently redeposited in later features of the Iron Age and Anglo-Saxon periods. But in most cases these sherds of pottery lack diagnostic traits and were therefore recorded in the finds index as "BAUN" (Bronze Age Unspecified) wares, making it therefore difficult to attribute many features or distribution patterns either to the Earlier Bronze Age or to subsequent Bronze Age patterns. All that can be said is that Bronze Age ceramics appear as a fairly common component of the Sutton Hoo finds assemblages, but that its distribution seems evenly dispersed without the clear foci visible in the Earliest Bronze Age.

In summary, Int 41's Bronze Age evidence would suggest that the linear boundaries continued for some time (until the appearance of Ardleigh urns) as did the Early Bronze Age occupation, betrayed by pottery such as Food vessels and Collared Urns. At some stage during the Bronze Age (perhaps Middle Bronze Age?) a change occurs and the linear boundaries are replaced by a strong fenced enclosure, perhaps betraying the need to better defend parcels of land or keeping animals in or out. Within this enclosure, the general spread of Bronze Age ceramics could indicate occupation but too few features and no structure nor distinct focus can be definitely linked to the fenced phase. Within, but also without, the fence (cf. the cremations recovered to the South of the fence in Int 44, see Vol. 5) a few cremations were encountered.

The fourth prehistoric phase apprehended on Int 41 belongs to the Iron Age and consists of a series of linear features. Three are straight W-E gullies (F216 on Mound 2, F60 and 61 between Mounds 2 and 5), more or less parallel to each other, which have survived to different lengths, depending on the degree of attrition suffered by the natural subsoil: thus F216 survived for the entire length of the Mound 2 platform, having been protected by the later mound make-up. None of these gullies has produced any evidence for having held any posts, hurdles or fences. But, in the SW corner of Int 41, we encounter the corner of an enclosure (structure S22) which continues in Int 44 and 48 (cf. Vols. 5 and 6). As two gullies (F393 and F122) join at right angles in what will become the centre of Mound 5 and, in that central portion, a series of close-set and staggered postholes (F523), destined to hold a palisade, were seen. Similar arrangements of postholes were seen in parts of the same enclosure in Int 48 (cf. Vol. 6, Section 5.4). The attribution to the Iron Age of the linear features and enclosure is given by the presence of sherds identified as belonging to Darmsden ware (but the short stretches F60 and F61 contained no pottery, the Iron Age attribution resting on grounds of stratigraphy and site-geometry). Darmsden ware was also recorded by Longworth and Kinnes in their Ditch 1 (Longworth and Kinnes 1980: 16) which is seen as part of the same enclosure.

As for the Bronze Age phase, identification of certain Iron Age features associated with the gullies and enclosure is not straightforward, apart from F219, a hearth in the NE part of the Mound 2 platform which sealed the postholes of the fence of the third phase. A number of postholes may belong to the Iron Age phase, if the posthole analysis carried out in Section 4.4 is to be believed (ie using a low hypothetical original ground surface as an indicator of "lateness"). Two of these postholes (F281 and F309) contain ceramic assemblages with Iron Age pottery as their latest components, and it may be possible to suggest that they belong to a diagonal and parallel set of postholes in the centre-Southwest of the Mound 2 Area.

The height of the original ground surface during the Iron Age is more difficult to establish, as there are no certain posthole structures from which to calculate a hypothetical norm: the top of the buried soils encountered at Horizon 4 on Mounds 2 and 5 has therefore been taken as the norm (c.

33.45/33/30 AOD in the Mound 2 area; c. 33.10 AOD in the Mound 5 area).

Two factors are worth noting in this overview: firstly, hardly any Iron Age pottery was recovered from the lowest buried soil Horizons of Mound 2 (Horizon 6, 1 sherd only) and Mound 5 (Horizon 6, 2 sherds only), whereas Horizon 5, and especially 4, show a not inconsiderable scatter. Secondly, mention must be made of diagonal ploughmarks running NW-SE across the southern half of Mound 2's buried soil platform (F195), the criss-cross and diagonal ploughmarks running also NW-SE across the North and centre-Southwest of the Mound 5 platform (F392) and the vegetation marks F416 in the centre-Southwest of Mound 5. All were seen and recorded at *Horizon 5*, ie the middle band of buried soil. The bases of the ploughmarks on the Mound 2 buried soil platform were recorded as being situated between 33.15 and 33.20 AOD, some 30cm below the top of the buried soil at Horizon 4. If we accept that the hypothetical original ground surface in the Earliest Bronze Age (phase 2) was situated at around 33.65 AOD (or higher), then it would be highly unlikely that the plough could have reached some 50cm down into the ancient soil. Furthermore, if the Horizon maps for Horizon 5 (on which the ploughmarks appear, see *Atlas*) and Horizon 7 are superimposed, it appears that the ploughmarks respect the corner of the Iron Age enclosure in the SW of Int 41 (with a gap of c. 1.5 - 2m to the West of the N-S gully F122 and a similar gap to the North of the W-E run F393), but that cultivation - perhaps of different types of crops (the vegetation pockmarks F416 only occurring within the enclosure) - happened both within and without the enclosure. For Mound 2, the evidence is more equivocal, as the ploughmarks F195 are on a different alignment to the Iron Age gully F216 and one tiny stretch of ploughmark may just have clipped F216.

The buried soils of Mounds 2 and 5 are *not* all undisturbed ancient soils: only Horizon 6, the lowest and the soil, devoid of Roman pottery and with almost no Iron Age pottery, was undisturbed by the plough, whereas Horizons 5 and 4 were ploughed. When? A late Iron Age date (following the establishment of the enclosure and gullies) is possible and the ploughing may have continued in the Roman period, especially the early Roman period, given the presence of Grey ware as well as a Colchester-type fibula in the buried soil of Mound 5 at Horizon 4. Indeed, the Roman period - the fifth phase of exploitation at Sutton Hoo - appears to be a period in which cultivation was the main activity, both on the Sutton Hoo promontory and in the flood-plain of the River Deben below (Wade in Bulletin 4, 1986, Fig. 21; Newman in Bulletin 5, 1988: 10-11; in Bulletin 6, 1989: Fig. 10; Bulletin 8, 1993: p30). On Int 41, Roman pottery is distributed in the buried soils of Mound 2 (all at Horizon 4 except for one sherd at Horizon 5) and in those of Mound 5 (all at Horizon 4 in the same area as that occupied by the ploughmarks). A few sherds of Roman pottery were also recorded from the tops of prehistoric features in the Mound 5 area (sherd no. 38907 from the top of the filled-in ditch F128, sherd no. 42705 from a Bronze Age (?) feature F547) and in the Mound 2 area (sherd no. 40460 from the Iron Age gully F216). Finally, Roman pottery also appears as redeposited in later contexts, such as the quarry pits of Mound 5 (one sherd each in F125, 556 and S59) and the marker-pit F269 of Mound 2 (5 sherds). This widespread but fairly thin scatter of Roman pottery would be consistent with ploughing and manuring fields. It is further suggested that these fields respected or perhaps even expanded on the layout of an Iron Age enclosure and attached "Celtic" fields such as those bounded by the N-S gullies seen in Int 48 and the W-E gullies seen in Int 41 (F216 under Mound 2, possibly F60 and F61 in the zone between Mounds 2 and 5). It is possible that the Iron Age system was bounded by hedges, perhaps accompanied by lynchets (explaining the gaps in cultivation marks at the side of the enclosure) rather than a full-grown palisade, and that the N-S and E-W gullies were field-ditches accompanied or not by banks (this cannot be verified since the top of the Iron Age ground surface was not present). If it is accepted that the "Celtic" field system continued in use for some time during the (Early) Roman period, then it would be possible to postulate that these boundaries were still visible to the Anglo-Saxon barrow builders (see below).

Thus, both the views of Dimbleby and French (see Vol. 9 of the Field Reports) regarding the ancient soils at Sutton Hoo could be reconciled. Firstly, it is true that Horizon 6, the lowest the buried soil sequence on Mounds 5 and 6 (as well as 1) is a true ancient soil, but only because it had not been reached by the plough later. Secondly, ancient soil was lost through attrition, denudation or erosion, probably at the end of the Early Bronze Age, thus leaving us with an incomplete sequence of buried soils. Thirdly, Horizons 5 and 4 represent remnants of ancient soil up to the Iron Age, but this was "turbated" by late Iron Age or Roman ploughing. And finally, the Anglo-Saxon barrow builders must have stripped the turf and topsoil in the areas where their barrows were to be

built, since no turfline is visible below the Mound make-ups and since turf was frequently found within the Mound 2 make-up (see Martin Carver, Section 7.1.3, this Volume).

With the sixth phase of exploitation at Sutton Hoo, we enter the period of the Anglo-Saxon burial ground of the 7th C AD. This period will only be touched upon very succinctly in this model, since models are proposed by Martin Carver in the *Selected Studies for the Early Medieval Period* (Section 7, this Volume). The Anglo-Saxon evidence consists of a number of different strands: the central burial chamber within Mound 2; its ship and the distribution of its rivets; slots perhaps associated with the construction of the central chamber (F214, F215); the layout of Mound 2 and its 4 marker-pits at each corner (F269, 271, 272 and 308); the digging of the quarry ditch around Mound 2 (F42, F153), the building of Mound 2 (Horizon 3: F143, Horizon 2: F137).

For Mound 5, the evidence consists of a central (robbed) cremation burial (F390, F417, F425), a double ring of sometimes interlocking quarry pits (from SW: F437, F125, F58, F57, F71, F407, F395, F394, F401, F508, F130, F131, F129, F133, F134, F530, clockwise). Some contained burials (F82 in F508; F424 in F130; F517 in F129; F435 in F133), while other burials, also arranged in a ring around the perimeter of Mound 5, occurred outside the quarry pits (clockwise from SW: F124, F486, F86, F81, F588, F590, F154). There was no Mound make-up present, the surface of Horizon 5 being all that survived of Mound 5 (F224). Finally, the evidence for Mound 20 consists of a small ring-ditch to the SE of Mound 5 (F114) with the burial of a child (F113) within. It may be worth adding in passing that posthole F112 nearby is *not* part of this burial, but a prehistoric posthole similar to F115.

The coincidence between the layout of the Iron Age features of the fourth phase and the position of Anglo-Saxon Mounds (5, 6, 17 and 18) has been noted before (cf. Bulletin 7, 1990: 16-17 and Bulletin 8, 1993: 23). A further mound, Mound 2, is also slap over the middle of a linear feature, now shown to be of Iron Age date. Can this still be coincidence? It would stretch the imagination somewhat to assert that 5 mounds happened to sit fortuitously over nodal points (corners, centres) of an Iron Age layout. The inevitable conclusion is that the Iron Age enclosure and other associated field boundaries (F216 under Mound 2) were still visible to the Anglo-Saxon barrow builders; the most likely appearance may have been in the form of hedges and possibly lynchets. It has been suggested that (early) Roman ploughing respected these boundaries. In the absence of any evidence to the contrary, it is further proposed that the field boundaries, even though they may no longer be ploughed in the late Roman period, continued to exist since there is no hint that the system was dismantled or replaced by anything else. Thus, the Anglo-Saxon barrow builders may have contemplated a landscape similar to a "bocage" landscape, with small bounded fields or pastures: boundaries would have been important to prevent soil loss on the sandlings. If boundaries existed in the late 6th C AD, why then decide to put 5 barrows on the boundaries, rather than inside the fields? A number of suggestions could be made: topsoil may have been needed to build mounds and a greater area of topsoil (and turf) would be available if the mounds were not inside the fields. Or an element of "appropriation of the past" (deliberately taking possession, and rendering obsolete, of a piece of ancient landscape) may have played a role.

After the demise of the Anglo-Saxon burial ground, the area of Sutton Hoo transected by Int 41 showed very few signs of activity during the Middle Ages, being some distance away from the (late) Medieval "holloway" that runs through Int 50, 44, 55 and Ashbee's re-excavation of Mound 1 (Int 7) as well as from the bank and ditch that bounds the western side of the Sutton Hoo promontory; the odd sherds of Medieval pottery in superficial contexts are the only medieval elements to report.

The early-modern and modern period at Sutton Hoo saw renewed activity of an antiquarian and military kind, reported upon by Martin Carver in Section 8 of this volume: it consists of at least one "robbing" episode of Mound 2, perhaps in 1860, most likely to be an antiquarian expedition which also targeted Mound 5, amongst other barrows at Sutton Hoo. Notice, in passing, that the pit F426 to the West of the central burial F390/F417 in Mound 5 is most probably the remnant of a robber trench rather than an early-Medieval quarry pit, as proposed by AJC in Section 3.8.5.4 (this Volume). Similarly, the groove F500, while certainly likely to be part of the gully F216 to the West of the burial chamber of Mound 2, (AJC, Section 3.9.2.15) may represent a wheelbarrow run as it leads directly to the "robbers' steps" F501 (see section 7.1).



A roughly rectangular pit (F257 and turf F261), perhaps also the slot F258 at the eastern end of Mound 2, also represents recent activity - perhaps as part of the 1860 excavation campaign or as a warren's pit (AJC, Section 3.9.2.9, this Volume): three, already once-disturbed, ship rivets were collected from its backfill.

In 1938 Basil Brown came to excavate Mound 2 and his records initiate the series of documented archaeological investigations, of which this report is a part. In 1942, the site of Sutton Hoo was the scene of a variety of military activities, including the excavation of slit trenches (F28, 29, 52, 54 and 127 on Mound 2, F123 and 399 to the West of Mound 5) and the use of the area of Int 41, but especially Mound 2 as a firing range which left a dense scatter of bullet cases, mortar bombs and pieces of shrapnel. Finally, between 1966 and 1970, Drs Longworth and Kinnes opened a series of areas, designed to understand the nature of Mound 5 (Int 11 reported by Longworth and Kinnes 1980) and establish the framework of the prehistoric sequence still apprehensible at Sutton Hoo.

## **5. SELECTED STUDIES: THE PREHISTORIC PERIOD by M R Hummler (MRH)**

### **5.1 Neolithic Features**

Unlike in other parts of Sutton Hoo (eg in Int 48, F116, see Vol. 6), in Int 50, F300 complex, see Vol 7, Int 32, see Vol. 8ii) there are no indubitable 'pure' Neolithic features recognised in Int 41 containing Mildenhall ware and bowls in the Grimston tradition. It is suggested that the lack of Neolithic features may be due to either of two factors or a combination of both, namely a diffuse presence in the Neolithic and a fairly substantial lowering of the original ground surface in later prehistoric and early historic times. The second factor would mean that Neolithic features, being originally cut from higher than subsequent ground surfaces (a height of 33.63 AOD is proposed for the Earliest Bronze Age ground surface in the area subsequently occupied by Mound 2; this may have been higher in the Neolithic; and the subsoil under Mound 2 is recorded at between 33.05 and 33.15 AOD) had very little chance of surviving. A feature would have to be at least 0.7m deep to make any impact on the subsoil, and even then significant finds of Neolithic artefacts may not be present in the truncated bases of features.

If features with 'pure' assemblages are not present on Int 41, nevertheless the presence of Neolithic ceramics is not rare in the buried soils of Mounds 2 and 5 or redeposited in features of later prehistoric phases. Thus, sherds of Mildenhall ware (No. 28231), coarse Neolithic bowls of the Grimston tradition (29177, 29209, 29409 from Mound 2, 40043 from Mound 5, 36595 from F347, 43016 from F474) and later Neolithic wares such as Peterborough ware (27443, 27572, 28702, 29140 (Mortlake), 27691, 27907, 28010, 28382, 28507 from Mound 2; 41131, 41133, 41472, 41477 all from F235; and an Ebbesfleet sherd (41682) from F218) as well as Grooved ware (25227, 27656, 28444, 29501, 29828 from Mound 2; 35440 and 36107 from Mound 5; and 28726, 28774, 28787, 28797 from F68) have been noted while scanning through the finds' index. The plot of Neolithic pottery on the buried soils of Mound 2 reveals that all sherds are distributed, if loosely, in the western half of the area subsequently occupied by Mound 2, perhaps betraying a former occupation in that area.

### **5.2 Early Bronze Age Boundary Ditch Beneath Mound 5**

#### *Definition*

Transecting the South of Int 41 in the southern part of the Mound 5 area, and running WNW-ESE, lies a broad, 2 - 2.5m wide band of mid-dark brown soil, already known as "Ditch 1" when excavated by Longworth and Kinnes in 1966-68 in Area C (Longworth and Kinnes 1980, Fig. 14). It was visible at Horizon 7 and defined in plan (where it was given feature numbers F117 (Eastern stretch), F128 (central stretch excavated by Longworth and Kinnes) and F126 (western stretch). It was excavated over its entire length within Int 41 by Andrew Copp (AJC) and Steven Keenan (SK) between April and June 1989. Details of excavation procedure can be found in Section 3.9.3.8 of this volume ("The Large Ditch").

#### *Stratigraphy*

The ditch was expected to display a complex stratigraphy, since Longworth and Kinnes had already identified three cuts within their Ditch 1: from South to North, they can be equated with our features F583/569, F584 and F568, while Ditch 1 itself is equated with Feature F126/128. The excavation of the whole complex of recut ditches (referred to as "gullies" in all the records made by AJC and interpreted by AJC as "palisade slots" except for the broad ditch F117/126/128) revealed a 4-phase complex of features. There seems to be no reason to doubt the stratigraphic diagram drawn up by AJC (see Section 4.2), as all the records are consistent with each other and the written observations are backed up by the two main section lines across the complex, D2150 at the East end and D2310 at the West end.

The 4 phases can be summarised as follows:

1. The earliest ditch is labelled F571 along its eastern stretch and F584 along its western stretch, running centrally beneath the ditch complex. It is the lowest of all ditches (lowest point recorded at 31.80m AOD) and becomes shallower westwards, where it peters out at c. 113 easting. The fill of F571 consists of two contexts, the lower context 2048 consisting of backfilled subsoil and bands of washed sand, the upper fill 2047 being siltsand with bands of iron-panning. In F584, a single context 2071 was given to the fill and can be equated with 2047.
2. The second ditch is labelled F561 along its eastern stretch and F568 along its western stretch. It has a continuous run through Int 41, to the North of the earlier ditch F571. Its base is more or less level and is the second deepest of the ditches, with its lowest point recorded at c. 32.00 AOD. It represents a recut of F571 and is itself cut by the later ditches F117/126/128 and F562/583. Its fill consists of a single context, labelled 2045 in F561 and 2058 in F568. Along the base of the second ditch, F562, a set of 30 spademarks, D-shaped in plan, were observed: this is labelled F563, its fill context 2049. No corresponding spademarks were observed in the base of the western stretch F568.
3. The third ditch is the broad ditch visible on the surface of Horizon 7, occupying the entire width of the combined two earlier ditches, which it truncated, to a depth of 32.30 AOD (lowest recorded point). It is wide, 2-2.40m wide at the top, 1.30m wide at the base and almost flat bottomed. Its eastern stretch was labelled F117, its central stretch (excavated by Longworth and Kinnes) is called F128, and its western stretch is known as F126. Its fill consists of two contexts, recorded in the eastern stretch (F117): the primary (lower) fill is known as 1216, the upper (main) fill being context 1217. This context 1217 is a remarkably thick (0.50 - 0.60m) deposit containing a succession of very hard horizontal bands of iron-panning (10 - 20mm thick), removable by mattock only, interspersed with bands of very pale (10 YR 6/3) siltsand, which could be interpreted as podsol. In the central stretch (F128) this fill 1217 is equated with context 1264, and in the western stretch (F126), context 2055 is the equivalent on 1217. In the central and western stretches (F128 and 126 respectively) the fills 1264 and 2055 are overlain by what can be termed definition spits: 1245 (over 2055 in F126) and 1835 (in F128). The latter refers to ditch fill removed from the baulk separating Longworth and Kinnes's Area C 5/5 and 5/3 from the quadrant edge V/W. But since this baulk is almost exactly on the line of the later Iron Age gully F122 running N-S across F128, it is possible that 1835 is a mixture of fills of both the earlier ditch F128 and the later gully F122 (this would account for the presence of a sherd of pottery, No. 38907, described as possibly Roman).
4. The fourth phase consists of two ditches, butt-ending opposite each other but staggered to NE and SW (leaving a 1.60m gap between them). The eastern ditch is known as F562, and cuts the northern edge of the previous ditch F117/128 to a depth of c. 32.35 AOD. It appears to deepen towards its western butt-end, and contains a single fill, context 1222. The western ditch known as F583 or F569 (both feature numbers refer to the same ditch), also with a base recorded at 32.35 AOD, cuts the southern edge of the broad ditch F126 and effects a slight curve towards its eastern butt-end. Its single fill (2070 for F583 or 2056 for F569) is the equivalent of 1222 in F562.

A summary table, below, is given, showing the order of ditches and the stratigraphic equivalences of features and contexts.

Int 41: Ditch complex, contexts and features

<u>West</u>	<u>Centre</u>	<u>East</u>	<u>R e m a r k s</u>
F584		F571 lowest fill 2048 10 YR 5/6	Earliest, "first" gully
one fill 2071 7.5 YR 5/6		upper fill 2047 7.5 YR 5/4  (F581 ignore: variation within F571, fill 2068 5 YR 4/4	
F568, one fill only 2058 (no spademarks)		F561, 1 fill only 2045 7.5 YR 5/4 F563, fill 2049 spademarks 7.5 YR 5/6	Second gully
F126	F128	F117 lower fill 1216 5 YR 4/3	Third ditch
Fill 2055 (=1217) 7.5 YR 5/4	fill 1264 (=1217)	upper concreted fill 1217 7.5 YR 4/4 + 10 YR 6/3	
Fill 1245 (over 2055) 5 YR 4/4	fill 1835 in baulk (may be mixed up with fill of gully F122)		
F583/F569 (the same) fill of 583 : 2070 7.5 YR 5/4 (fill of 569 = 2056, not recorded)		F562 one fill 1222 7.5 YR 4/4	Fourth gully

The ditch complex excavated in Int 41 was also encountered in Int 50 (see Vol. 7, Section 5.2) where it butt-ended with a further series of ditches running SSW-NNE. The 4 phases encountered in Int 41 can easily be equated with the 5 phases encountered in Int 50: a table in Volume 7, 5.2 shows the equivalences between phases. In short, both phase 1's represent relatively narrow central ditches; both phase 2's are recuts to the North; but Int 50's phase 3 is a further recut not encountered in Int 41; phase 4 of Int 50 consists of broad ditches, the exact equivalent of the third broad ditch F117 in Int 41; finally, phase 5 of Int 50 is a final narrow recut, similar to the fourth phase ditches of Int 41.

The stratigraphic position of the ditch complex within the prehistoric sequence displayed in Int 41 appears to be in no doubt, since the entire ditch complex is cut by every other datable feature, including the postholes of the Bronze Age fence F109, 110, 111 and 120, the gullies of the Iron Age enclosure (F122) and the quarry pits F129, 130, 131 and 133 appertaining to the eastern arc of Mound 5 (see section 4.2 for further details). It is therefore the earliest feature complex encountered in stratigraphic order on Int 41 (but not the earliest phase altogether, since some Neolithic

occupation may predate the stratigraphically verifiable order).

### *Dating and Assemblages*

Dating material from the ditch complex is not plentiful, but sufficient material is present to suggest an inception date in the Earliest Bronze Age.

In all, 72 sherds of ceramic were recovered from the ditch complex (excluding the 22 sherds found in context 1835 of ditch F128 which may, in fact, come from the Iron Age gully F122). They are listed here, from the earliest ditch to the latest, within the four recognised phases.

- |    |                     |  |
|----|---------------------|--|
| 1. | F571. Context 2047: | 1 basesherd 43470  |
| 2. | F561. Context 2045: | 5 bodysherds 43172, 43419, 43455, 43460, 43461 (Beaker fine)   |
|    | F568. Context 2058: | 3 bodysherds 43427, 43493, 43546   |
| 3. | F117. Context 1216: | 6 fragments of fired clay: 41954, 41956, 41957, 42515, 42841, 42846                                      |
|    |                     | 12 bodysherds: 42459, 42463, 42477, 42480, 42487, 42511, 42522, 42526, 42530, 42726, 42764, 42845        |
|    |                     | 2 basesherds: 41945, 42541 (BAUN)  |
|    |                     | 1 rimsherd: 42481  |
|    | F117. Context 1217: | 6 fragments of fired clay: 41926, 41959, 42527, 43508, 43509, 43510                                      |
|    |                     | 13 bodysherds: 41930, 42466, 42469, 42474, 42478, 42482, 42510, 42513, 42514, 42516, 42517, 42520, 42525 |
|    |                     | 1 basesherd: 42519   |
|    |                     | 1 rimsherd: 41935  |
|    | F126. Context 1245: | 4 bodysherds: 43178, 43180, 43181, 43482   |
| 4. | F562. Context 1222: | 16 bodysherds: 42467, 42472, 42473, 42476, 42484, 42485, 42486, 42528, 42529, 43436, 43437, 43518-43522  |
|    | F569. Context 2056: | 1 bodysherd: 43210   |

In addition, apart from the ubiquitous pieces of burnt flint and flint flakes, a few flint implements have found their way into the ditch fills:

A scraper (43529) from the lowest fill 2048 of the earliest ditch F571

A knife (43467) from the fill 2045 of the second ditch F561

A knife (42518) from the primary fill 1216 of the third ditch F117

A scraper (41923) from the secondary fill 1217 of the third ditch F117

A further four implements (an arrowhead 16979, a retouched implement 41948, a scraper 42471 and a knife 42489) were recovered from the latest ditch F562 (context 1222).

The presence within the ditches of bronze droplets (residue from casting?), resulting from metalworking activities in the Earliest Bronze Age, as suggested in Section 5.4 of this volume, may also be significant for dating the ditch complex. The contexts in which these residues occur are (from earliest to latest):

1 bronze drip 43173 from the primary fill 2048 of the earliest ditch F571

1 bronze drip 43453 from the fill 2045 of the second ditch F561

1 bronze object 43459 from the fill 2045 of the second ditch F561

1 bronze drip 42468 from the secondary fill 1217 of the third ditch F117

1 bronze drip 41947 from the fill 1222 of the latest ditch F562

Finally, it must be noted that very little charcoal was recovered from the ditches: it is highly unlikely that charcoal is present in significant quantities to warrant expenditure on C14 dating, quite apart from the problems of ascertaining the sort of wood present or its primary context. Nevertheless, the contexts which did produce limited quantities of granular charcoal recovered in one-litre flotation samples are listed here (from earliest to latest):

Flot sample 43524 from the primary fill 2048 of the earliest ditch F571

Flot sample 43469 from the fill 2045 of the second ditch F561

Flot sample 43523 from the secondary fill 1217 of the third ditch F117

Flot sample 43438 from the fill 1222 of the latest (eastern) ditch F562

Flot sample 43525 from the fill 2070 of the latest (western) ditch F583

Last, a single acorn (find No. 43488) was found in the primary fill of the earliest ditch F571: too much cannot be made of a single acorn, but it may be significant that all other acorn finds made at Sutton Hoo stem from Earliest and Early Bronze Age contexts (late Beakers and Food Vessel: see Section 5.5 of this volume).

Further, it must be noted that the assemblage recovered in the same ditch complex by Longworth and Kinnes in their area C and A are consistent with an Earliest and Early Bronze Age date. They do report a few sherds of Peterborough ware from their Ditch 1 (Longworth and Kinnes 1980: 31), but it is suggested that these sherds may be redeposited. Longworth and Kinnes's sequence appears to end with a few sherds identified as belonging to Ardleigh urns (Longworth and Kinnes 1980: 16) in the latest fill of their ditch.

All in all, stratigraphy, the presence of Earliest Bronze Age pottery, including late Beaker fine ware and flint implements consistent with an Early Bronze Age date, the presence of residue from bronze working and finally the find of a single acorn, as well as the absence of any demonstrably later artefacts in the ditch complex, all combine to point towards the Earliest and Early Bronze Age as the period of use of the ditch complex. A *terminus post quem* is given, stratigraphically, by the building of the Bronze Age fenced enclosure and by the presence of Ardleigh urns, perhaps in the Middle Bronze Age.

#### *Shapes and Sizes*

This part of the report deals with plans, sections, profiles, depths, levels and dimensions and attempts to reconstruct some of the original shapes and sizes which could not be recorded in the

field, since the ditches were encountered in their truncated form. Thus, if there are discrepancies between the dimensions given in Section 3.9.3.8 of this volume and this section, it is because the excavator (AJC) would quote dimensions as found (thus, if a ditch is recorded as being 0.30m deep, this does not refer to its full depth, but to that part of the ditch still extant before truncation by another one; similarly, widths tend to be narrower than the 'real' width since the width excavated could be that encountered half or a third way down the complete ditch).

### *Depth*

The stratigraphic order is reflected by the order of depth into the subsoil exhibited by each ditch. Thus, F571, the earliest ditch, is the deepest, with its lowest point at its eastern end recorded at 31.80 AOD. But its western end is recorded 0.50m above that at 32.30 before petering out, being obliterated by the later western ditch F126 (base at 32.30 AOD). F561, the second ditch, follows with its base at c. 32.00 AOD, which is also the level recorded for the spademarks F563 in the base of this ditch. The third broad, shallower, ditch F117/126/128 bit into the subsoil at 32.30 AOD and a similar depth (32.35 AOD) is recorded for the fourth and last, narrower, ditches F562 and F583/569.

Having established the lowest levels AOD at which the bases of each ditch were encountered, it remained to indicate how deep each ditch could have been, had they not cut each other and had the original ground surface from which they were cut still survived. In order to estimate the latter, three sets of figures need to be taken into consideration. The first figure is the top of the subsoil encountered beneath the Buried Soil platform on Mound 5, taken to be at 32.90 AOD. Since the ditches were not cut from the subsoil level, but from higher, we can establish that -

F571 has to be deeper than 1.10m  
 (F584 has to be deeper than 0.60m)  
 F561/568 has to be deeper than 0.90m  
 F117/126/128 has to be deeper than 0.60m  
 F562/569/583 has to be deeper than 0.55m

But how much deeper than these values should the ditch depth be estimated? Two sets of figures, representing a minimum and a maximum value should come into play: the first set, equated with a minimum value, is given by the top of the Buried Soil encountered at Horizon 2/4 on the Mound 5 platform, its level being 33.10 AOD at the least. Since it appears that this Buried Soil has been truncated and has 'shrunk' throughout later prehistory to be ploughed by the later Iron Age or Roman period (see Section 4.6.1 of this volume), the height of the Buried Soil on Mound 5 can be taken as the absolute minimum level from which the ditches have been cut. Thus the minimum depths for the ditches are:

F571:	1.30m deep
(F584:	0.80m deep)
F561/568:	1.10m deep
F117/126/128:	0.80m deep
F562/569/583:	0.75m deep

The maximum value is a figure of 33.40m AOD, being the estimated original ground surface in the Early Bronze Age: this figure was arrived at through an analysis of postholes in the areas of Mound 2 and Mound 5 (see Section 4.4 of this volume). Given the maximum height of 33.40 AOD, the depths of the ditches would then be the following:

F571:	1.60m deep
(F584:	1.10m deep)
F561/568:	1.40m deep
F117/126/128:	1.10m deep
F562/569/583:	1.05m deep

The 'true' depths of the ditches probably lie somewhere between minimum and maximum depths: to a degree, the real depth is immaterial, since the relative depth is known. It does, however, serve

to illustrate that the ditches are substantial and do not (for a number of other reasons too, see below) warrant the term 'gully'.

### *Levels*

The bases of each ditch are not always recorded at the same level AOD along the various section lines that bisect them or in the written records, as some ditches slope eastwards, others westwards, while others remain relatively level. Thus, if a ditch is described as 'flat-bottomed' in the feature records, this term refers to the profile of the ditch and not necessarily to a level base.

The earliest ditch (F571 and F584) is at its deepest at its eastern end (31.80 AOD), gradually becomes shallower westwards, to peter out at the 113 easting, being truncated (at 32.30 AOD) by the later ditch F128. The second ditch (F561) appears more or less level, being at its deepest around the 130 easting at 32.00 AOD. Its western counterpart (F568) is recorded at c. 32.30 AOD.

The third ditch is again more or less level, with its base at c. 32.30. Finally, the last phase consists of two butt-ending ditches, the eastern one (F562) becoming somewhat deeper towards its western butt-end (c. 32.27 AOD at the 123 easting), the western one (F583/569) being a little shallower (32.35 AOD at the 115 easting).

Although the general impression recorded by AJC, ie that the ditches become shallower westwards, is not incorrect, it appears that the slope of the ditches is fairly haphazard and therefore perhaps immaterial. This is reinforced, if the levels of the same ditch system encountered in Int 50 are taken into account: indeed, the bases of the same ditches encountered 25m further East tend to be shallower in the East (see Vol. 7, Section 5.2).

Thus, it would appear that the slope of ditches varies somewhat and, while a fairly level effect is achieved, it seems that the direction in which a ditch 'flows' is not consistent nor, perhaps, was it particularly important. This would exclude drainage as the prime reason for cutting the ditches; a less than surprising result on a naturally well-drained sandy soil.

### *Profiles*

A look at the two main sections D2150 (East) and D2310 (West)] reveals a fairly consistent set of profiles, consisting of 'narrow' (0.30 - 0.50m wide at base), steep-sided, more or less flat-bottomed, slots for the first (F571/F584), second (F561/568) and fourth (F562, 583/569) ditches while the third ditch (F117, 126, 128) shows a much broader (c. 1.30m at base), sloping-sided and flat-bottomed profile. A close examination also reveals that *all* the profiles through the eastern stretch of the ditch complex show a slightly steeper slope along the *southern* edge of the ditches and a slightly more sloping (but still steep) profile along the northern edge. This has important implications for the positioning, to North or South of a putative bank (see below). Along the western stretch of the ditch complex, the profiles tend to be a little more rounded: the excavator (AJC) suggests that, the ditches being generally somewhat shallower towards the West, they suffered more from erosion of the sides. Again, on the western stretch, profiles tend to be steeper along the southern edge, with the exception of the last ditch (F583/569), whose northern edge *may* be steeper. Again, this may have implications for the positioning of a bank, as F583/569, and its counterpart F562 are staggered to South and North respectively (see below).

The depth and consistency in profiles of the various ditches forming the ditch complex leads to the following conclusions:

- There are two types of ditch present: ditches of Phases 1, 2 and 4 being all of one and the same type (relatively narrow, slot-like at base, flat-bottomed and steep-sided, the South side generally steeper), the ditch of Phase 3 being much broader but still flat-bottomed and relatively steep-sided, although with a less angular profile.
- The shape of the profiles, their positioning and the nature of their fills (see below) appears consistent with repeated cleaning of open ditches (resulting in steep sides, almost inevitable

in soft sand) and, when the ditches have silted up too much, recuts along the same alignment, but somewhat staggered within the same 3m span.

Thus, it is suggested here (by MRH) that the ditches were open and did not contain timber structures in any phase, contrary to AJC's view in Section 3.7.3.8 of this Volume. The reasoning is exposed below.

### *Dimensions*

The above paragraphs concerned with levels, depths and profiles and an examination of the plans (D2366-2369) of the various ditches forming the ditch complex as well as an estimate of their width at the top (had they not been cutting each other), results in the following table:

	<u>Lowest Base</u>	<sup>*</sup> <u>Max. Depth</u>	<sup>**</sup> <u>Min. Depth</u>	<u>Width at Base</u>	<u>Width at Top</u>
1. <u>Earliest</u> <u>Ditch</u>					
F571 (E)	31.80 AOD	1.60m	1.30m	0.50m	c.1.20m+
F584 (W)	32.30 AOD	1.10m	0.80m	0.50m	c.1.10m+
2. <u>Second</u> <u>Ditch</u>					
F561 (E)	32.00 AOD	1.40m	1.10m	up to	c.1.30m+
F568 (W)				0.50m	
3. <u>Third</u> <u>Ditch</u>					
F117/128 (E)	32.30 AOD	1.10m	0.80m	c.1.30m	2.00 - 2.40m
F126 (W)	32.30 AOD	1.10m	0.80m	c.1.30m	2.00 - 2.40m
4. <u>Fourth &amp;</u> <u>Last Ditch</u>					
F562 (E)				0.30 -	
	32.35	1.05m	0.75m	0.40m	c.1.10m
F569/ 583 (W)	32.35	1.05m	0.75m	0.30 - 0.40m	1.10 - 1.30m

\* To calculate a maximum depth, an original ground surface at 33.40m AOD has been used.

\*\* To calculate a minimum depth, an original ground surface at 33.10m AOD (= height of the Buried Soil at Horizon 4 on Mound 5) has been used.



Looking at the ditch dimensions, two ditch types emerge clearly: 3 narrow ditches between 1.10m and 1.30m wide at the top and between 0.30 and 0.50m wide at the base and one very wide ditch between 2m and 2.40m wide at the top and 1.30m wide at its base. Depths depend largely on the stratigraphic order of recuts, but in general the narrow ditches tend to be deeper than the wide one.

Could the two ditch types - narrow/deep and broad/shallow - represent different functions and, consequently, betray changes in the agricultural regime in the Early Bronze Age at Sutton Hoo? An interesting excursus in Peter Warner's Report on Documentary Sources relating to Sutton Hoo [Warner 1984, Archive Report Z6.1 (1)] on land use in the Parish of Sutton quotes and refers to a tenancy agreement, dated 1815, between the tenant farmer of Ferry Farm, Sutton, and his landowner. In this agreement, the tenant is required to maintain ditches, hedges and fences of two sorts of field, arable and pastoral. The arable ditches should be 4½ feet wide at top, 20 inches wide at base and 3 feet deep (ie 1.35m. 0.50m. 0.90m) and a length of 60 rods (300m) should be cleared annually. The pasture-land ditches should be 6 feet wide at top, 4 feet wide at base and 3 feet deep (ie 1.80m, 1.20m. 0.90m) and a length of 25 rods (125m) should be cleared "as often as is necessary". The dimensions, arrived at quite independently for the prehistoric ditches at Sutton Hoo, match these figures remarkably well and suggest that ditches of Phases 1, 2 and 4 could have bounded arable land, whereas the ditch of Phase 3 could have formed a pastoral boundary.

### *Ditch Fills*

The fills encountered in the ditch complex are listed below, from earliest to latest, with their main characteristics:

	<u>Colour</u>	<u>Matrix</u>	<u>Remarks</u>
1. F571, 2048 (primary)	10 YR 5/6	v. sandy, siltsand	Backfilled subsoil & bands of washed sand
F571, 2047	7.5 YR 5/4	heterogeneous siltsand	Horizontal bands of iron panning
F584, 2071 (=2047)	7.5 YR 5/6	v. sandy siltsand	
2. F563, 2049 (spademarks)	7.5 YR 5/6	v. sandy siltsand	Wash from sides of F561?
F561, 2045	7.5 YR 5/4	compact siltsand	Horizontal bands of iron panning
F568, 2058 (=2045)	7.5 YR 5/4	soft siltsand	Iron panning mentioned in notes
3. F117, 1216 (primary)	5 YR 4/3	compact siltsand	Primary fill. Occasional streak of yellow sand
F117, 1217	7.5 YR 4/4 + 10 YR 6/3		*
F126, 2055 (=1217)	7.5 YR 5/4	compact siltsand	A few horizontal bands of iron panning
F126, 1245 (over 2055)	5 YR 4/4	stony siltsand, homogeneous	
4. F562, 1222	7.5 YR 4/4	loose siltsand, homogeneous	No iron panning
F583, 2070 (=1222)	7.5 YR 5/4	siltsand,	

## homogeneous

- \* 1217, the main fill of F117, was a "remarkable" 0.50 - 0.60m thick heterogeneous siltsand with horizontal bands of 10 - 20mm thick bands of iron/manganese panning which could only be removed by mattock. Sandwiched between the bands of iron-panning were bands of very pale (10 YR 6/3) siltsand.

A number of similarities and important differences may be pointed out from this list.

Firstly, a mid-brown to dark brown *colour* (7.5 YR 4/4, 5/4 and 5/6) characterises the vast majority of fills. It could be interpreted as arable soil and/or bank erosion in secondary fills within the ditches. The consistency of colour would also be achieved when ditches recut each other, since the secondary fills would be recycled from ditch to field or bank and then back into the ditch.

There are only 4 contexts which exhibit different colours, and this not by an accident of recording. Context 2048, the primary fill of the first ditch F571, is a very light (10 YR 5/6) and very sandy siltsand exhibiting bands of washed sand: this could represent primary silting with natural sandy subsoil washing back down into the ditch. Another recognisable primary fill is that of the third ditch (F117), namely context 1216, recorded as below 1217 along the southern edge of F117, showing the "occasional streak of yellow sand" (wash?) and reddish-brown in colour (5 YR 4/3). The iron-panned secondary fill of ditch F117 (1217) contains, just above the bands of solid iron-pan, bands of very pale (10 YR 6/3) siltsand: these bands may be the result of the same leaching process which created the iron-pan bands or may represent a more generalised episode of podsolization. Finally, one superficial context on the surface of the third ditch (1245 in F126) is recorded as reddish-brown (5 YR 4/4) and much more stony than other fills (15% as opposed to 3-4%). It may be that the plough which affected the Buried Soil of Mound 5 reached as far as the top of the ditch and affected the composition of its uppermost fill.

Secondly, noting the presence or absence of bands of iron panning can help in determining which fills represent primary silting (no iron-pan) and which fills allowed enough time to elapse for a leaching process to take place, resulting in bands of iron pan to form within the secondary fills. Thus, all the secondary fills of the ditches of the first three phases (2047 in F571, 2045 in F561, 2058 in F568, 1217 in F117 and 2055 in F126) exhibit bands of iron-panning, only Phase 4 escaping the process. The broad third ditch F117/126/128 shows the most extensive and most substantial iron panning of any ditch: it may be that this wide ditch was not cleaned out as often as the previous ones, or was left to fill up for a much longer space of time, or was bounding land that had become pasture and was therefore not broken up by the plough, resulting in much more severe iron panning (modern farmers at Sutton Hoo comment that, if land is not ploughed regularly, they need to bring in 'pan-busters' to break up concretions in the soil). Since we have suggested that the size of the third ditch F117/126/128 was consistent with a ditch bounding pasture-land by comparison with 1815 farming practice, the widespread presence of iron panning could lend further support to this hypothesis.

The sequence of infilling of the ditches of Int 41 could be summarised in the following model (feature and context numbers in stratigraphic order are given in parentheses in the margin).

F571	A ditch is cut. It may be cleaned out many times along the same line, resulting in a deepening 'slot' as cleaning deepens the feature.
2048	Finally, this ditch silts up.
2047	Arable soil from the field and nearby bank clogs up the ditch through the action of ploughing and erosion. This filling up may take some time, giving time for bands of horizontal iron-panning to develop through leaching.
F561	A new ditch is cut, being the recut to the North of the earlier ditch and partly through natural subsoil to the North.

- F563 D-shaped spademarks are left visible in the bottom of this ditch. They may be the spademarks of the diggers of F561 or, more likely, those left by subsequent cleaning episodes along the line of F561, resulting in a slot-line appearance, similar to the first ditch. No primary silting is observed in the second ditch.
- F117 A third, much broader and shallower, ditch is cut, taking in within its width the combined widths of the two previous ditches. It cuts through the backfill of the two earlier ditches as well as through natural subsoil to the South.
- 1216 Perhaps this wide ditch was not repeatedly cleaned out, as the earlier ones had, and was allowed to silt up and bands of washed sand were allowed to slip into the ditch along its southern edge, where the ditch cut through subsoil.
- 1217 After this episode, the ditch is allowed to fill up with soil from a nearby bank and fields. The filled-in ditch lies 'fallow' for a considerable span of time, allowing very substantial iron panning to develop within its secondary fill, which may also experience a process of podsolization, consistent with a change of use to a pastoral boundary.
- F562 A last attempt is made at reinstating the long-lived boundary by cutting a once-again narrow (but shallow) ditch along the North edge of the filled-in broad ditch along its eastern stretch.
- F583 Along its western stretch, a new narrow/shallow ditch follows the southern edge of the filled-in broad ditch. The two butt-end in the centre, leaving a gap in between.
- 122, 2070 The backfill of these ditches is qualified as "loose" or "soft", lacking traces of iron pan. It may be that the attempt was short-lived or, more likely, that ploughing (which may have eradicated this boundary altogether, before the Bronze Age fence-line is constructed) did not allow the formation of iron pan.

#### *Banks?*

It must be stated at the outset that there is no actual evidence for banks flanking the ditches, since neither remnant banks nor a rise in the subsoil level sometimes associated with former banks (eg Barnham, Martin 1993, 10) nor clear tip-lines from eroded banks into the ditches could be found in the Int 41 stretch. The evidence is circumstantial, and based more on common sense than hard fact.

It seems highly likely that the ditches were cut in order to throw up a bank, since drainage can be discounted as the prime reason for ditch-digging on a naturally well-drained soil, and since base levels are not consistent with drainage. Neither does it seem likely (*pace* Copp in this Volume) that the ditches once held palisades or other forms of timber structure. Finally, it also seems unlikely that no banks ever existed, the ditch contents being simply spread into the adjacent fields: the ditches of Phases 1, 2 and 3 all bite substantially into sterile subsoil which would have been of no good to the soil composition of putative fields.

Thus, although not proving this, the report assumes that banks flanked the ditches and that they were, in fact, an important aspect of the landscape, perhaps with hedges growing on them. It is further suggested that banks were indeed needed in order to lessen the effect of wind erosion which be quite severe once a field is ploughed and that, in Phase 3, the wider ditch (and probable accompanying bank) may have been needed to control animals effectively.

But where would these banks have stood? On the North side or the South side, with a berm or without? As the position of a flanking bank is mostly a matter of conjecture, two models have been put forward, one for a South-flanking bank, one for a North-flanking bank.

The factors to be taken into consideration are:

- The profile of ditches is generally slightly steeper on the South edge than the North edge. If a bank were to the South, it could be that the bank protected the side and the profile of the ditch remained sharper. Or, if a bank were to the North, erosion from the bank itself resulted in a more sloping North ditch-edge.
- The prevailing wind at Sutton Hoo blows from the South-West. But both North and South flanking banks could provide an effective barrier, since it cannot be shown which side of the field was to be protected, whether fields existed on both sides or on none.
- It is significant that all phases of recuts occur within the same 3m lateral span, ditches wandering only slightly to North and South. Therefore, the position of a bank, especially with a hedge on top, may have been fairly stable, care being taken not to erode or cut into the bank. The 1815 tenancy agreement for Ferry Farm suggests that protecting banks was important, since the tenant farmer was required not to "turn up soil upon banks nearer than 4 feet from the table where the spring is laid to the prejudice of the same or the trees growing thereupon". The tenant farmer is also encouraged to sow rows of "furzes and whins" to maintain the hedges (quoted by Warner 1984).
- Finally, it may be noted that the feature population is generally much greater to the South of the ditches than to the North, with postholes (sometimes in rows) observed in Int 48, 41 and 50, as well as frequent occurrences of features variously described as "natural features", "treepits", or "bushpits". But again, the evidence could be read both ways: either there *was* a bank to the South (and the features are part of a hedge), or there was a bank to the North which protected the subsoil and did not allow features to reach that far down.

Consequently, both models are presented with no significant preference given to the North-flanking model or South-flanking model. But perhaps the North-flanking model is a little more convincing.

*Conclusions: gully, palisade, or bank and ditch?*

In summary, the above investigations make the following points:

1. The "gullies" are substantial *ditches* when reinstated to their full depths. Two types of ditch are present - narrow/deep/steep/flat-bottomed ones in Phases 1, 2 and 4 and one wide/shallower/slightly more sloping-sided/flat-bottomed ditch in Phase 3. The difference may be due to a difference in function (arable/pastoral).
2. The "gullies" did not hold a timber structure, the slot-like lower portions of the ditches (where AJC presumed a horizontal timber in which uprights would be set) being explained quite satisfactorily by episodes of cleaning, which has the effect of deepening the bases of ditches. The fills of the ditches are consistent with silting up, 'weeping' of subsoil from the sides and later backfill through erosion and ploughing. No fill context could be said to represent timber rotting *in situ*. This would presuppose that all the timber was removed in all phases and that the removal did not leave any traces in the shape of the cuts. This seems unlikely.
3. The ditches were not cut primarily for drainage purposes, but in order to throw up a bank, either to the North or the South side. This bank may have been topped by a hedge and the restricted lateral movement of the course of each successive ditch suggests that care was taken in maintaining the course of a bank. The purpose of this bank is seen as action taken to lessen the effects of soil erosion, keeping valuable topsoil.
4. The bank and ditch system in the South of Int 41 appears to belong to the Earliest or Early Bronze Age, with late Beaker pottery and a small amount of residue from Early Bronze metalworking present in the earliest two ditches. It seems that the episode may have lasted perhaps into the Middle Bronze Age, when sherds of Ardleigh urns are found in the uppermost fills.

### 5.3 The Roundhouse and Associated Features Beneath Mound 2

The features that make up a structure known as S8 in the NE corner of the subsoil platform protected by Mound 2 are the following:

F220 (1580, 1640): central hearth

F221 (1581, 1747): posthole, southern arc

F222 (1582, 1626): posthole, southern element of SE-opening porch, paired with F267

F260 (1629): posthole, southern arc

F263 (1632, 1638): posthole, northern arc

F264 (1633, 1639): posthole, northern arc

F265 (1634, 1749, 1750): posthole, eastern arc

F267 (1636, 1748): posthole, northern element of SE-opening porch, paired with F222

F360 (1731): posthole, western arc

In addition, AJC lists F270 (1641, 1767), tentatively identified as a cremation (but no bones were recorded) as part of Structure 8, located between hearth and porch. But there is some doubt as to whether this feature belongs to S8, or indeed whether it is a cremation at all (see below).

On the other hand, a pit (F268, 1637) and three postholes (F259, 1628; F266, 1635; F374, 1751 and cutting F263) located within the area occupied by Structure 8 are not thought by AJC to belong to the structure: he believes they represent either earlier or later events in the palimpsest revealed on the Mound 2 subsoil platform. These features have, however, been included here in the discussion and presentation of the roundhouse as it may be premature to reject possible elements of a structure simply because they do not fit the perfect 5m diameter circle made by F221, 260, 265, 264, 263, 358 and 360. Finally, a shallow natural scoop or burrow (F262) and two very shallow postholes (F359 and F367) have been discounted from the set making up Structure 8.

The plan of the roundhouse, though convincing in its general outline, conveys also the rather heterogeneous nature of each element making up the structure. Nevertheless, the symmetry betrayed by the placing of postholes around a central hearth with a SE-opening porch is convincing enough to propose the presence of a roundhouse, with an internal diameter of 4.5m (measured from post to post). The construction of a porch would give a length of 6m from the western arc to the South-eastern opening of the porch. A very similar house of Early Bronze Age date was excavated by Edward Martin at West Row Fen, Mildenhall (Martin and Murphy 1988: 355): its post-ring has a 5m diameter and it sports a SE-opening porch. A slightly larger post-built roundhouse, 6m in diameter and also with a SSE-opening porch (structure 1), associated with a Beaker and mainly collared Urn assemblage, was excavated at Redgate Hill, Hunstanton (Norfolk) on the North-eastern Fen edge (Healy, Cleal and Kinnes 1993: 23 and Fig. 25; 71). A possible Beaker roundhouse is also suggested by Pryor at Site 11, Fengale, Peterborough (Pryor 1993: 137 and Fig. 95), but there an eaves-drip gully and wall-slot roundhouse some 12m in diameter requires a certain amount of imagination to be exercised.

The details of the plan of the roundhouse, however, show many differences in the size, shape, depth, profile and content of each constituent posthole. There are six main reasons for such diversity: firstly, the excavator (AJC) found his task made more difficult by extremely active rabbits, whose burrows had disturbed nearly all the features on the North-eastern edge of the Mound 2 platform, the slope and base of mounds being particularly favoured by them. Secondly, the quarry ditch surrounding Mound 2 had clipped some of the easternmost postholes (F222, 267, 266, 264). Thirdly, Basil Brown's trench (F4) running NE-SW towards the centre of Mound 2 had already touched some of the components of the roundhouse (pit F268, hearth F220, cremation F155 and F270; this has important implications for the provenance of a faience bead from either of these two features).

Fourthly, the roundhouse was excavated at subsoil level, after the removal of buried soil, at a height of between 33.10 and 33.15 AOD (except in the North, where postholes F263, 264 and 265 survived a little higher to 33.30 AOD). The central, truncated sunken hearth scoop was encountered at 33.30 AOD and must originally have been located higher, since it was already considerably lowered by Basil Brown (his diary entries for 7 and 11 July, 1938). This observation, coupled with analysis of the original ground surface in the Earliest Bronze Age (see Section 4.4, this Volume), suggest that the ground surface into which the posts were sunk may have been as high as c. 33.63 AOD, ie some 0.45 - 0.50m above the level of the subsoil. Thus, substantial parts of the postholes and structural elements may be missing, and the diversity can, to a certain extent, be explained by the fact that we are contemplating truncated bases of posts. Fifthly, it may be that posts need not be regimentally of the same size and depth and variations could still accommodate a perfectly viable standing structure.

The sixth and final reason may be the most important to account for differences in the postholes: it is suggested below that the house, or what was left of it, was partly dismantled, with posts pulled eastwards and southwards, resulting in East and South-sloping edges (F260, 222, 267, 266, 264, 263). Refuse filtered into the hollows left by this operation (no need to suggest "ritual deposits" in postholes, *pace* AJC, see below). Two posts (F221(?), F265) may have rotted *in situ*, while a few postholes with no structural evidence at all may have been pulled, but without receiving refuse in their hollows (F358, 360, 374).

So, differences exist in the geometry and composition of the postholes making up the structure. These are visible in the plan of the excavated features, in the sections drawn across each feature (all lined up on the 33.00 AOD datum to facilitate comparison of size and depth) and in the accompanying table showing feature dimensions, summaries of the finds' assemblages found within the features and the characteristics of each posthole. But once each detail is digested, it is still possible to make some generalisations concerning the structure.

The *postpits* appear to fall into two broad categories, smaller ones around the perimeter being c. 40cm in diameter and larger ones in the porch area (F222 and 267 of the porch itself, F265 nearest to porch) being 70cm or more in diameter.

The depth of the *postpits* tends to be around 20cm from the subsoil level for most postpits, with a few shallower ones in the West and two very deep postpits in the East (porch posthole F267 and adjacent posthole F265). This would mean that postpits may have originally been 0.65 - 0.70m deep for the most part, the two big postholes having been sunk c. 1m into the ground from a putative original ground surface.

The size and depth of the *posts* themselves is rather more difficult to ascertain, since it is suggested that most posts had been removed or pulled. But it seems that the diameter of the posts of the post ring may have been around 0.20m (F263, 264, 265, 358, 360), while those of the porch may have been 0.40m (or more) in diameter (F222, F267). Burrows have disturbed the bases of nearly all postholes, rendering interpretation difficult: it seems that most bases were flush with the base of the postpits, F265 and F263 being instances where the post ring may have been driven through (or subsided through) the base of the postpit.

Very few posts survive as *postpipes*: of the 6 postholes (F221, 222, 263, 264, 265, 267) listed by AJC in Section 3.9.2.5 of this Volume, 4 are definitely not postpipes (F222, 263, 264, 267). This leaves only two (F221 and F265): F221 was unfortunately so disturbed by burrows that little can be salvaged. F 265 is thus the only post that can be said with some confidence to have rotted *in situ*: the description of the fills of the posthole, the absence of finds and charcoal from the postpipe context 1749 speak in favour of this interpretation.

Next come a number of postholes (F259, F260, F266, F358, F360, F374), showing no structural evidence: they tend to be almost vertical-sided, somewhat sloping to the East side and flat-based. The description of their fills suggests that no post had rotted *in situ*, but that a post may have been removed, allowing soil (similar in colour to the buried soils) and streaks of subsoil to fill the hollow, into which occasional finds also found their way (1 flint flake, 1 potsherd in F259; 1 flint flake and

charcoal flecks in F260; 1 Bflint, 4 flint flakes and charcoal flecks in F266). The charcoal component of these postholes is minimal, unlike those of the last category.

The last category of postholes consists of 4 postholes of the eastern and northern part of the structure: the two porch-postholes F222 and F267 and the ring-postholes F263 and F264. These postholes are characterised by their charcoal-black central fills, originally interpreted as postpipes. They are emphatically *not* postpipes. The sections through these postholes, the description of their fills and assemblages, and their eastward and southward-leaning profiles very strongly suggest that the posts had been pulled out (towards the East and South) and that refuse of a domestic nature accumulated within the hollows left by a dismantled structure. It may even be suggested that the area of the former roundhouse was cleared, with refuse from the central hearth F220 being deliberately pushed into the hollows in a 'clearing up' or levelling operation. Indeed, the black fill descriptions closely match those of hearth F220 and it cannot escape notice that only the postholes East of hearth F220 receive this debris, not those to the West.

If refuse ended in the hollows left by former posts, there does, however, seem to be no need to resort to 'ritual' explanations to account for the presence of "rich" assemblages in these postholes. Firstly, "rich" is a matter of opinion, and half a dozen finds or less does not seem excessive. An examination of the finds' assemblages within the postholes (ie postpits, postpipes and postholes with no structural evidence) shows that a number of postholes (F221, 358, 360, 374) contain no finds whatsoever. Neither were any finds made in the two putative postpipes of F221 (context 1747) and F265 (context 1749). This leaves us with 8 postholes producing finds. Of those 8 postholes, 4 (F259, 260, 265, 266) are postholes where finds were made in the postpit only (flint flake and a potsherd in F259; a flint flake in F260; 2 Bflint, 6 flint flakes and a potsherd in the postpit F265; 1 Bflint and 4 flint flakes in F266). Notice again that it is to the East of the hearth F220 that finds are more plentiful (in the postpits of F265 and F266), suggesting that a clearing operation swept eastwards, allowing finds to accumulate in the postpits of pulled-out posts (F266), or around a post rotted *in situ* (F265). Finally, there are the 4 postholes where refuse, probably emanating from clearing up a domestic occupation around hearth F220, ended up in the central 'black' fills of F222, 263, 264 and 267, as well as in the postpits. The two large porch-postholes F222 and F267 produced 3 Bflint and a potsherd in the case of the former, and 3 Bflint, a flint core and a potsherd in the case of the latter (a Bflint and 2 further potsherds also came from the *postpit* of F267). The smaller ring-postholes F263 and F264 contained no finds other than charcoal in their central black fills, but it is worth mentioning a grain of *hordeum* sp. (barley) in the flotation sample of F264's black fill (No. 33593, context 1639); the postpits of F263 and 264 contained a potsherd (F263) and a flint flake (F264).

In summary, the contents of postholes making up the roundhouse structure seems to be entirely explained by the presence of domestic refuse accumulating in hollows around posts, or within the hollows left once a post had been removed. It is suggested that this refuse may have ended up in the hollows as part of an eastward-sweeping cleaning operation, and this explanation is preferred to one involving any form of ritual.

Apart from the posts making up the roundhouse, there are three further features to take into consideration: the near-central hearth, F220, a pit to the SW of the hearth (F268) and a possible cremation (F115/F270) located between the hearth and the porch, in the middle of the entrance.

The *hearth* F220 was defined in 1988 as "sitting" on the surface of the subsoil platform beneath Mound 2. Indeed, it exhibits a rather domed profile, its centre being first encountered at a height of 33.28 AOD, ie some 15cm higher than the level of the surrounding subsoil (c. 33.15 AOD). However, this must *not* be taken to mean that the hearth was sitting on top of a contemporary ground surface, since this is not represented by the level of the extant subsoil. Indeed, the ground surface contemporary with a Beaker phase is estimated to be at a height of c. 33.63 AOD. Therefore, F220 is the truncated base of a hearth scoop, some 0.40m deep, its base fill being represented by the charcoal-rich black siltsand 1580 containing hundreds of fragments of heat-shattered calcined flint. Context 1640, encountered beneath 1580, is a red, burnt sand more likely to be the subsoil reddened by contact with hearth F220 than a fill.

This presupposes that the hearth F220 is a shallow pit where burning took place *in situ*. Could this be possible at a depth of up to 0.40m below the contemporary ground surface? It is our opinion that a scoop can be created by repeated burning and clearing of a hearth on a soft sandy subsoil, quite apart from the possible advantages of having a slightly sunken hearth. The excavation team's own bonfire, repeatedly lit and cleaned between 1988 and 1992, itself resulted in a substantial scoop with soft sandy edges. Were this to be excavated to "natural" subsoil, it would probably result in a similar profile.

When encountered in 1988, the hearth was roughly circular, context 1580 being between 0.55m and 0.70m in diameter, and the suboval "aura" of context 1640 being roughly 1.05 x 0.75m in extent. Given that a depth of 0.40m is suggested for the hearth scoop, it is possible that the hearth F220 possessed an original diameter of c. 1m.

The finds yield from hearth F220 consisted entirely of fragments of heat-shattered burnt flint: 124 of these were recorded *in situ*, being larger than 10mm across. A further 4 finds are soil samples: two flotation samples (33590 and 33598) were submitted for assessment for macrobotanic remains by Alan Hall (EAU report 40, 1994) but produced nothing more than a moderate amount of granular charcoal. Two further soil samples remain (33706 and 33713) and may be suitable for C14 analysis. The suggestion that a hearth, 1m in diameter and around 0.40m deep from a putative ground surface of 33.63 AOD once existed is not so fanciful: it is possible that "the fire on the old ground surface" which Basil Brown encountered on 11 July 1938 while excavating an East-West approach trench into Mound 2 was indeed F220. His entry in his diary reads as follows (in Bruce-Mitford 1974: 148 and Bruce-Mitford 1975: 111), "7 July ... On this day an interesting find was made in a patch of black earth almost certainly due to burning. There were associated with this many small sherds of Bronze Age pottery and I decided to sieve all this layer. In this process Fuller saw a small blue object among the stones and bits of pottery in the sieve. I examined this and found it to be a Bronze Age faience bead of a turquoise blue colour ..."

"11 July ... On the old ground surface we found evidence of a fire, but whether it belongs to the Bronze Age or Anglo-Saxon is uncertain ..."

The find of a segmented blue faience bead which, according to Coles and Harding (1979: 11, 49, 66) belongs to the earlier part of an Early Bronze Age facies in Central and Eastern Europe, but is also known in Malta, Spain and the Wessex culture (where such beads could have been manufactured locally) is of particular importance, since it has implications for the dating and function of the roundhouse (structure S8). The bead must either come from the hearth F220 or from another feature, disturbed or cut into the buried soil nearby. The information provided by Basil Brown is not completely unequivocal: the entries in his diary could either refer to the same feature or to two different features. On balance, it seems much more likely that Basil Brown refers to two different features: the first feature (encountered on 7 July) could be equated with cremation F155, the second feature being hearth F220 (encountered on 11 July). Indeed, Basil Brown does not give any indication that the "patch of black earth" of 7 July and "the fire on the old ground surface" of 11 July are the same, which he most certainly would have done had they been the same. Furthermore, his trench advanced in a westward direction, having started in the East on 6 July. Therefore, Basil Brown would have first encountered the black patch with faience bead and four days later, after the weekend, the hearth, F220, further West. This is indeed the situation on plan, with cremations F155 and F270 just under a metre South-East of hearth F220. The outline of Basil Brown's trench (F4) has been added to the plan, showing its edge as defined at Horizon 1 and at Horizon 4 (the top of the buried soil at c. 33.50 AOD or Basil Brown's "old ground surface").

Cremation F155, encountered in 1987 at 33.41 AOD (which would confirm that Basil Brown had clipped c. 10cm off the top of it) consists of a small heap of burnt bones (no analysis yet to confirm whether this is human or animal) "lying on the buried soil but seen ... at Horizon 3 ... It is likely to be a disturbed prehistoric cremation that became incorporated into Mound make-up at an early stage of barrow building" (Copp, feature card F155). These bones were lifted as a block, sieved and stored as a single find (18661).

To complicate matters further, another small feature, F270, interpreted as a "cremation" by its



excavator (Klara Spandl) is located extremely close to F155 some 0.20m to the South. Although neither burnt bones nor charcoal were found within this small hole (some 0.20m in diameter and 0.10m deep from the surface of Horizon 7 at 33.10 AOD), the suggestion that this feature is a cremation rests upon the hypothesis (by AJC) that the "sticky green clay" which forms the fill 1767 represents some form of residue from cremation deposits. Indeed, similar sticky green clay was associated with a secure cremation deposit elsewhere on Mound 2, F225 (see Section 5.8). The question is, first, whether F270 is a cremation or not (an analysis of the clay samples 35688 from context 1767 and 35685 from underlying context 1641 may provide an answer to that question) and secondly, if affirmative, whether F270 represents yet another cremation very close to F155, or whether F155 and F270 are one and the same feature, dug at different horizons at an interval of one year and with some 0.20m missing between Horizon 3 (level of F155: 33.41 - 33.34) and Horizon 7 (level of F270: 33.15 - 33.05), with the buried soils of Horizons 4-6 having been removed in spits in between. If the latter is the case, then the 0.20m South-eastward "slip" would have to be explained as an accident in planning either of these features.

Whether F155 and F270 are the same or not, the hypothesis remains that one (or two) cremation(s) most probably disturbed several times, by post-prehistoric ploughing, by barrow builders and by Basil Brown's approach trench, were inserted into the palimpsest of prehistoric features on the Mound 2 platform, *after* the roundhouse had gone out of use (indeed, it is suggested that the roundhouse had actually been dismantled). The faïence bead (which was not calcined, unlike all the remains from hearth F220, another argument against its belonging to the hearth) is better suited to an Early Bronze Age cremation context, and would provide a *terminus ante quem* for the roundhouse.

So far, Structure 8 consists of a ring of postholes with porch and a central hearth, but *no* cremation inside the entrance. One further feature worthy of consideration is a pit, F268, its centre some 1.5m to the SW of hearth F220. It consists of a subcircular cut into the subsoil at Horizon 7, c. 1-1.10m in diameter and some 0.22m deep from the subsoil surface at 33.13 AOD. Its sides are gently sloping towards a scooped base. This represents the severely truncated base of a once-more substantial pit, perhaps 0.70m deep if one assumes an original ground surface at around 33.63 AOD. Its single fill 1637, a red-brown (5 YR 4/4) stony siltsand is unremarkable. The finds were: 8 burnt flints, 7 flint flakes, 6 small pottery body sherds (33741, 33742, 33748, 34319, 34320, 34321) all belonging to the same vessel but reduced to small crumbs in 4 instances. Only sherds 33742 and 33748 (conjoining) are a little bigger (c. 20mm across): they are plain, medium-coarse (8-9mm thick), uniformly-fired, brown-black sherds with fine to medium flint, sand/quartz and grog temper. They are not distinctive enough to ascribe to a type, but a late Beaker-domestic or Early Bronze Age fabric is not impossible. A soil sample (33709) and a flotation sample (33597) were also taken.

*A priori* there are no grounds for dismissing F268 from the feature family that makes up Structure 8, but neither are there any reasons for including the pit. It may be that this pit is a little too close to posthole F221 and hearth F220 for comfort, and no obvious function for a pit within the structure emerges from the record. Like the cremations, pit F268 could be a later cut (the pottery being unlikely to be earlier than the late Beaker period). Consequently, the outline of pit F268 has been left faint on the plan, since it is impossible to ascertain whether it belongs to the roundhouse or not.

In conclusion, the following model is proposed for Structure 8: in the late Beaker phase there stood a roundhouse made of a circle of 7 postholes around a central sunken hearth. Its internal diameter was c. 4.5m. A porch was located at its South-East, made of another 2 bigger and deeper load-bearing posts. If a putative original ground surface is reinstated, it emerges that the posts were substantial (diameters of 0.20m for the ring-posts and 0.40m for the porch posts are suggested) and sunk well into the ground (post pits up to 0.40m in diameter and up to 0.70m deep are proposed for the ring, 0.70m in diameter and up to 1m deep for the porch). Apart from the hearth, no other internal feature belongs unequivocally to the late Beaker phase (though pit F268 remains a possibility). An analysis of the location of the finds, of the presence or absence of structural details such as postpipes, of the fills and the profiles of the postpits suggests that the roundhouse was dismantled: two postholes may have rotted *in situ* but the other 7 seem to have been pulled out, most of them in a eastward or southward direction. Debris accumulated within 4 of these pulled

postholes, all on the same side of the structure. It is suggested that these finds-rich postholes are the result of clearing the ground after dismantling. A ritual explanation, as proposed by AJC in Section 3 of this volume, or as proposed for a very similar late Neolithic structure at Knowth (Eogan and Roche in *Archaeology in Ireland* 7, 1993: 16-18) is not favoured here. Finally, after the roundhouse was cleared away, a cremation, perhaps also a pit, were cut into the surface of what would, much later, become the Mound 2 platform. A blue faience bead may date this cremation-depositing episode to the Early Bronze Age, immediately after the Beaker episode: the roundhouse may even have been dismantled on purpose to make way for a cremation.

The threads that hold this model together are very tenuous. In order to make it somewhat more solid, it may be appropriate to subject as much as possible of the meagre harvest of finds, charcoal and soil samples to a programme of scientific analysis. Such analysis would be destined to identify the nature of the sticky clay from "cremation" F270, the provenance and date (?) of the cremated bones in F155 and the determination by C14 of the charcoal from the posthole deposits and hearth. The cremation F155, F270 and pit F268 are unlikely to contain sufficient charcoal for C14 dating.

Very little can be said about what went on within the roundhouse. It may in fact be that it was kept quite 'clean' without any accumulation of detritus in the buried soil (which, in any case, was truncated in post-Beaker phases). On the other hand, it may be that the focus of activity, domestic or otherwise, was deliberately located outside the roundhouse. A prime contender for such a focus of intense activity in the late Beaker phase is located some 5m to the South-west of the roundhouse in features in and around the treepit F330 (see below, Section 5.6).

This section ends with a table detailing the characteristics of the features found within the area of Structure 8.

Table: Characteristics of Features Within Roundhouse Area

Hearth F220

Diameter:	1.05m W-E, c. 0.75m N-S
Shape:	Suboval
Depth:	0.11m
Levels:	33.28 (centre top), 33.17 (bottom South)
Fill 1580:	5 YR 3/2. Finds: 115 Bflint; 1 soil sample; 1 flint sample (No. 33598)
Burnt sand 1640:	2.5 YR 3/6. Finds: 9 Bflint; 1 soil sample; 1 flint sample (No. 33590)

Posthole F221

Diameter (posthole):	c. 0.37m
Diameter (postpipe):	0.12m ?
Shape:	± circular
Depth (posthole):	0.23m in section
Depth (postpipe):	0.10m (disturbed by burrow)
Levels:	33.15 (centre, top), 33.92 (centre, bottom)
Fill 1581 (posthole):	5 YR 3/4. No finds, 1 soil sample

Fill 1747 (postpipe): 5 YR 3/2. No finds, a few flecks of charcoal, 1 soil sample

Posthole F222 (porch)

Diameter (posthole): 0.90m W-E, 0.85m N-S

Diameter (ghost): c. 0.40m

Shape:  $\pm$  circular

Depth (posthole): 0.20m in section

Depth (ghost): 0.15m (disturbed by burrow)

Levels: 33.10 (top, West), 32.83 (bottom, East)

Fill 1582 (posthole): 5 YR 3/4, stony. Packing? on East side. No finds, a few flecks of charcoal. 2 samples (1 flot [no. 33596], small amount of charcoal), 1 soil)

Fill 1626 (ghost): 5 YR 2.5/1, black homogeneous but few flecks of charcoal. Finds: 3 Bflint; 1 potsherd (no. 33604); 2 samples (1 flot [no. 33595, small amount of charcoal], 1 soil)

Postpipe removed allowing refuse to accumulate in hollow

Posthole F259 (not part of roundhouse?)

Diameter: c. 0.35m

Shape: subcircular

Depth: 0.15m in section

Levels: 33.10 (top), 32.95 (centre, bottom)

Fill: 5 YR 3/3. Finds: 1 flint flake; 1 pot sherd (No. 33616); 1 soil sample

Posthole F260

Diameter: 0.35m W-E, 0.45m N-S

Shape: Oval

Depth: c. 0.20m

Levels: 33.12 (top, North edge), 32.92 (bottom, North)

Fill 1629: 7.5 YR 4/4. Finds: 1 flint flake; 1 soil sample. A few flecks of charcoal

Burrow F262 (not relevant to roundhouse)

Size: c. 0.35m W-E, 0.50m N-S

Shape: Suboval

Depth: 0.06m

Levels: 33.13 (top, North), 33.07 (bottom, centre)

Fill 1631: No finds. 1 soil sample

Posthole F263

Diameter (posthole): 0.44m W-E, 0.47m N-S

Diameter (ghost): 0.18m ?

Shape: ± circular/oval

Depth (posthole): 0.20m in section

Depth (ghost): Unknown

Levels: 33.21 (East edge), 33.01 (bottom, centre)

Fill 1632 (posthole): 5 YR 3/4, a few flecks of charcoal. Finds: 1 potsherd (No. 33617). 1 soil sample

Fill 1638 (ghost): 5 YR 2.5/1, black, a few flecks of charcoal in top only. No finds.  
1 soil sample  
Postpipe driven through base of pit, removed, allowing refuse to accumulate in hollow at top

Posthole F264

Diameter (posthole): 0.45m W-E, 0.47m N-S

Diameter (ghost): 0.20m

Shape: Subcircular

Depth (posthole): 0.18m

Depth (ghost): 0.12m (disturbed by burrow)

Levels: 33.21 (NW edge), 33.03 (bottom centre)

Fill 1633 (posthole): 5 YR 4/3. Finds: 1 flint flake. 1 soil sample

Fill 1639 (ghost): 5 YR 5/2, black homogeneous, a few flecks of charcoal. No finds. 1 soil sample,  
1 flot. sample (No. 33593: small amount of granular charcoal, 1 grain of *hordeum* sp.)  
Postpipe removed allowing refuse to accumulate in hollow

Posthole F265

Diameter (posthole): c. 0.65m W-E, c. 0.75m N-S

Diameter (postpipe): 0.20m?

Shape: ±circular/oval

Depth (posthole): 0.53m in section

Depth (postpipe): 0.53m in section

Levels: 33.18 (W edge), 32.65 (bottom, centre)

Fill 1634 (posthole): 5 YR 4/6. Finds: 2 Bflint; 5 flint flakes; 1 potsherd (No. 33753). 1 soil sample. 1 flot sample (No. 33589: small amount of granular charcoal)

Fill 1749 (postpipe): 5 YR 4/3. No finds, no charcoal, 1 soil sample.  
Postpipe rotted *in situ*?

Posthole F266 (not part of roundhouse?)

Diameter: 0.38m W-E, 0.45m N-S

Shape: Suboval

Depth: 0.26m

Levels: 33.15 (SW edge), 32.89 (bottom, west)

Fill 1635: 5 YR 4/4, a few flecks of charcoal. Finds: 1 Bflint; 4 flint flakes. 1 soil sample

Posthole F267 (porch)

Diameter (posthole): 1.25m NNW-SSE, 0.70m WSW-ENE

Diameter (ghost): 0.40m (min.) - 0.60m (max.)

Shape: Subrectangular

Depth (posthole): 0.46m

Depth (ghost): 0.45m

Levels: 33.15 (N edge), 32.69 (bottom, North)

Fill 1636 (posthole): 7.5 YR 5/4, no charcoal. Finds: 1 Bflint; 1 fired clay (No. 33761); 1 potsherd (No. 33967). 1 soil sample

Fill 1748 (ghost): 7.5 YR 2/0, black homogeneous, a few flecks of charcoal. Finds: 3 Bflint; 1 flint core; 1 pot rim-sherd (No. 33610). 1 soil sample, 1 flot. sample (No. 33592: a small amount of granular charcoal).

Postpipe removed, allowing refuse to accumulate in hollow

Pit/Scoop F268 (uncertain whether part of roundhouse)

Diameter: 1.00m W-E, 1.10m N-S

Shape: Subcircular

Depth: 0.22cm

Levels: 33.13 (S Edge), 32.91 (bottom, centre)

Fill 1637: 5 YR 4/4. Finds: 23 records: 8 Bflint; 7 flint flakes; 6 potsherds (Nos. 33741, 33742, 33748, 34319, 34320, 34321). 1 soil sample, 1 flot. sample (No. 33597 - not submitted to A. Hall)

"Cremation" F270 (not part of roundhouse?)

Diameter: c. 0.22m

Shape: Subcircular

Depth: 0.12m in section

Levels: 33.15 (S edge), 33.04 (bottom, centre)

Fill 1641 (siltsand): 5 YR 3/3, a few flecks of charcoal. Finds: 1 flint flake. 1 soil sample, 1 flot. sample (No. 37752: small amount of flaky charcoal).

Fill 1767 (green clay): 2.5 YR 4/4, only 30mm deep. No finds. 1 soil sample, 1 flot. sample (No. 37751: nothing except rootlets).

Also cremation F155 (not part of roundhouse?: seen at Horizon 3: same as F270?)

Diameter: 0.22m N-S, 0.15m E-W

Shape: Oval

Depth: 0.07m

Levels: 33.41 (top, centre, domed), 33.34 (N edge)

Fill 1438: 10 YR 4/6, yellow-green siltsand  
Contents lifted as 1 find (soil sample No. 18681: sieved, producing fragments of cremated bone: animal or human?)

Posthole F538

Diameter: 0.30m W-E, 0.40m N-S

Shape: Oval

Depth: 0.19m

Levels: 33.16, 32.97 (bottom, centre)

Fill 1729: 5 YR 3/3, a few flecks of charcoal. No finds. 1 soil sample

Posthole F359 (not part of roundhouse)

Diameter: 0.25m N-E, 0.30m N-S

Shape: Oval

Depth: 0.04m

Levels: 33.13, 33.09

Fill 1730: 5 YR 3/3, a few flecks of charcoal. No finds. 1 soil sample

Posthole F360

Diameter: 0.26m W-E, 0.32m N-S

Shape: Subcircular

Depth: 0.15m

Levels: 33.15, 33.00 (bottom, centre)

Fill 1731: 5 YR 3/3, a few flecks of charcoal. No finds. 1 soil sample

Posthole F367 (not part of roundhouse?)

Diameter: c. 0.20m

Shape: Subcircular

Depth: 0.09m

Levels: 33.14 (top, North), 33.05 (bottom, centre)

Fill 1738: 5 YR 3/4, a few flecks of charcoal. No finds. 1 soil sample

Posthole F374 (not part of roundhouse?: cuts F263)

Diameter: c. 0.24m W-E, c. 0.28m N-S

Shape: Oval

Depth: 0.14m

Levels: 33.21, 33.07 (bottom, centre)

Fill 1751: 5 YR 3/2. No finds. 1 soil sample

Note also posthole F356, located further to the East of the roundhouse: within its fill 1727, a flot. sample (No. 41610) was taken: it produced charcoal, hazelnuts, grains of ?*avena* and *triticum*, and other charred fragments).

#### 5.4 Evidence for Prehistoric Bronze Working

During the excavation of the West-East ditch complex S23/24, the excavators noticed a number of bronze droplets in the fill of the gullies F571 and F561 and later recuts (F117 and F562). In all, there are 4 bronze 'drips', irregular lumps probably residue from casting, as well as 1 scrap of a bronze object (No. 43459) from the ditch complex. To these 5 finds should be added a 6th find, from the same ditch complex, but recovered further East in F62 of *Int 50* (find no. 5610 of *Int 50*, a possible bronze pin), and a 7th find, a bronze drip from the ploughsoil 1022 of *Int 41*. With the exception of the latter find, all these bronze scraps and waste products were found within the same ditch system, and most between the 130 and 138 easting. The most plausible explanation for the presence of bronze waste in the ditch complex is that ditches F571 and F561 (the earliest and second earliest of the series of recut ditches, which also produced a sherd of Beaker fine ware) received residue from bronze working in their fills, before Ditch F117 was cut; the finds of bronze residue in F117 and F562 (third and fourth recut respectively) would have originally come from the backfill of F561, but ended up as redeposited in the later gullies when the recuts into F561 were carried out.

There seem to be no reasons to doubt the contexts in which the residues from bronze working were discovered: therefore it is suggested that bronze (casting?) was carried out at Sutton Hoo, perhaps on a small scale, in the Earliest Bronze Age and that its residue ended up in the ditch complex (and perhaps other prehistoric features, see below), together with material as early as the late Beaker period. The finds of bronze residue from *Int 41* are, potentially, evidence for very early metal working in the British Isles and therefore warrant specialist examination.

A number of finds of slag are reported from prehistoric features (one each from F216, 218 and 552), from the successive buried soil horizons of Mound 2 and Mound 5 and, finally, in later features associated with Mound 2 (including 1 piece of bronze slag No. 22820 from the quarry ditch F153).

All these finds will need to be examined to ascertain what sort of metalworking they betray and whether any of them could add to the corpus of Earliest Bronze Age bronze working.

Finally, two concentrations of metal (one of 20 slag finds in Horizon 3 of Mound 2, F143; one of 37 iron objects and 2 pieces of slag in F181 on the surface of the Buried Soil of Mound 2 at Horizon 4) (see section 3.8.2.3 by AJC), may represent residue from iron working in the Iron Age or later periods. Again, close examination is recommended.



Evidence for Prehistoric Metalworking from Int 41 (and 50)

a. Bronze Waste from (and near) Ditch Complex

<u>Find. No.</u>	<u>Context</u>	<u>Feature</u>	<u>Easting</u>	<u>Northing</u>	<u>Height</u>	<u>Weight</u>	<u>Material</u>	<u>Identity</u>	<u>Box</u>	<u>Remarks</u>
41947	1222	562	13886	15555	32.86	2.4gr	Metal (Ae)	Unid. drip	M-4	
42468	1217	117	13656	15443	32.69	2.6gr	Metal (Ae)	Unid. drip	M-19	
43173	2048	571	13759	15479	32.14	1.7gr	Metal (Ae)	Unid. drip	M-19	
43453	2045	561	13195	15718	32.20	0.9gr	Metal (Ae)	Unid. drip	M-19	
43459	2045	561	13050	15763	32.22	6.3gr	Metal (Ae)	Unid. obj.	M-19	
12991	1022	-	139	160	-	11.9gr	Metal (Ae)	Unid. drip	M-19	In plough- soil N of ditch
5610 (Int 50)	1465	62	16338	14409	32.30	0.2gr	Metal (Ae)	Fastener (pin)	M-2	In Int 50 ditch

Evidence for Prehistoric Metalworking from Int 41 (and 50) (cont'd.)

b. Slag from Prehistoric Features

<u>Find No.</u>	<u>Context</u>	<u>Feature</u>	<u>Easting</u>	<u>Northing</u>	<u>Height</u>	<u>Weight</u>	<u>Material</u>	<u>Identity</u>	<u>Box</u>	<u>Remarks</u>
40704	1576	216	11330	19998	32.88	7.4gr	Metal ( )	Slag	M-4	What metal? IA?
41748	1952	218	12095	20270	33.05	0.6gr	Metal ( )	Slag	M-4	What metal? Beaker?
43095	2030	552	12384	16875	32.65	-	Metal ( )	Unid.	M-2	What metal? Beaker?

Evidence for Prehistoric Metalworking from Int 41 (and 50) cont'd.

c. Slag from Buried Soil Contexts of Mound 2

<u>Find No.</u>	<u>Context</u>	<u>Feature</u>	<u>Easting</u>	<u>Northing</u>	<u>Height</u>	<u>Weight</u>	<u>Material</u>	<u>Identity</u>	<u>Box</u>	<u>Remarks</u>
23350	1454	158 (H4)	126	205	-	1.4gr	Metal ( )	Slag	M-3	What metal?
23351	1454	158 (H4)	126	205	-	6.0gr	Metal ( )	Slag	M-3	What metal?
27828	1455	158 (H4)	12448	20761	33.39	1.5gr	Metal ( )	Slag	M-4	What metal?
27844	1455	158 (H4)	12496	20669	33.35	12.4gr	Metal ( )	Slag	M-4	What metal?
33286	1455	158 (H4)	12421	20651	33.41	22.0gr	Metal ( )	Slag	M-4	What metal?
28054	1540	206 (H5)	11295	20078	33.09	6.2gr	Metal ( )	Slag	M-4	What metal?
28539	1530	206 (H5)	12645	19415	33.25	2.8gr	Metal ( )	Slag	M-4	What metal?
23284	1569	213 (H6)	12530	21065	33.13	3.1gr	Metal ( )	Slag	M-4	What metal?

Evidence for Prehistoric Metalworking from Int 41 (and 50) cont'd.

d. Slag from Buried Soil Contents of Mound 5

<u>Find No.</u>	<u>Context</u>	<u>Feature</u>	<u>Easting</u>	<u>Northing</u>	<u>Height</u>	<u>Weight</u>	<u>Material</u>	<u>Identity</u>	<u>Box</u>	<u>Remarks</u>
35321	1591	224 (H4)	11638	17041	33.08	28.4gr	Metal ( )	Slag	M-4	What metal?
35746	1591	224 (H4)	11620	17069	33.08	2.3gr	Metal ( )	Slag	M-4	What metal?

e. Slag Redeposited in Later Contexts

<u>Find No.</u>	<u>Context</u>	<u>Feature</u>	<u>Easting</u>	<u>Northing</u>	<u>Height</u>	<u>Weight</u>	<u>Material</u>	<u>Identity</u>	<u>Box</u>	<u>Remarks</u>
22482	1375	142	-	-	-	1.8gr	Metal ( )	Slag	M-3	What metal? from robber trench
22771	1330	142	11737	199213	32.75	12.3gr	Metal ( )	Slag	M-3	What metal? from robber trench
22820	1342	153	110	205	-	40.3gr	Metal (Ae)	Slag	M-3	from quarry ditch
34302	1642	271	13710	20531	32.79	19.6gr	Metal ( )	Slag	M-4	What metal? from marker pit

Evidence for Prehistoric Metalworking from Int 41 (and 50) cont'd.

f. Iron Fragments (also 2 slag) form F181 on Surface of Buried Soil, Horizon 4 of Mound 2 and From Horizon 3 of Mound 2

<u>Find No.</u>	<u>Context</u>	<u>Feature</u>	<u>Easting</u>	<u>Northing</u>	<u>Height</u>	<u>Weight</u>	<u>Material</u>	<u>Identity</u>	<u>Box</u>	<u>Remarks</u>
19988 - 19999	1497	181	124...	207...	33.45 - 33.49	>100gr	Metal (Fe)	Unid. / Slag	M-3	12 pieces
21001 - 21023	1497	181	124...	207...	33.43 - 33.49	>100gr	Metal (Fe)	Unid. / Slag	M-3	23 pieces
21025 - 21028	1497	181	124...	207...	33.45 - 33.48	3 - 7gr	Metal (Fe)	Unid.	M-3	4 pieces
22367 - 22372	1388	143 (H3)	123	206	-	1 - 20gr	Metal ( )	Slag	M-3	5 pieces What metal?
22374 - 22381	1388	143 (H3)	123	206	-	1 - 20gr	Metal ( )	Slag	M-3	8 pieces What metal?
22383 - 22389	1388	143 (H3)	123	206	-	1 - 20gr	Metal ( )	Slag	M-3	7 pieces What metal?

During excavation of features at recovery level D on Int 41, a large number of samples destined for flotation were recovered: they consisted of a 10-litre bucket per context, which was wet-sieved down to a 1mm mesh. Sludge residue was not kept: in retrospect, this should have been done, in the light of Dr Allan Hall's comments on the paucity of cereal grains retrieved (see his report 94/40, 1994, reproduced in Vol. 9 of the Field Reports). Further details on recovery procedure can be found in Section 3.8.1.4.1 (buried soils) and 3.9.1.2 (features) of this volume. In addition, if an excavator noticed charred plant remains while excavating a feature, he would routinely treat these spot finds as individual finds and record them as all other finds.

In all, 372 "flot" samples and 30 spot finds of individual plant remains were retrieved from Int 41.

The flot samples fall into three groups:

- a. Those retrieved from contexts associated with Mound 2: 38 samples in total (29 samples from the quarry ditch F42/F153; 2 from the "gully" F116; 7 from a turf spread F138). None was submitted for assessment by Dr Alan Hall.
- b. Those retrieved from the three superimposed horizons of buried soils from Mound 2 (238 samples) and Mound 5 (12 samples): 250 samples in total. 24 samples were submitted for assessment.
- c. Those retrieved from negative features excavated at Horizon 7: 84 samples (59 samples emanate from prehistoric features, 25 from early medieval quarry pit or grave fills). 50 samples were submitted for assessment.

During the course of writing this field report, MRH made a selection of which flot samples should be submitted to Dr Allan Hall (Environmental Archaeology Unit, University of York) for an assessment of the charred plant remains present in them. It was decided to submit all those flotation samples from *prehistoric* features as well as a pilot selection from the buried soil horizons of Mounds 2 and 5. All early medieval or later contexts were left out of this exercise.

Thus 50 flot samples emanating from 41 prehistoric features were chosen for assessment, out of a total of 59. Those left out came from features F268, 307, 363, 397, 411 and 454. Apart from F268, an unfortunate loss, all those unselected samples came from postholes or small scoops containing so little in the way of an assemblage or content that it was thought that little could be gained from submitting them to an assessment.

Of the 30 spot finds of individual charred plant remains available from Int 41, 23 were submitted for identification. They come from:

- F137: Mound 2 at Horizon 2 (1 spot find)
- F223: A ?posthole to the South of the Beaker treepit in South-East of Mound 2 (5 spot finds) (flot also submitted)
- F226: A ?posthole to the East of the Beaker treepit in South-East of Mound 2 (1 spot find) (flot also submitted)
- F391: The buried soil of Mound 5 at Horizon 5 (10 spot finds)
- F460: A pit in the centre-West of Mound 5 (1 spot find)
- F468: A pit in the centre of Mound 5 (2 spot finds)
- F473: A pit in the centre of Mound 5 (1 spot find)
- F521: A gully of the Early Bronze Age ditch system (1 spot find)

The 7 spot finds left unselected come from the quarry ditch of Mound 2 (F42/153), the robber trench of Mound 2 (F142) and Mound 2 at Horizons 2 and 3 (F137, F143).

Mound 2's buried soils were subjected to a comprehensive array of flotation sampling along the baulks between quadrants (see Section 3.8.1.4.1). This resulted in 238 samples from adjacent metre

squares superimposed in three consecutive horizons: Horizon 4 (F158), the highest, produced 90 samples; Horizon 5 (F206) in the middle produced 61 samples, and Horizon 6 (F213), the lowest, 87 samples. Of all these samples it was decided to submit 12 samples to assessment of macroscopic plant remains. Two blocks of 6 samples were selected: the first block is located in the area of the "roundhouse" in the North-Eastern part of the Mound 2 buried soil platform and consists of 2 superimposed adjacent square metres [finds nos. 32167 and 32168 from F158 (Horizon 4); nos. 32221 and 32222 from F206 (Horizon 5); nos. 32303 and 32304 from F213 (Horizon 6)]. The second block was chosen in the area of the feature cluster in the South-western part of Mound 2 and again consists of 2 superimposed adjacent square metres [finds nos. 32138 and 32139 from F158 (Horizon 4); nos. 32189 and 32190 from F206 (Horizon 5), and ns. 32275 and 32276 from F213 (Horizon 6)].

Only 12 flotation samples were available for the Mound 5 buried soils, 4 from each superimposed horizon (F224: Horizons 2/4; F391: Horizon 5; F412: Horizon 6). All 12 were submitted for an assessment of macroscopic plant remains. The assessment of the samples submitted was carried out by Dr Alan Hall in July 1994 (see "Assessment of charred plant remains from prehistoric features from Interventions 41, 48 and 55 at Sutton Hoo, Suffolk", EAU Report 94/40, reproduced in this series of Field Reports, Vol. 9).

Most, if not quite all, samples produced charcoal in moderate quantities with, not surprisingly, an abundance of charcoal in Hearth F218, scoops F502, F506 and F532 (containing hearth remains) all in the NE of Mound 2. Charcoal was also abundant in three postholes in the centre of Mound 5: F544, 545 and 551 (all these postholes cut earlier pits and the charcoal may be derivative).

Very few cereal grains were observed and this is most likely to be a result of the method of wet-sieving used, the cereal grains not having been captured in the flot, but remaining in the sludge (which was not retained). Nevertheless, it can at least be said that *hordeum*, *avena*, *triticum* and perhaps other cereal species were available. Although there are only 6 grains of cereals noted in the assessment, it is worth pointing out that all of them are located in the Eastern part of the Mound 2 area near or in the Beaker treepit F311/F330 or "roundhouse" (postholes F264 (roundhouse) and F356 immediately to the West of the roundhouse).

The most interesting aspect of the work carried out on the charred plant remains of Int 41 concerns the remains of *hazelnut shells* (but not kernels or "nuts") and the remains of *acorn seeds* (but not cups or "shells"). First of all, it must be pointed out that of all the features producing acorns or hazelnuts, nearly all have good or acceptable grounds for being dated to the Earliest Bronze Age period on ceramic evidence (Beaker pottery and Early Bronze Age food vessels). None of the features attributed to the subsequent Bronze Age and Iron Age periods have had a single hazelnut or acorn within their fills. Thus, if the sequence and the presence of hazelnuts/acorns are compared, the fit between Earliest Bronze Age and the 'nut/acorn' features is indeed extremely good, to the extent that presence of hazelnut/acorns could be taken as a further indicator of date. This is also confirmed by the hazelnut/acorn-rich pits of the Beaker pit complex in Int 55 (see Vol. 5ii).

Secondly, there appears to be a spatial differentiation between those features producing charred hazelnut shells and those features bearing charred acorn seeds: the Earliest Bronze Age features of Mound 2 are the hazelnut-bearers, those of Mound 5 the acorn-producers. Only in one pit on Mound 2 (F235) do both appear together; the buried soil of Mound 5 at Horizon 6 (F412) also produced one flot sample (No. 38494) with a moderate amount of hazelnuts, but the majority of flot samples of the buried soils of Mound 5 at Horizons 5 and 6 (F391, F412) contained acorns (10 spot finds and 2 flot samples). It is suggested that this spatial differentiation is due to different activities being carried out in different parts of the site. Perhaps the hazelnut-munching occupants of the Mound 2 settlement area discarded the shells in domestic fires or added the shells to fuel and the remnants of such consumption ended up in pits (F235, F330), a hearth (F218), scoops and/or postholes (F223, 226, 313, 333, 342, 356). In the Mound 5 area, acorns may have been processed to make them less unpalatable (roasting, leaching, boiling?), the charred remains of such processing finishing up in the food-vessel pit F460, the Beaker pits F468 and F473 and the postholes cutting these pits (an abundance in F543, 544, 545), or situated close by (F466, 521, 522) and finally also, in one instance (find no. 43488), in one of the early ditches (F571) making up the Early Bronze Age ditch system.

MRH is grateful to Dr Allan Hall for producing this assessment of charred macroscopic plant remains from the prehistoric features of Int 41: the full details of the assessment can be found in Table 1 of his report (EAU, 94/40 FR9/6.2) reproduced below.

Extract from Reports from the EAU, York  
Report 94/90

Catalogue of samples from Int 41 submitted  
for assessment

The full catalogue of samples examined is shown below, ordered by intervention and feature number.

Remains recorded are presented in Table 1 in order of feature number.

*I. Intervention 41 (1986), excavations of  
Mounds 2 and 5*

A. Flots from wet-sieved samples

(i) from the far NW corner of Int. 41, not  
associated with Mounds 2 or 5

Feature no.	Context	Sample/Find
-------------	---------	-------------

F68 (gully in F)

1145	26753
------	-------

F70 (PH in F)

1149	26751
1148	26752

(ii) Area of Mound 2

F195 (Ploughmarks in R/S)

1574	29952
------	-------

F216 (IA ?gully through Mound 2)

1576	40481
	41008

F218 (hearth, N platform of Mound 2)

1951	41630
------	-------

F220 (hearth, centre of 'roundhouse')

1640	33590
------	-------

F222 (PH of Beaker 'roundhouse' porch)

1582	33596
1626	33595

F223 (PH/pit S of Beaker pit)

1583	37754
------	-------

F235 (pit, N platform of Mound 2)

1602	41007
------	-------

F238 (PH, N platform of Mound 2)

1605	41347
------	-------

F258 (Slot in O, E of Beaker pit)

1627	33594
------	-------

F226 (PH to E of Beaker pit)

1593	33296
1746	33297

F264 (PH of Beaker 'roundhouse')

1639	33593
------	-------

F265 (PH of Beaker 'roundhouse')

1634	33589
1750	33591

F267 (PH of Beaker 'roundhouse')

1748	33592
------	-------

F270 (cremation? in YO, centre of Beaker 'roundhouse')

1641	37752
1767	37751

F289 (PH, W platform of Mound 2)

1934	41348
------	-------

F294 (scoop/pit, W platform of Mound 2)

1822	40258
------	-------

F311 (Pit in N, S of Beaker pit)

1682	34420
------	-------

F313 (Pit in N, Beaker pit)

1684	37753
1788	37749

F330 (Pit in N, Beaker pit)

1701	37750
1783	37646
1795	37647

F333 (PH in S, S of Beaker pit)

1800	37644
------	-------

F342 (PH/pit in S, next to Beaker pit)

1713	37645
------	-------

F356 (PH of BA fence)



	1727	41610		2048	43524
F383 (PH in H, BA fence)			F583 (gully of ditch system)		
	1760	34416		2070	43525
F502 (scoop in quarry ditch SW of Mound 2)					
	1929	41346	<u>(iv) Buried soils in areas of Mounds 2 and 5</u>		
F506 (scoop in quarry ditch NE of Mound 2)			Mound 2		
	1933	41409	(a) over roundhouse		
F511 (PH of BA fence)			F158 (Horizon 4)		
	1950	41631		32167	
F532 (scoop in H) Mound 2 Area				32168	
	1999	42015	F206 (Horizon 5)		
<u>(iii) Area of Mound 5</u>				32221	
				32222	
F117 (ditch system)			F213 (Horizon 6)		
	1217	43523		32303	
F122 (IA gully)				32304	
	1238	41809	(b) Over Western feature complex		
	1960	41808			
F466 (PH in R, centre of Mound 5)			F158 (Horizon 4)		
	1882	42625		32138	
				32139	
F543 (PH in R, centre of Mound 5, cuts pit F468)			F206 (Horizon 5)		
	2014	42630		32189	
				32190	
F544 (PH in R, centre of Mound 5, ?cuts Beaker ?pit F468)			F213 (Horizon 6)		
	2012	42626		32275	
				32276	
F545 (PH in R, centre of Mound 5, cuts pit F468)			Mound 5		
	2016	42629			
F551 (PH, centre of Mound 5, cuts pit F468)			F224 (Horizon 2/4)		
	1915	43092		37985	
F552 (PH, centre of Mound 5, cuts pit F473)				37986	
	2030	43094		37987	
F561 (gully of ditch system)				37988	
	2045	43469	F412 (Horizon 6)		
F562 (gully of ditch system)				38491	
	1222	43438		38492	
F571 (gully of ditch system)				38493	
				38494	
			F391 (Horizon 5)		
				38821	
				38822	
				38823	
				38824	

				3246
B. Spot finds from prehistoric features				
	F90 (Beaker? pit)		1	4 1 1
F137 (Mound 2, Horizon 2)	4314			
41153	1413		4313	
F223 (PH/pit S of Beaker pit, M2)				
34421				
34422				
34423				
35063				
35064				
	<i>III. Intervention 55 (southernmost area examined 1983-92)</i>			
	A. Individual finds from Beaker pit complex			
F226 (PH to E of Beaker pit, M2)	F6			
34379	1015		630	
			682	
F391 (Mound 5, Horizon 5)				
36165	F63			
36181			1351	
36184			1352	
36188	F67			
36211			1585	
36219	F71			
36239		1124	1786	
36242				
39453	F72			
39461		1126	1362	
	F85			
F460 (pit, M5) 42889		1133	1790	
F468 (pit, M5) 42634				
42865				
F473 (pit, M5) 43106				
	B. Flot samples from Beaker pit complex			
F521 (pit, M5) 42623	F7	1017	2075	
F571 (ditch system) 43488		1102	2076	
	F16	1036	2077	
<i>II. Intervention 48 (immediately W of Mound 5)</i>	F41	1067	2078	
		1104	2079	
A. Flot samples	F62	1022	2080	
		1112	2081	
F29 (Beaker? pit in central part of area), context 1049	F63	1105	2082	
3232	F67	1110	2083	
3234				
3235	F70	1119	2084	
3236				
3237	F71	1123	2085	
3238				
3239	F72	1125	2086	
3240				
3241	F78	1120	2087	
3242				
3243	F82	1121	2088	
3244				
3245	F83	1142	2089	

	1132	2090
F85	1133	2091
F86	1134	2092

Table 1 of EAU Report 94/40. Results of examination of flot samples and individual finds. Key: Int. Intervention no.; Ftr. Feature no.; Con. Context no.; CA charcoal abundance; CT charcoal type (gr=granular, fl=flaky); CS charcoal max. size; HA hazelnut abundance; HS hazelnut max. size; AA acorn abundance; AS acorn max. size; R rootlet abundance.

Int. items	Ftr.	Con.	Sample	CA	CT	CS	HA	HS	AA	AS	R	Other
41	F117	1217	43523	F	1	gr	10	-	-	-	-	2
41	-											
41	F122	1238	41809	F	1	gr/fl	15	-	-	-	-	1
41	-											
41	F122	1960	41808	F	1	fl	5	-	-	-	-	-
41	-											
41	F137	-	41153	S	-	-	-	-	-	1	20	-
41	-											
41	F158	-	32138	F	1	gr/fl	5	-	-	-	-	-
41	-											
41	F158	-	32139	F	1	gr	10	-	-	-	-	-
41	-											
41	F158	-	32167	F	1	gr	10	-	-	-	-	-
41	-											
41	F158	-	32168	F	1	gr	10	-	-	-	-	-
41	-											
41	F195	1574	29952	F	1	gr	5	-	-	-	-	-
41	-											
41	F206	-	32189	F	1	gr	10	-	-	-	-	2
41	-											
41	F206	-	32190	F	1	gr/fl	10	-	-	-	-	2
41	-											
41	F206	-	32221	F	1	gr	10	-	-	-	-	-
41	-											
41	F206	-	32222	F	1	gr	10	-	-	-	-	-
41	-											
41	F213	-	32275	F	1	gr	10	-	-	-	-	-
41	-											
41	F213	-	32303	F	1	gr	10	-	-	-	-	-
41	-											
41	F213	-	32304	F	1	gr/fl	10	-	-	-	-	-
41	-											
41	F213	-	32276	F	3	gr/fl	20	-	-	-	-	-
41	-											
41	F216	1576	40481	F	1	gr	10	-	-	-	-	1
41	-											
41	F218	1951	41630	F	2	gr/fl	10	1	10	-	-	-
41	-											
41	F220	1640	33590	F	1	gr	5	-	-	-	-	-
41	-											
41	F222	1582	33596	F	1	gr	10	-	-	-	-	-
41	-											
41	F222	1626	33595	F	1	gr	10	-	-	-	-	-
41	-											
41	F223	-	34421	S	-	-	-	1	10	-	-	-
41	-											

41	F223	-	34422	S	-	-	-	1	10	-	-	-
41	-											
41	F223	-	34423	S	-	-	-	1	15	-	-	-
41	-											
41	F223	-	35063	S	-	-	-	1	10	-	-	-
41	-											
41	F223	-	35064	S	-	-	-	1	10	-	-	-
41	-											
41	F223	1583	37754	F	1	gr	5	2	20	-	-	-
41	-											
41	F224	-	37985	F	1	gr	10	-	-	-	-	-
41	?mod. elder seed fgts; 2 mod. ?clover seeds											
41	F224	-	37986	F	1	gr	10	-	-	-	-	-
41	-											
41	F224	-	37987	F	1	gr	10	-	-	-	-	-
41	-											
41	F224	-	37988	F	1	gr	10	-	-	-	-	-
41	-											
41	F226	-	34379	S	-	-	-	1	10	-	-	-
41	-											
41	F226	1593	33296	F	1	gr	10	-	-	-	-	-
41	-											
41	F226	1746	33297	F	1	gr	5	-	-	-	-	-
41	-											
41	F235	1602	41007	F	1	gr	5	1	5	1	15	-
41	-											
41	F238	1605	41347	F	1	gr	10	-	-	-	-	-
41	-											
41	F258	1627	33594	F	1	gr	10	-	-	-	-	-
41	-											
Int. items	Ftr.	Con.	Sample	CA	CT	CS	HA	HS	AA	AS	R	Other
41	F264	1639	33593	F	1	gr	5	-	-	-	-	-
41	1 Hordeum sp.											
41	F265	1634	33589	F	1	gr	5	-	-	-	-	-
41	-											
41	F265	1750	33591	F	1	gr	10	-	-	-	-	-
41	-											
41	F267	1748	33592	F	1	gr	15	-	-	-	-	-
41	modern insect fragments											
41	F270	1641	37752	F	1	fl	5	-	-	-	-	-
41	-											
41	F270	1767	37751	F	-	-	-	-	-	-	-	1
41	-											
41	F289	1934	41348	F	2	gr/fl	15	-	-	-	-	-
41	-											
41	F294	1822	40258	F	2	gr/fl	25	-	-	-	-	-
41	-											
41	F311	1682	34420	F	1	gr	5	-	-	-	-	-
41	?1 charred cereal grain											
41	F313	1684	37753	F	1	gr	5	1	10	-	-	1
41	-											
41	F313	1788	37749	F	1	gr	5	1	10	-	-	-

41	-											
41	F330	1701	37750	F	1	gr	5	1	10	-	-	-
41	-											
41	F330	1783	37646	F	1	gr	5	1	15	-	-	-
41	-											
41	F330	1795	37647	F	1	gr	5	1	20	-	-	-
41	-											
41	F333	1800	37644	F	1	gr	10	2	15	-	-	-
41	-											
41	F342	1713	37645	F	1	gr	5	1	10	-	-	-
41	-											
41	F356	1727	41610	F	1	gr	10	1	5	-	-	-
41	1 ?Avena; 1 ?Triticum and ?other ch fgts											
41	F383	1760	34416	F	1	gr	5	-	-	-	-	1
41	-											
41	F391	-	36165	S	-	-	-	-	-	1	20	-
41	-											
41	F391	-	36181	S	-	-	-	-	-	1	15	-
41	-											
41	F391	-	36184	S	-	-	-	-	-	1	20	-
41	-											
41	F391	-	36188	S	-	-	-	-	-	1	20	-
41	-											
41	F391	-	36211	S	-	-	-	-	-	1	20	-
41	-											
41	F391	-	36219	S	-	-	-	-	-	1	15	-
41	-											
41	F391	-	36239	S	-	-	-	-	-	1	15	-
41	-											
41	F391	-	36242	S	-	-	-	-	-	1	10	-
41	-											
41	F391	-	38821	F	1	gr	10	-	-	-	-	-
41	-											
41	F391	-	38822	F	1	gr	15	-	-	-	-	-
41	-											
41	F391	-	38823	F	1	gr	15	-	-	-	-	-
41	-											
41	F391	-	38824	F	1	gr	10	-	-	-	-	-
41	modern insect fgts											
41	F391	-	39453	S	-	-	-	-	-	1	20	-
41	-											
41	F391	-	39461	S	-	-	-	-	-	1	10	-
41	-											
41	F412	-	38491	F	1	gr	5	-	-	1	10	-
41	-											
41	F412	-	38492	F	1	gr	10	-	-	1	10	-
41	-											
41	F412	-	38493	F	1	gr	10	-	-	-	-	3
41	-											
41	F412	-	38494	F	1	gr	5	1	5	-	-	-
41	-											
41	F460	-	42889	S	-	-	-	-	-	1	15	-
41	-											
41	F466	1882	42625	F	-	-	-	-	-	2	25	1
41	-											

41	F468	-	42634	S	-	-	-	-	-	1	20	-
41	-											
41	F468	-	42865	S	-	-	-	-	-	1	15	-
41	-											
41	F473	-	43106	S	-	-	-	-	-	1	20	-
41	-											
41	F502	1929	41346	F	2	gr	25	-	-	-	-	-
41	modern birch frs and insect fgts											
41	F506	1933	41409	F	3	gr	30	-	-	-	-	-
41	-											
41	F511	1950	41631	F	1	fl	10	-	-	-	-	-
41	-											
Int. items	Ftr.	Con.	Sample	CA	CT	CS	HA	HS	AA	AS	R	Other
41	F521	-	42623	S	-	-	-	-	-	1	20	-
41	-											
41	F532	1999	42015	F	2	gr	25	-	-	-	-	2
41	-											
41	F543	2014	42630	F	-	-	-	-	-	3	25	1
41	-											
41	F544	2012	42626	F	2	gr	25	-	-	2	20	2
41	-											
41	F545	2016	42629	F	2	gr	25	-	-	2	20	2
41	-											
41	F551	1915	43092	F	3	fl	30	-	-	-	-	2
41	-											
41	F552	2030	43094	F	1	gr/fl	15	-	-	1	20	-
41	-											
41	F561	2045	43469	F	1	gr	5	-	-	-	-	-
41	-											
41	F562	1222	43438	F	1	gr	10	-	-	-	-	-
41	-											
41	F571	-	43488	S	-	-	-	-	-	1	20	-
41	-											
41	F571	2048	43524	F	1	gr	10	-	-	-	-	-
41	modern grass spikelet fgts											
41	F583	2070	43525	F	1	gr	5	-	-	-	-	-
41	-											
41	F68	1145	26753	F	1	gr	10	-	-	-	-	-
41	-											
41	F70	1148	26752	F	1	fl	15	-	-	-	-	-
41	mod earthworm egg caps											
41	F70	1149	26751	F	1	fl	15	-	-	-	-	-
41	-											
48	F29	-	3232	F	1	gr	10	-	-	-	-	-
48	-											
48	F29	-	3234	F	1	gr	5	-	-	-	-	2

48	- F29	-	3235	F	1	gr	5	-	-	-	-	2
48	- F29	-	3236	F	1	gr	5	-	-	-	-	2
48	- F29	-	3237	F	1	gr	5	-	-	-	-	-
48	- F29	-	3238	F	1	gr	5	-	-	-	-	2
48	- F29	-	3239	F	1	gr	5	-	-	-	-	2
48	- F29	-	3240	F	1	gr	15	-	-	-	-	2
48	- F29	-	3241	F	1	gr	5	-	-	-	-	2
48	- F29	-	3242	F	1	gr	5	-	-	-	-	2
48	- F29	-	3243	F	1	gr	10	-	-	-	-	-
48	- F29	-	3244	F	1	gr	10	-	-	-	-	3
48	- F29	-	3245	F	1	gr	10	-	-	-	-	3
48	- F29	-	3246	F	1	gr	10	-	-	-	-	3
48	- F90	1411	4314	F	2	gr	25	-	-	-	-	-
48	- F90	1413	4313	F	1	gr	5	-	-	-	-	1
			modern moss shoots									
			modern moss shoots									
55	- F16	1036	2077	F	1	gr	10	-	-	-	-	2
55	- F41	1067	2078	F	1	gr	5	1	10	-	-	-
55	- F41	1104	2079	F	1	gr	10	1	10	-	-	2
55	- F6	1015	630	S	-	-	-	-	-	1	25	-
55	- F6	1015	682	S	-	-	-	-	-	1	10	-
55	- F62	1022	2080	F	1	gr	5	-	-	-	-	3
55	- F62	1112	2081	F	2	gr	15	-	-	-	-	2
55	- F63	-	1351	S	-	-	-	1	15	-	-	-
55	- F63	-	1352	S	-	-	-	1	10	-	-	-
55	- F63	1105	2082	F	2	gr	10	1	10	-	-	2
55	- F67	-	1585	S	-	-	-	1	15	-	-	-
Int. items	Ftr.	Con.	Sample	CA	CT	CS	HA	HS	AA	AS	R	Other



55	F67	1110	2083	F	2	gr	20	1	15	-	-	2
55	-											
55	F7	1017	2075	F	2	gr	10	-	-	-	-	3
55	-											
55	F7	1102	2076	-	1	gr	10	-	-	-	-	2
55	-											
55	F70	1119	2084	F	1	gr	10	1	10	-	-	3
55	-											
55	F71	1123	2085	F	1	gr	10	1	10	-	-	2
55	modern moss shoots											
55	F71	1124	1786	S	-	-	-	1	10	-	-	-
55	-											
55	F72	1125	2086	F	2	gr	10	-	-	-	-	2
55	-											
55	F72	1126	1362	S	-	-	-	-	-	-	-	-
55	bark fragment approx. 20 x 10 mm											
55	F78	1120	2087	F	2	gr	10	-	-	-	-	3
55	-											
55	F82	1121	2088	F	1	gr	15	-	-	-	-	3
55	-											
55	F83	1132	2090	F	1	gr	10	1	10	-	-	2
55	-											
55	F83	1142	2089	F	1	gr	10	-	-	-	-	3
55	-											
55	F85	1133	1790	S	-	-	-	1	10	-	-	-
55	-											
55	F85	1133	2091	F	1	gr	10	-	-	-	-	3
55	tree root bark? 2											
55	F86	1134	2092	F	1	gr	15	1	10	-	-	3
55	-											

## 5.6 Evidence for "ritual deposits" (or not)

In section 3.11.5.2, AJC suggests that a number of features on the Mound 2 subsoil platform represent ritual deposits in former postholes. The term "ritual" was used as AJC was struck by the nature of the fills of some "postholes" (though they are by no means all postholes): they are very dark, charcoal-rich and often contain remains of charred hazelnut shells. They are not remains of posts burnt *in situ*, but are more similar to hearth-fills (or hearth sweepings). Further, these "postholes contain a rich assemblage of ceramic sherds, flint flakes and implements as well as burnt flint. Thus, AJC proposes that posts were (deliberately) pulled from their sockets and that a rich assemblage was deposited in the resulting hollow in a ritual manner. Examples include those postholes forming the North-East arc of the roundhouse; a second group is clustered around pit F311/330 to the SW of the roundhouse, and a third isolated instance is the posthole F238 in the North of the Mound 2 platform. The latter is located in the zone of concentrated debris resulting from ironworking, perhaps datable to the Iron Age, encountered at a later stage on the surface of Horizon 4 and at Horizon 3. Posthole F238 may itself be of Iron Age date (2 sherds of IA pottery? in its fill).

When discussing the roundhouse (Section 5.3), it has been proposed that the "rich" fills of some of the postholes making up the roundhouse are *not* the result of a "post-structural ritual", but that the fills formed after the (perhaps deliberate) dismantling of the roundhouse and the clearing of the ground. There seems to be no need to invoke a ritual activity, as the hollows could quite naturally act as traps for domestic refuse in a

clearing operation.

This leaves us with the cluster of features around pit F311/330 and with pit F330 itself, located some 5m to the SW of the roundhouse. There is indeed a nucleus of features unusually (by Sutton Hoo standards) rich in finds as well as charred remains, dated to the late Beaker period by the presence of numerous sherds of Beaker rusticated as well as fine wares. These features are:

F311/330: a large, irregular, double kidney-shaped pit (311 being the western 'kidney'; 330 the eastern one)

F223: a further pit immediately South of F330

315, F313, F342, F226: 4 features, in a slight arc, immediately to the North-East of F330

F331, F332, F333: three postholes, one cutting F330, in a line to the SE of F330

All these features pre-date the North-South fence-line, itself thought to be of Bronze Age date. It may be worth noting that in this stretch of fence-line, and in this stretch only, 3 postholes contain one sherd each of possibly Beaker pottery (F320, F321, F328), presumably redeposited when the fence cut through this Beaker-rich cluster. Finally, mention must be made of the fact that the plot of ceramic datable to the Beaker period in the buried soil (Horizons 4-6) shows a greater concentration of Beaker ceramic in the area of the F330 cluster.

Thus, we seem to be in the presence of rich Beaker pit assemblages perhaps associated with postholes of a structure, a scenario reminiscent of the pit cluster in Int 55 (see Vol. 5.ii) which is discussed at length.

Once again, we must ask ourselves how the Beaker-rich deposits came to be formed; whether a function could be suggested for the punching of these holes into the ground, and what the disuse phase, presumably the phase responsible for the formation of the finds-rich deposits, consisted of. It appears that, in the prehistoric literature, the presence of rich deposits of flint and ceramic in pits and postholes is often noted and is often interpreted as being deliberate, with possibly 'ritual' overtones: examples include the Grooved-ware-rich postholes of a roundhouse at Knowth (Eogan and Roche 1993: 16-18) or the pit with giant Beaker sherds, charcoal, flint and bones from Lakenheath in Suffolk (Briscoe in Proc. Camb. Ant. Soc. 53 1960: 1-7). A review by Frances Healy (1995, forthcoming) of Middle to Late Neolithic pit groups in East Anglia, including those of Spong Hill, also points towards a non-utilitarian interpretation (p.3), similar to that proposed by Julian Thomas (1191: 62). So, are the Sutton Hoo examples further instances of such practices or *can* they be interpreted in other ways: in other words, is the deposition of artefacts deliberate, or could it equally have been made in a more haphazard way? Are the finds primary or secondary? What was the primary function and the secondary use of the holes? It must be said that, in sandy and eroded soils, so much information is lost, compared to sites where information derived from organic remains is better preserved (eg West Row Fen at Mildenhall, where such diverse functions as flax-wetting pits, antler-soaking pits or shallow wells can be suggested for a number of Early Bronze Age pits: Martin and Murphy 1988) so that the identification of function and the detection of intention is an uphill task at Sutton Hoo.

Nevertheless, let us review the evidence such as it is, presenting first pit F311/F330, then the features possibly associated with it (F223; F226, 342, 313, 315; F331, 332, 333).

Pit F311/330 was first identified as two separate lobes, one in the West (F311), one in the East (F330), separated by a central portion of yellow sand (Context 1841, over 1842 and 1843). It was excavated by Klara Spandl as two separate units (F311 first) until, during the excavation of F330, it was realised that some of its fills (Contexts 1789, 1790, possibly 1701) 'dived under' the redeposited yellow subsoil 1841 and could be equated with 1842. It is not easy to reconstruct the fate, not hazard a guess at the function of this feature as the records, though copious, are somewhat confusing. Nevertheless, the following description can be drawn from the records:

Pit F311/330 is an irregular hollow, oriented WNW-ESE, c. 3m across on NNW-ESE axis and 2.80m across at its widest (N-S through eastern lobe) or 2.00m across at its narrowest (N-S across redeposited sand 1841). When fully excavated, it reached a depth of c. 0.60m (from c. 33.03 AOD at top to c. 32.42 at base) and, if an original putative ground surface of between 33.60 AOD and 33.45 AOD is accepted, then the original pit would have been at least 1m deep (as well as probably wider, perhaps 3.5m to 4m max. across). The stratigraphy and infill sequence of pit F311/330 is almost impossible to reconstruct, as F311 was excavated fully as a single context (1682), whereas F330 boasts no less than 9 fills: their approximate order of deposition is (from earliest): 1789 described as a silty "wash" in base of pit; then 1790 and 1701 (1790 under 1701) being the main brown finds-bearing fills; also 1788 (encountered when overdigging F313 but actually equivalent to 1790/1701) and patches 1783 and 1795 encountered on the surface of 1701: these fills all appear to line the sides ("shoulders") of the pit and dish into its base; finally, some sandy contexts fill the centre of the pit, namely 1842 (described again as "washed sand"), followed by clean redeposited yellow sand 1841; a rabbit burrow (1843) tunnels through this. No single section was drawn through the pit, but an attempt has been made to reconstruct a West-East profile through the pit.

All these fills fall into two classes, sandy yellow contexts with a typical Munsell value of 7.5 YR 5/4 (for Contexts 1789 and 1872; and as light as 7.5 YR 5/8 for the redeposited sand 1841) and more silty brown anthropogenic fills with a typical Munsell value of 5 YR 3/4 for 1701 and 1795; a slightly less red version is context 1790 (7.5 YR 4/4) and 1788 (7.5 YR 4/2). These contexts also differentiate themselves by the quantity and nature of the finds recovered within them: *no* pottery was found in the contexts considered to be redeposited subsoil (1841, 1842, 1843 only produced a few burnt flints and flint waste), nor were there any remains of charcoal or charred hazelnuts, which are quite frequent in the brown anthropogenic fills (in 1682, 1701, 1795, 1783, 1788).

A look at the provenance of the ceramic finds shows that the vast majority come from what could be termed the 'main fill' group, as 43 sherds (out of a total of 53) emanate from the brown contexts 1682, 1701, 1783, 1795. Only 10 sherds came from the earlier contexts 1789 and 1790 (5 each) and, as already mentioned, none were recovered in the latest sandy deposits.

All together, 53 sherds of pottery, 72 flints (68 waste flakes and core fragments as well as 2 scrapers and 2 arrowheads), 103 fragments of burnt flint, as well as soil and flotation samples (with charred hazelnuts, charcoal and 1 grain of cereal), a few snails, shells and one burnt bone were recovered from the pit. Does this make it a particularly "rich" assemblage, or do any elements point towards a "ritual" function?

While no argument categorically rules out that we are indeed in the presence of a rich/ritual deposit, the weight of the arguments against such a hypothesis seems, on the whole, slightly greater: the two arrowheads are undoubtedly of very high quality and all 4 implements (the two scrapers and arrowheads) are deposited within a very restricted area (in the North-East of F330). Some of the ceramic of Earliest Bronze Age date, including Beaker fine ware, Beaker rusticated ware, and fingernail impressed wares is also of good quality and a few sherds have been found to be conjoining. But 53 sherds of pottery, many of them extremely small and abraded and from a great diversity of different vessels found in a volume of over 4 cubic metres of fill, can hardly be deemed a "rich" assemblage. An explanation, alternative to the "ritual" one, could be that debris, including hearth sweepings with charred hazelnut shells, accumulated in a midden nearby. Some of the contents of this midden ended up in the hollow F311/330: this may explain why so many small sherds of different vessels, but so few profiles of single vessels were recovered. Then, once the "main brown fill" had accumulated (or been pushed) into the hollow, the remainder was backfilled with more or less clean sand (1842, 1841). If this hypothesis is accepted, then one has to assume that the primary function of pit F311/330 was that of an empty hollow, only its secondary function having been to receive the (partial) contents of a midden. What could this primary function have been?

The excavator (Klara Spandl) as well as AJC and MOHC put forward the idea that F311/330 was a tree-pit: the

tree would have blown over (Klara Spandl on context card 1842 suggests it fell towards the East, presumably as then, just as now, the prevailing wind comes from the South-West), creating the rather characteristic crescent shape (that of F311), observed in many other treepits at Sutton Hoo. Removal of this tree could easily have created an irregular hollow 3-4m across and at least 1m deep. The hole would then have been backfilled with midden material as well as clean sand, either as a perfectly pragmatic action or, if preferred, some artefacts were deposited as a ritual offering (which would then imply an element of tree-worship).

The treepit hypothesis seems to fit the records fairly well and could explain the irregular nature of the excavated pit where roots created crevices and interstices. But it need not be the only possible function for a large hollow in the earliest Bronze Age in the Mound 2 area, next to the roundhouse. But only if organic evidence had survived better (such as at West Row Fen) could other functions be scrutinised: flax wetting pit, antler-soaking pit, water trough, food-storage pit, smoking pit, etc.

A number of features were found immediately adjacent to the pit F311/330 and show either a spatial, stratigraphic or an assemblage relationship.

Let us leave aside the postholes that are part of the N-S running fenceline that have been assigned to a subsequent phase (postholes nos. 320, 321, 323, 324, 325, 328, 329, 380, 381) apart from noting in passing that three of its postholes (F320, 321 and 328) each produced one sherd of Beaker fine ware, presumably redeposited when the fence cut through the Beaker complex.

A further few features (F312, 314, 338, 339, 340, 341, 396) have been left out of this discussion, as wither their spatial relationship with F330 was too tenuous, or because they yielded too little information to be of any use in the present discussion.

This leaves us with 8 features worthy of attention: one is a pit (*not* a posthole), F223 immediately to the South of F311/330. A second group is formed by 4 postholes (if such they are) forming a slight arc to the North-East of F311/330: they are F226, 342, 313 and 315. Finally, a third group is formed by three postholes, seemingly in line, running southwards from F311/330: they are F331 (which cuts pit F311/330), 332 and 333. These 8 features have produced assemblages which, to a greater or lesser degree, contain elements of the Earliest Bronze Age/late Beaker period, similar to those encountered in pit F311/330, either because they are contemporary with the pit, or because they disturbed deposits found within or around the pit.

First, let us review what records each of these 8 features have to offer.

*Pit F223* measured c. 1m in diameter and had a flat base which only bit into the subsoil by c. 0.20m from the top of the subsoil at 33.08 AOD (this pit may have been between 0.5 and 0.75m deep if an original ground surface between 33.45 and 33.63 AOD is assumed)/ It contained a single, homogeneous black fill 1583 (5 YR 2.5/2), characterised by the presence of very large amounts of charred hazelnuts (sample no. 37754 and spot-finds 34421-3, 35063-4). Ceramic finds consist of a lump of fired clay, a sherd of Beaker fine ware, two sherds of Beaker rusticated ware and one fingernail-impressed sherd. The pit also produced 31 fragments of burnt flint and 30 flints including a scraper (No. 3499), a core fragment and 28 waste flakes.

Although the feature was recorded as a posthole (and AJC suggests that the "post was removed allowing dark brown fill to wash into the hole" (cf feature card 223) there is nothing to suggest that F223 was ever a posthole.

*Feature F226* represents more of a puzzle: it is by far the richest feature in terms of ceramic finds compared to its relatively small size: 21 sherds of ceramic are recorded, some of them very large. They represent the rims, bases and body sherds of large Beaker rusticated vessels, Beaker fine comb-impressed wares as well as other fingernail-impressed wares. A single charred hazelnut shell was retrieved (No. 34379) but nothing more than

granular charcoal was found within its two flotation samples. Finally, a couple of burnt flint fragments and two flint flakes were recovered.

The dimensions, profile and description of the fills of this feature may point towards its being a posthole, but not necessarily so: it is between 0.65 and 0.70m in diameter, cuts into the natural subsoil to a depth of c. 0.25m from 33.08 AOD, and has a central black homogeneous silty fill 1593 (5 YR 2.5/2). All but one of the pottery sherds came from this central fill. Around (and stratigraphically earlier than the central fill) was a lighter siltsand (7.5 YR 4/4) interspersed by AJC as being sand washed into the sides of the hole. It seems possible that a post, perhaps some 0.25-0.30m in diameter once stood within the postpit and that after the removal of a post, debris accumulated within the hollow. This explanation is thus similar to that offered for the postholes of the roundhouse, thought to have been removed and followed by a clearing operation (cf Section 5.3). But, if it is preferred to attribute any element of ritual to some features, F226 would be a prime contender (together with F460 on the Mound 5 platform) because of the quality and quantity of its ceramic assemblage.

*Features 342, 313 and 315*, the three remaining elements of an arc to the NE of pit F311/330 next to F226 *may* have been postholes. They are similar in size and profile, type of infilling and composition of the assemblage. They measure around 0.75m in diameter, are between 0.2 and 0.3m deep from the surface of the subsoil at c. 33.05 AOD and are filled with a dark brown siltsand (7.5 YR 3/2 or 4/2) containing sherds of pottery (8, including Beaker rusticated and Beaker fine ware in the case of F313), charred hazelnut fragments (in F342 and 313) and fragments of burnt flint, flint flakes and core fragments as well as one scraper (in F315). Their composition is similar to that of F226 and a similar interpretation, namely that hollows filled up with debris once posts had been removed from postholes, is not incompatible with the records.

To the South of pit F311/330 and next to pit F223 lies another similar feature, *F333*: although disturbed by rabbit burrows, it was probably around 0.30m deep from the surface of the subsoil at 32.98 and had a diameter of around 0.50m with a central black fill 1800 (5 YR 2.5/1) containing an abundance of charred hazelnut fragments, flint flakes and core fragments, burnt flint and a lump of fired clay. As outer brown fill 1704 (5 YR 3/4) contained a few fragments of burnt flint it is again possible to interpret this feature as a posthole with detritus accumulating in the hollow left by a pulled post. Mickey Mouse

## 6. SELECTED STUDIES: THE ROMAN PERIOD

### 6.1 The Burial Sites and the evidence for cultivation beneath Mounds 2 and 5

#### 6.1.1 *Relative Heights of Buried Soil Plateaux - Mounds 2 and 5*

The schematic section illustrating the relative heights of each Mound/buried soil complex was created from the *maximum* values for the horizon heights.

#### Horizon 0

Mound 2:	35.15m	12300/20420
Mound 5:	33.55m	12500/16600

#### Horizon 4

Mound 2:	33.54m	12300/19500
Mound 5:	33.36m	12350/16600

#### Horizon 5

Mound 2:	33.32m	12300/19500
Mound 5:	33.16m	12350/16600

#### Horizon 6

Mound 2:	33.21m	12300/19500
Mound 5:	33.06m	12350/16600

#### Horizon 7

Mound 2:	33.10m	12300/19500
Mound 5:	32.95m	12350/16600

The section reveals a different height for the BSOIL beneath each mound. This reflects the general topography of the site. More significant are the broad similarities in the character of the BSOIL which imply that Mound 5's soil has suffered only minor disturbance, even after the removal of a substantial mound.

- recognition of three archaeological horizons within each soil profile.

- comparable thickness of deposit:

Mound 2 - 0.045m

Mound 5 - 0.41m

- similar thickness of each horizon

	<u>Horizon 4-5</u>	<u>Horizon 5-6</u>	<u>Horizon 6-7</u>
Mound 2	0.22m	0.11m	0.11m
Mound 5	0.20m	0.10m	0.11m

The coincidence of the height of the BSOIL beneath Mound 2 and the surface of Mound 5 (at Horizon 0) may require further comment, but at this stage the situation is seen as accidental.

Both sets of ploughmarks belong to Horizon 5. Unfortunately, the method of construction for the schematic section using the maximum height measurement confuses the matter. In reality each horizon is not a uniform height, nor indeed was Horizon 5 a continuous deposit. Thus on Mound 2 the ploughmarks were actually recorded within Horizon 5 but at a lower height than the maximum value for the overall horizon.

On the section, the ploughmarks of Mound 2 are 0.33m beneath the surface of the BSOIL, for Mound 5 they are 0.19m below the surface. However, if we read the height of the BSOIL horizons at the point where the ploughmarks occur, we discover a closer relationship. At 117/194 the surface of each horizon is,

Horizon 4:	33.38m
Horizon 5:	33.19m
Horizon 6:	33.12m
Horizon 7:	33.00m

At this point, the ploughmarks are 0.17m beneath the surface of the BSOIL.

## 7. **SELECTED STUDIES: The Early Medieval Period**

## 7.1                    **Mound 2 (Burial 2) [MOHC]**

### 7.1.0                *Guide to the Mound 2 story.*

#### 7.1.0.1

The site of Mound 2 featured six major episodes of the Anglo-Saxon period and later: the digging of the 'corner-pits' (7.1.2), the construction of a burial chamber (7.1.3), the emplacement of a ship (7.1.4), the digging of the quarry ditch (7.1.5), the construction of the Mound (7.1.6), the 19th century excavation and contemporary disturbance (8.1), and the 1938 excavation and later disturbance (8.2).

Mound 2 was trenched in antiquity (probably the 19th century, VOL 2, INT 1) and again in 1938 (VOL 2 INT 3), and completely excavated between 1984 and 1988 (this vol INT 26 and INT 41). This report concerns only the results of the 1983-1993 campaign. The results of the earlier campaigns will be found in VOL 2, together with their assessment. The procedures employed and the course of the excavation are described in part 3 (3.5.1, 3.6.2, 3.7.2, 3.8.2, 3.8.4, 3.9.2, 3.10.5, 3.11.1). These sections were written mainly by A J Copp, the site supervisor for INT 41. The analysis, interpretation and models for the sequence are given in section 7. This was written by M O H Carver. The two texts are cross-referenced, highlighting areas of disagreement or uncertainty.

#### 7.1.0.4 The naming of the parts.

#### INT 26

F 1    Basil Brown's trench

F 2    'keel profile' in W section

#### INT 41

F 3    The mound at horizon 1

F 4    Basil Brown's Trench; upper cut

F 5-7   Basil Brown's spoil heaps

F 14   Basil Brown's trench in the quarry ditch

F 19-20, 31-32, 38-40 Basil Brown's spoil heaps

F 42   The quarry ditch, first definition

F 135   The robber trench at horizon 2

F 137   The mound at horizon 2

F 138   A turf

F 142   The robber trench at horizon 3

F 143   The mound at horizon 3

F 150   Basil Brown's trench; second level cut

F 151   Basil Brown's trench; lowest level cut

F 153   The quarry ditch, second definition

F 156   Basil Brown's steps

F 157   The robbers' steps

F 159   A plank ?

F 160   A finds stance

F 161   A plank

F 162   The Burial chamber

F 163   A plank ?

F 164-184 Finds stances  
 F 185;187-189 Parts of the Burial chamber  
 F 186 [number used by AJC to represent the composite feature F 150-151 (intruders' trenches)]  
 F 197-199 Planks  
 F 200-205 Burial chamber walls  
 F 207-212 Burial chamber walls  
 F 214 Beam slot to support ship [in HN]  
 F 215 Beam slot to support ship [in N]  
 F 257 Pit in O  
 F 261 Turf in O  
 F 269 Corner pit in F/FL  
 F 271 Corner Pit in J/JO  
 F 272 Corner pit in O/T  
 F 308 Corner pit in Q  
 F 501 Post-hole [?] in M, W of chamber.

## 710.5 Summary of the Investigations

### 7105.1 Early investigations.

71051.1 When the modern investigation of Mound 2 began in 1984, it had already been much reduced in height [by ploughing, see 8.1], and subject to at least two previous excavations. The first, which was responsible for a very large E-W trench, was probably that referred to in the Ipswich Journal for 24 Nov 1860 (INT 1; see VOL 2, 7.1 and this vol 8.1). This trench dispersed the rivets of a clinker-built ship and ransacked the burial chamber. This incursion, the actual cut of which was elusive, has been named 'the robber trench'.

71051.2 The second known excavation was that of Basil Brown for Ipswich Museum and Mrs Pretty in 1938 (INT 3, Vol 2). This more modest trench, aligned ENE-WSW, remained inside the other for much of its trajectory; it allowed the retrieval of disturbed finds and rivets, some of which were thought, wrongly, to be in situ.

**NOTE: The following records describe Basil Brown's excavations and the features he discovered, as re-excavated in 1984-7.**

*N236/3, N236/14 and N241/2, N241/3 show the cut for the 1938 trench, and its excavation, at horizon 2. N 241/2 shows Basil Brown's 1938 trench under re-excavation. N 53/28 shows part of the boat-shaped feature found by Brown re-excavated in 1985, Int 26].*

*N 264/5 shows the whole boat-shaped feature, re-excavated in 1987 after the removal of Mound 2 [Int 41; view from E]. N 48/34 shows BB's backfill, including evidence for sieving. N 60/1 shows the 'prow' of the 'boat', the edges marked by bracken roots. N 58/36 shows square-shaped anomalies on the chamber floor, encountered or instigated by Brown. N 53/14 shows trowel or tool marks cutting the subsoil, refilled by Brown's backfill and probably owed to him. N 271/8 shows the 'prow'; two erosion shoulders sealing the line of the burial chamber already excavated by the robbers. N 266/9 shows the erosion-shoulder sectioned.*

*The roller skates back-filled into the trench when Basil Brown's excavations were complete were no doubt the property of Master Robert Pretty or his friends.*

### 7105.2 The 1983-93 campaign: Summary

71052.1 Mound 2 was first visited during the evaluation phase of the present campaign: the usual surveys (3.1)



were supplemented by radar transects (N307/26), which inferred the presence of a robber trench (3.1.5).

71052.2 A section of backfill was then removed from Basil Brown's earlier trench, in order to allow inspection of conditions inside the mound and to assess the legibility of the stratigraphic sequence visible in the sides (INT 26, 1984; 3105.2; N 44/32; N 58/3; N 73/33). These evaluation exercises indicated the scale of previous interventions, and reinforced the likelihood that little of the mound structure or the central burial had survived. Accordingly it was decided to excavate Mound 2 completely, and to use what remained of it to address the questions:

- What burial rite was employed?

- How had the mound been constructed?

71052.3 The **Mound** itself was excavated in plan in a series of "horizons", numbered from 0 to 4 (N175/2(9); N 165/6; N189/12; N218/2; N231/11; N243/10; N269/7; N 313/10). Between each horizon, vertical baulks were left standing which carried the array of running sections. These baulks were generally recorded and demolished prior to the preparation of the next horizon, so that they rarely stood more than 1 metre high. This also represents the safe height for a soil baulk at Sutton Hoo, where the sand-silt comprising most deposits has very little ability to support greater heights than this without collapse.

Each horizon was a curved surface representing a new level of visibility, but did not necessarily represent a stratigraphic episode. Thus Horizon 0 was the surface of the turf; Horizon 1 the surface with the turf removed; Horizon 2 the first level at which strata could be distinguished (average depth c 30 cm below the turf); Horizon 3 recognised the real interface between the outer perimeter of the original mound and the inner perimeter of the quarry ditch and was therefore the first level to be free of post-construction slump; Horizon 4 was the surface of the buried soil with the mound removed.

At the scale of normal archaeological work, that is at ground level, kneeling or standing, with the eyes not more than 2 m from the surface, no contexts (individual layers with edges) were defined within the mound make-up. This was as expected from the evaluation. However it was necessary to use the horizons, as the surfaces of maximum visibility, to search for variations in the mound- loading and intrusions in it; this was done by recording them in plan, generally from a height of 10m or more (eg N236/3, which shows the 'sandy shoulders' and the 'robber trench' at Horizon 2.)

It was equally necessary, however, to view the stratigraphic sequence in section, since the interface between the mound make-up, the quarry ditch, the robber trench and the horizons themselves could be seen and recorded in no other way. This is because, whereas the coarse junction between one context set and another could sometimes be seen in plan where they were at the same stratigraphic level, a troweller on the ground would never have a sufficiently long visual memory to notice changes which occurred within broad merging layers in the same place. The variation between one context and the one beneath it was either too subtle or too chaotic for an excavator to know when she passed from one to the next. However such interfaces could be read in section, even when the two layers were very similar, from the 'median line' between them.

The method of reducing the mound by horizons under an array of running sections was therefore adopted to achieve a balance between these two imperatives and maximise the yield. It was successful in the main. The description of the excavation, definition and recording of each horizon is given in section 3. The evidence of the drawn sections is discussed in section 715.4

71052.4 The **Quarry Ditch** of Mound 2 had been seen by Basil Brown (who had also trenched it without record, see vol 2). It was made visible during the evaluation by shining oblique lighting on it at night (see N 47/15\*). The quarry ditch was excavated at the same time, and using the same techniques (horizons defined

under running sections) as the mound. The interface between the quarry ditch fill and the mound make-up remained highly ambiguous until they were both fully excavated.

71052.5 Neither the **ship** nor the **robber trench** was defined, except very partially in situ. The form of each has been compiled from observations and analyses; the ship from its dispersed rivets and its 'seating' (7.1.5), and the robber trench from the debris it scattered and the occasional secure edge (8.1).

71052.6 The **Burial Chamber** was fully excavated after the mound had been removed and the quarry ditch emptied (at 'horizon 4'). It was recorded in five operations:

- A preliminary reconnaissance in 1984, within the back-fill of Basil Brown's trench (INT 26)
- Excavation of the Mound, 1986-87, by horizon, subsuming the ship and the robber trench.
- Definition of the burial chamber, 1987, in 8 stages
- Recording of the remains of the burial chamber structure and the traces of its contents , 1987-8 ,in a further 8 sub-stages.
- Examination of the surface of the buried soil under the mound for activity associated with the burial, 1988-9.

Details of the methodology and procedures are given in 3.10.5.1

From these investigations it is possible to deduce the shape of the hole originally cut by the Anglo-Saxons, the burial chamber constructed in it and how it had been furnished. Something can also be known of the ship which was placed at ground level and buried by the mound.

71052.7 A number of other features relating to the Mound 2 burial excavated at various horizons, was only added in the analysis stage when their relationship to Mound 2 was discovered. These were the pit F 257 and its turf lump F 261, which were part of the robber trench; and the four 'corner-pits' F 269, F 271, F 2727, F 308, which were extracted from the prehistoric phases anterior to Mound 2 and redefined as marker-pits for the mound itself.

#### 7.1.1 *Definition, Excavation and Recording of the Burial beneath Mound 2* [From section 3]

##### 711.1 *Summary* [MOHC]

The burial beneath Mound 2 had already been excavated at least twice. The first occasion was inferred from the Robber Trench (F142 etc and was probably an excavation, archaeological in intention, of the 19th century. It has left no record, but may be that referred to in the Ipswich Journal in 1860 (see 8.1). The second occasion was the excavation by Basil Brown for Ipswich Museum in 1938. He cut the trench called by us F4(see 8.2).

During the present project, Basil Brown's Trench, the Robber Trench, the ship and the burial chamber were defined in 5 major stages and a number of sub-stages as follows:

- 1984 INT 26, a preliminary reconnaissance within Basil Brown's Trench and confined to his back fill (3.10.5.2). This suggested a position for the ship, keel down across an underground chamber.
- 1986-87 . Dissection of Mound 2, by Horizon (Horizon 1-3), allowing the definition of the robber

trench, the scatter of rivets from the ship, and the location of the chamber (see 3.5.1, 3.6.2, 3.7.2)

- 1987. Definition of the chamber and its distinction from the robber trench and the trench of Basil Brown. This was carried out in 8 stages.(3.10.5.3)
- 1988. Dissection of the remains of the structure of the chamber and what was once inside it. This was divided into a further 8 sub-stages (3.10.5.4)
- 1988-9. Exploration of the surface of the buried soil under the mound. This produced the 'path' and the two beam slots which possibly supported the ship (see 3.8.2).

The present section therefore concentrates on the definition and the excavation of the chamber. For an analysis and synthesis, see section 7.1.

#### 711.2 *Reconnaissance: INT 26* [MOHC].

7112.1 The purpose of INT 26 was to provide an opportunity to inspect the inside of mound 2 and learn how to excavate it. The excavation of 1938 had suggested the presence of a clinker-built, flat-bottomed, straight-sided, transomed-sterned boat at the bottom of a deep hole (Bruce-Mitford 1975, 104). It was intended to contact the vestiges of this unlikely artifact and confirm the integrity of the hole it was in.

7112.2 The method employed was to cut a trench \* by \* m across the line of Basil Brown's Trench (N44/32). Since the latter was not actually visible at that stage, it was assumed to run approximately E-W, and INT26 was accordingly laid out N-S. The edges of BB's trench had grown into the post-war turf of Mound 2, and were not actually defined until the equivalent of Horizon 2, some 20cms below the turf (N 40/20). It was then apparent that Brown's trench had actually run WSW-ENE (N 42/4).

7112.3 To secure the cut edges during the descent, vertical wooden shuttering was inserted, supported by horizontal waling boards and held in tension by steel acrows (N 43/29,N48/29). The latter were replaced by wooden struts once INT 26 had achieved its intended limits (N107/2).

7112.4 The layers comprising the backfill of the 1938 trench (F4) could generally be distinguished, particularly when they had been sorted by the sieving of the 1938 excavators (N48/34). Confirmation that the layer set being removed was mid 20th century came with the discovery of a pair of steel roller skates, but there were few other diagnostic or contemporary finds. The N and S sloping edges so exposed were not easy to interpret (N51/15;N53/28;N95/11). It was initially expected that exposed sections of mound-make and buried soil might be recognisable. However, it was quickly realised that the removal of 1938 spoil exposed neither of these things, but collapsed 'landfall' [MOHC Notebook, 4 Aug 1984] , that is the mound-make-up which had slipped downwards into a hole. The hole in question could either be that dug by Basil Brown, that dug by the robbers or at a pinch that dug by the Anglo-Saxons. Since this was a reconnaissance expedition, it would have been a mistake to try and determine which by cutting back. Nevertheless, sometimes by accident and sometimes by design, the temptation was not wholly resisted.

7112.5 The level reached by Basil Brown was assessed from the 1938 photographs and confirmed by the find of one of the very marker sticks that appeared in one of them (Bruce-Mitford 1975, 127; N53/28). The cut for INT 26 had arrived towards the west end of the area cut by Brown. At this point the curious boat shape defined by Brown had nearly been recovered: tapering towards the west and straighter towards the east (N53/28;N58/34;MOHC notebook, 10 Aug 84). It was also apparent that Brown had reached a vertical edge against bedded natural to the east, he had not done so to the west. The 'boat shaped' curve which so recalled a hull, had in fact been defined against redeposited natural, not natural in situ. (ibid). It was assumed at this stage (rightly as it turned out) that this redeposition was owed to slumping following the robbing operation.

7112.6 The depth of INT 26 had now reached c3m and on 15 Aug a section of 1938 backfill exposed beneath the shoring on the east side collapsed. None of the shuttering moved and no damage was done. The exposed section had stood only 9 inches high (N48/34), but such an unstructured soil at such a depth could clearly support virtually no thrust, so it was necessary to lower the shoring immediately to the base of Brown's trench. At the east side, this required the remaining wall of backfill to be trimmed vertically and the shuttering to be driven down. Matching this on the west side was less straightforward. The west edge of Brown's trench as found by the trowel, had gradually curved inwards (ie to the east) with increasing depth, terminating with the two shoulders of redeposited natural already mentioned. It was plainly undesirable to cut into these shoulders during the reconnaissance operation. It was equally undesirable to cut into the strata above this which lay westwards of Brown's backfill; but some trimming would be necessary to achieve a west edge for INT 26 nearer the vertical, in order to support the shoring.

7112.7 It seemed possible, that if such trimming made an incursion into intact strata, traces of a ship might still be retained there. "In cutting back W face (lower) prior to lowering the shoring, MOHC asked Gillian [Hutchinson] to see if the prow rose. She duly produced a boat-shaped profile with a keel, much to her surprise." (MOHC Notebook, 15 Aug 1984; N59/44-5; N60/4)

7112.8 Attempts were made to eliminate the last traces of Basil Brown's backfill, at the level of the boat-shaped hollow and the shelf surrounding it that he had defined in 1938. This was generally unequivocal at the lowest level, the rich brown homogenous fill coming away from natural bedded subsoil (N53/14) or from fine grey silt (N53/14) or from a flat sand surface mottled by anomalies (1114; N58/36). Each of these layers was to appear again, when the whole chamber was excavated (see 3.10.5.3 and 3.10.5.4). The sand with its linear anomalies (1114) was found to continue under the shoulders of redeposited soil left by Brown to give his 'boat' shape. The layer therefore belonged to the robbing episode and not to Brown although it is possible that Brown marked that part of the surface which he encountered. The silt layer is also attributed to the robbers, since it too continued beneath the false shoulders left by Brown (N53/14 for a trial cut in action). Some of the anomalies, however, could already be seen to have been caused by bracken roots entering Basil Brown's loose backfill and arresting or deflecting at the marginally harder strata at the edge of his cut (N60/1).

7112.9 Having reached this stage over all the exposed area, the floor was sealed, the recording completed (N58/3). N95/11 and N107/2 show the north and south edges of Basil Brown's trench as excavated in their final form. The edges were protected with Vinamul, the wooden shoring treated with preservative (see the green planking in N107/2), the base of the excavated area was backfilled over polythene and sandbags to the depth of the 'gunwale' of BB's 'boat' (N60/18) and the area of INT 26 then roofed and equipped with a gutter (N60/20; N73/33).

### 711.3 *The Definition of the Chamber* [MOHC]

7113.1 The excavation of the Mound 2 burial chamber was resumed three years later in September 1987, after the removal of Mound 2. The shoring of INT 26 was removed as the mound was lowered through its horizons. N236/3, N236/14 and N241/2, N241/3 show the cut for the 1938 trench, and its excavation, at horizon 2. At horizon 3, the shoring was removed altogether. N256/7, N259/6 show the dark band of buried soil appearing in the edge of Basil Brown's trench, with the remains of the mound make-up above it. The cut for the chamber was still not visible, although the cut made by Basil Brown, presumably following the chamber-edge, was clear enough [N256/7]. The level that Basil Brown had descended from was approximately that which was to become horizon 4 at the west end (N259/15). Steps were defined at the east end, where they could be credited to Brown (N266/7) and with less confidence at the west end where they were attributed to the robbers (see the foreground of N256/10, N259/10).

7113.2 The primary cut against the buried soil and the natural was distinguished with great difficulty; the natural system had undoubtedly been cut by the robbers and by Basil Brown and finally by ourselves. Each of

these incursions are likely to have caused bites to have been taken out of the original shape, through ill-directed digging or subsequent collapse. In spite of this, the basic oval shape was persistent and unambiguous. It was later interpreted as the seating of a ship which had been placed over the chamber. (N263/9 at horizon 3; N313/10, N259/4 at horizon 4; N325/9 at horizon 7).

7113.3 The cut achieved on the removal of Basil Brown's backfill and therefore made by him was called F150. It often coincided, naturally enough, with F151, designated as the shelf on which the ship sat, and F186 designated as the cut for the chamber. The identity of each of these was often (understandably) confused by AJC; the turbulence of contexts never allowed these three episodes to be distinguished at their interfaces; the surface finally defined therefore applies to all three, and all three feature records must therefore be taken as cumulative and equivalent. An attempt can be made to separate the loci due to each of the three episodes on the basis of their geometry post-hoc. The definition of F150/151/186 began on 15 Sep 1987 and was achieved in 8 stages as follows.

7113.4 STAGE 1: East end, south: removal in HN and N against a temporary section of 1407 (beneath 1411, bottom right in N48/34) as BB backfill. This produced the curve of buried soil above natural seen in N256/9. West end, south: removal of the contexts left standing in the west section following the completion of INT 26./ (N188/20)

7113.5 STAGE 2: East end: removal of 1423, a black earth/turf relic which 'clad' the north and south sides of the east end. In places this is c30cms thick (N259/14). On the south side of east, 1421 was a pale grey dust interrupting bedded subsoil (polaroid in MOHC Notebook, p87).

7113.6 STAGE 3: East end: Further unsuccessful attempts to eliminate the traces of 1407 and 1421 to produce a clean homogenous surface. These attempts stop short of an undercut, which would imperil the stability of the lower parts of the chamber, and the relic strata probably refer to collapse or scabbing infilled with later backfill, rather than animal activity during a period of exposure, since actual holes are few.

The silty 'wash' layer contacted in INT 26 at the centre of the chamber area was found at the EAST end, and was particularly strong on the south side. The wash fanned out towards the centre of the chamber area (N263/15; N266/0). This wash follows the line of Basil, Brown's cut as seen in the 1938 photograph (Bruce-Mitford 1975, p127 ). It can therefore be attributed to rain wash entering his excavation after it was finished and before backfilling began.

7113.7 STAGE 4: West End, south: Removal of the first of the 'false shoulders' which led BB to believe that the prow of a ship lay inside the chamber. N264/4 shows the situation at the commencement of the process. The context (1427) had already been eroded by trowelling in INT 26 (as 1055[?]). Removal of 1427 did not affect the profile of the 'ship' preserved in vinamul from INT 26. N266/8 shows the relationship between the principal players: Left: the SOUTH shoulder (1429); Right: the NORTH shoulder (1430), as yet not sectioned (for N-S section see N266/20). At the foot of the west end, the thin black line of the west chamber wall is just beginning to appear.

7113.8 Above this, in the background: the 'ship' profile. It has almost, but not quite disappeared through cleaning, and at this stage the tiny rectangular slot attributed to a keel is still just visible. One mm further to the west, the whole profile vanished, leaving a gentle unaccented slope (as seen in N274/7; the vertical cuts are investigations of faults in the natural bedding to ensure the absence of structure). There were no rivets in association with the ship profile, and it must remain dubious as the trace of a keel or hull in situ. The fill was considerably darker than that of the false shoulders (eg N271/8), so it is unlikely to have filled in the same way at the same time. As found it has the wrong profile to be a prow or stern; but it would have to be rising rapidly - almost vertically - to explain the fact that it does not extend westwards (see 7.1.3 for discussion).

7113.9 It was also noted at stage 4 that no rivets had been found in association with the presumed edges of the ship 'seating' (F150/151/186). It seems unlikely that any of the hard won upper edges of the chamber actually represents a surface still in contact with the ship. Either the ship remains were thoroughly erased by the robbers, or the timbers had already fallen in, taking the rivets with them (see collapse model (7.1.7)).

7113.10 STAGE 5: Removal of the main part of the 'false shoulders' (N269/15). The south shoulder (1429;1470) consisted of four episodes of banded strata (N 266/9): alternatively loam, resembling buried soil; and silt, like the wash which came down the sides during excavation and derives from the natural subsoil. The pattern was then repeated with the lower silt band containing some speckles of black manganese-like deposits. This was interpreted as a set of layers naturally deposited during episodes of erosion from the edges. The North shoulder (1430; 1442-7 beneath), was a more homogenous silt, but the same explanation could be advanced (N266/20).

Both shoulders were clearly not bedded subsoil in situ; yet Basil Brown had stopped when he encountered them. Given that the shape which remained will have experienced at least some modification at his hands while he tried to define the boat implied by the rivets, it is possible to see their original shape as 'cones of erosion'.

7113.11 STAGE 6: Further attempts to remove the 'cladding' of false edges.

East End: The final residue of 1407 (south) and 1421 (north) was achieved without injury to the edge of F150/151/186; both turned out to be superficial. The attempt to remove 1422, a floury unbanded sand about midway (easting 126.26) on the north shoulder of F150 ran into difficulties. The layer merged with natural subsoil, in turn beneath buried soil. The edge at this point was therefore seriously overcut (D547; N266/26, rear, right).

7113.12 STAGE 7 (contemporary with STAGE 8): West end: Removal of remains of 1429 and 1430. In an effort to improve legibility at this crucial corner, the decision was taken to section E-W, as a last chance to check for the existence of a 'rising prow' concealed within the false shoulder, 1430 (N266/27; the section is being cut E-W through the south part of the 1430 hump. MOHC's hand rests on the place that the 'ship' profile once crossed). There was no evidence of any structure.

7113.13 STAGE 8 (contemporary with STAGE 7): East end: Cleaning of the floor area from the east end westwards began to produce a number of linear anomalies such as had already been noted during the excavation of INT 26. One at least, a circular mark with iron staining was immediately recognisable as a bucket; others were suggestive but not readily identifiable. The cleaning was even and gentle allowing first impressions to stay (N266/2; N269/14; N269/12; N261/31; N252/32; N261/36; N264/5). These anomalies could have been due to Basil Brown's digging operations; or to those of the barrow robbers of the 19th century. But it was assumed that there was also the possibility that in spite of all the disturbance the chamber floor could have retained the imprint of the finds that had once stood, under extreme pressure on that spot. Some slight encouragement to this assumption was given by the fact that some of the anomalies, and of a similar character, appeared **under** the 'false shoulders' 1429 and 1430 (and 1442 to 1447) which Basil Brown had not removed (N266/36). The fragile and tenuous lines of the timber walls of the burial chamber began to appear at the same horizon (N289/26A; N261/36; N271/0; N274/10). Also seen were 'post-impressions', square at the corners, with some other mid-wall candidates being circular in section (MOHC Notebook, p99). Accordingly, the anomalies were recorded in plan and designated as 'finds stances' to be investigated in a series of 8 sub-stages which followed. These were under the supervision of AJC, MOHC having been obliged to return to York.

711.4 *The Mound 2 Chamber: Testing for the Final fill and the excavation of the structure [AJC/MOHC]*

### 7114.1 *Objectives*

These were laid out in a directive issued by MOHC for the winter excavators who would complete the chamber (AJC, MRH, K Spandl, M Johnson):

#### 1. The Feature map at Stage 8 is as follows:

F4 is the outer cut of Basil Brown's (1938) Trench

F142 is the outer cut of the robber trench (19th c?)

F150 is the ship-shaped cut (excavated by Basil Brown)

F151 is the chamber-grave within and below the ship-shaped cut (partially excavated by Basil Brown).

F156 is the steps cut on the east side by Basil Brown

F157 is the steps cut on the west side by the robbers.

*To these were added by AJC:*

*F162, to describe the set of contexts exposed on the chamber floor under Basil Brown's backfill.*

*F186, which replaced F150 and 151 in the records.*

#### 2. There were to be three main tasks for the excavation at this stage:

- I: Remove the false sides of F151 to natural or wood stains shown all the way round. Only (the remains of) 1429 to go.
- II: Excavate the 'object stances'
- III: Excavate the structure.

#### 3. **Getting Ready**

- shelter: requires re-sheeting. 4xwhite sheets would do it. Jay (Carver) knows the details (he built it.
- Aquavac: put the generator outside the shelter and make sure it is earthed. Use nozzle brush. Don't use on water.
- Use leaf, brush on "objects", not aquavac.
- Contexts and feature cards - on my board. Please incorporate into files (after completion). Need context numbers for walls, floor, object stances etc.
- Set up recording [system] AS FOR A GRAVE (own folder etc)

#### 4. Recording - as for graves

- establish E-W section down the middle (use AJC line)
- When task I (above) is complete, complete plan of floor before excavating.
- Sieve everything (by context) using *fine* sieve
- Establish 1 metre grid and sample 30g/1m<sup>2</sup>/50mm vertical for LTP, phosphate (location of body)
- Keep all earth from 'object stances' for fine sieving and chemical testing for bone, wood etc. Plan and locate [each] with PLANET and photograph as a feature.
- Plan, photograph and draw [main E-W] section every 50mm vertically (colour).
- [Use] polaroid for fleeting details.

*These are items from the standard grave-recording procedure (see FR1/10) with slight variations. They were varied further by AJC (see below).*

#### 5. The Structure

We need to know:

- Dimensions of timbers
- position and attitude of nails (one already found in NE corner, but loose)
- as many C14 samples as possible
- Direction of wood grain wherever possible
- Want to be able to reconstruct chamber eventually

#### 6. Final Hachure Plan

Especially important to establish and survey 'boat ledge' [ie F150/151]. Need a contour [plan] of the whole pit. If possible, [use] 3-space tracker.

Good Luck!

#### 7114.2 General Description on commencement of Stage 8/1 [AJC]

The remains of the chamber survived in a rectangular form with a width varying from 1.40 - 1.50m and a length from 3.70 - 3.80m. The undulating floor of the excavated chamber lay 2.00m beneath the contemporary surface of the *buried soil*. These measurements provide a maximum capacity for the chamber of approximately 11.40m<sup>3</sup>, but in 1987 only a fraction of this chamber remained in tact. Only a thin spit of original chamber fill 0.15m thick survived (0.855m<sup>3</sup>) representing 7.5% of the total volume. These delicate lower levels contained only ambiguous traces of the richly furnished burial. The evidence retrieved on this surface was primarily of a graphic nature - a pattern of swirling brown stains against a predominantly yellow sandy fill. Only a few of these stains were identified with any confidence.



Tight up against the subsoil sides of the lower chamber were the only specifically 3-D components to survive. These basal units of timber walling survived as thin sinuous lines of dark brown/black sand running irregularly around the perimeter of the chamber.

The remaining contexts attributed to the fill of the robbing episode (1442,1443,1471) were removed (Task I, above) and the traces which remained on and of the floor and walls of the chamber were then recorded.

#### 7114.3 Procedure.

The contexts which remained in the chamber were defined in eight further STAGES, which are all designated as substages of Stage 8: 8/1, 8/1a, 8/2, 8/3, 8/4, 8/4b, 8/4c, and 8/5. Since they were the result of cleaning and recording a horizontal surface on the chamber floor, they began to be referred to in the Field Records as "Horizons". In the Field Reports, the term 'stage' and 'substage' have been preferred, to avoid confusion with the principal horizons in which the site as a whole was recorded and to bring the chamber of Mound 2 into line with the standard terminology used for graves.

STAGES 8/1-3 inclusive describe the removal of the fill contained within the original wooden walls of the chamber, and STAGES 8/4-4c, the removal of the walls themselves. The base of the fully excavated empty chamber was recorded at STAGE 8/5. The records for Stage 8/1 consist of plans and written descriptions; central to this record was a naturalistic coloured plan which was eventually completed in pencil. Only part of the western end was coloured before we switched over to outlining the perimeters of contexts or areas of discolouration with pencil. Coloured pencils continued in use for each substage to describe the character of the wooden walls set around the perimeter of the chamber and to record the occasional stain on the chamber floor.

All the planning was completed using a planning frame and a mini-grid set up inside the chamber, the nails of this grid were located by PLANET with true site co-ordinates. The nails divided the chamber into six quadrants (A-F) against an E-W longitudinal axis and two N-S transverse lines. Only the longer E-W line was used as the axis of a cumulative section between Stages 8/1-5. At Stage 8/4b a separate set of section lines was cut across the chamber walling. At each stage, a Category 2 photograph was taken of the surface. These overhead shots were taken from a gantry laid across the buried soil. Artificial light was used to illuminate the shape of the *excavated* features at stage 8/ 1a on the floor of the chamber and at stage 8/ 5 when the walling had been dismantled. For each individual feature/ context on the floor of the chamber it was the responsibility of the excavator to record photographically the various stages of excavation. Apart from the A1 plans, each feature was initially re-planned in colour immediately before excavation. Once MJ took over responsibility this scheme was abandoned so the stage plans became the sole drawn record of the feature/context in plan. All the features were excavated at Level E.

Each context excavated from the chamber was subject to intense sieving to recover any fragments of finds or any organic debris. Depending upon the target, the mesh size varied from either 0.01m for general chamber fill or 0.001m for fill specifically from Finds stances.

#### 7114.4 *Stage 8/1*: N271 [Stage 8], N274/4 [8/1], N284/1 [8/a]

The surface first defined at stage 7/8 was planned, photographed and metal detected (and redesigned as Horizon 1, more properly substage 1, or Stage 8/1). Each reading from the detector was annotated onto the A1 plan but the targets were not immediately recovered. The overall surface of substage 1 (and later 2 and 3) were described as a feature - F162 and the various shapes on the surface were described as 'planks', 'Find stances' or 'walls'. The background fill of F162 was recorded as 1476 or 1506. *Find stances* were recognised by the colour of the stains (darker brown), shape and pattern. All of the Find stances belong to substage 1 and they were all excavated by substage 1a. A few of the Find stances contained fragmentary finds, either fragments of wood, metal or prehistoric debris (burnt flint, ceramic, flint), but there were *no* finds left in situ. Planking and

walls were recognised by their shape (linear) and the presence of decayed wood. Decayed wood survived as ghost stains where often only the edge of the stain retained the diagnostic organic texture; this was correspondingly a darker brown/black colour. Among the excavators there was some difficulty over the recognition or the distinction between planks and walls. In this discussion, "planks" will describe stains which occur on the floor of the chamber, while "walls" refer to planks around the perimeter of the chamber.

At substage 1, MJ replaced KHS/KD after the excavation of F159 and F160, so the remainder of the structural elements were removed and described by MJ. The Find stances were a variety of shapes and sizes and must reflect, to some extent, the shape of the objects as they were pulled off the floor of the chamber. All of the stances are shallow (0.01 - 0.10m deep).

#### 7114.5 *Stages 8/2 and 8/3: N288/9 [8/2]; 291/6, 291/7 [8/3]*

These were both recorded as F162, and contained only broad differences in fill; there were no shapes which could be interpreted as Finds stances. After planning and photography the contexts which made up the chamber fill were removed. At substage 4 which followed, only the natural subsoil base and the traces of the structural walls survived.

#### 7114.6 *Stage 8/4: N292/4, N300/6 [4c]*

During successive substages, portions of the extant walling were re-numbered as more detail became visible. The progression of the recording can be followed on the plans but it was only at this substage that the walling was investigated in detail. To date the excavation of the chamber floor had stopped just short of the walling. Initially the excavator attempted to remove the supporting fill and expose the upstanding wall. This was not successful: often the irregular, narrow, wood stain seen in plan along the edge could *not* be followed down the side of the wall itself, so excavating up against the side of the structure did not provide a clear interface with the wall. Also the walls were not conveniently vertical. They often sloped in at an acute angle threatening collapse. All four faces were cleaned, drawn in elevation (see D610, 611, 612 and 613) and photographed by NMB before this method was abandoned or taken any further. (The position of each elevation is marked on D553).

It was felt that the most successful results were generated by cleaning the top edge of the walling in plan and then cutting sections transversely across the axis of the wall. We expected that this would provide a variety of constructional detail - length of wall, type of joints, thickness of wall, angle of walling. A total of ten sections were drawn across the walling, seven on a N-S axis and three E-W.

All the walls were removed during the recording process leaving a sterile, clean subsoil chamber. Behind the walls, the excavator sought the cut for the original chamber - recorded as F186. Since the timber chamber was built tight up against the almost vertical subsoil walls only a very thin deposit of weathered subsoil survived behind them.

#### 7114.7 *Stage 8/5: N303/4,5*

The empty floor of the chamber was hachure-planned. This stage marked the end of MJ's participation and the remaining loose ends were tidied up by AJC. The overall shape of the chamber had not then been consistently recorded. Although the floor was recorded, the hachure plans of the original cut containing the steps of Brown (F156) and the robbers (F157), the perimeter of the chamber, the ledge of the ship trench remained incomplete (see D1370) and ambiguous. [AJC then decided to record] the shape of the excavated chamber in profile (ten transverse profiles, three longitudinal) in the expectation of reconstructing the geometry of the chamber.

#### 7114.8 *Sampling the base*

Once the subsoil floor of the Chamber had been recorded (as context 1511), a comprehensive array of 490 phosphate/ chemical samples was taken across it [N307/32, N306/3]. These samples were taken on a square grid of 0.10m (see D609 for array). Furthermore, two Kubiena boxes were driven through the floor of the chamber, one box in the SW corner was taken through a rather dirty subsoil section which apparently exhibited peculiar horizontal mineral staining from the chamber fill, the second box from the centre of the Chamber cut through a very clean subsoil section.

Two exceptional mineral stains, very dark brown/black in colour were sampled just outside the Chamber walls (30g bags). Along the north wall a gravelly black stain was seen within the subsoil and was described as a 'pipe' stain. Just outside the line of the eastern chamber wall, on a low ledge, another similar stain was also sampled. From the deep subsoil walls of the chamber a set of TL samples were taken. These samples were recovered in small cylindrical tubes pushed through the remnant walling and into the subsoil near the base of the northern and southern walls.

Within the fill of the chamber 30g samples for chemical analysis were taken at regular intervals along the longitudinal and transverse axes of the chamber.

#### 7114.9 *Discussion* [AJC]

##### The Structure

The shape of the walling was variously described as amorphous (F185), subrectangular, e.g. (F188, F189) or linear e.g. (F200, F212) and consistently colour coded on the stage plans. The character of the walling was also consistent since it contained irregular lines of organic debris marking an edge of the wood, and both the colour and texture were similar to the stains of coffins excavated from Int.32.

Although elements of walling were visible on the surface at substage 1 (dark linear stains around the perimeter) they were only allocated feature/context numbers from substage 1a/4c inclusive. A feature number was applied to a length of walling which often changed in length and shape at successive horizons, for example F201 was eventually superseded by three separate lengths described as F210, F211 and F212. If possible a feature number was allocated to only a single wall- unit but the irregular nature of the stains did not usually lend itself to such precision.

There is no doubt that the walling around the perimeter of the chamber was in situ, but it is just as certain that only the very basal levels of a once substantial wooden structure survived. If it was a larger (i.e. taller) wooden structure it is remarkable that only these lower levels have survived, indeed it would suggest that the original robbers were methodical in their approach to the robbing. It appears Brown only touched the southern and western wall in 1938. Whether or not the robbers did recognise the faint traces of the wooden structure, they did not excavate outside the area of the chamber. Apart from the NW corner and the eastern side which have been disturbed and cut back by the robbers and Brown respectively, the shape of the excavated chamber must reflect the original dimensions and shape of the chamber and wooden structure. The profile drawn transversely across the body of the chamber (profiles C-H) suggest a height and position of a roof, presumed to be a boat (or part of a boat). Whether it lay keel down or up, is ambiguous, and so is its resting place but a very strong candidate is the narrow ledge running irregularly around the upper chamber (F151). Within the fill of the chamber lengths of collapsed walling were recognised overlying the in-situ structure - F185, F188 and F189. However, they had also been recorded within the disturbed strata taken out prior to substage 1. There are descriptions of 'woody' or 'woody-rooty' stains from 1470-1471 (F151).

When considering and assessing the constructional detail visible along the surviving lengths of the wooden

structure it is essential to bear in mind the equivocal character of the stains. Detail was isolated in patches along the southern wall at substage 4 and along the north, east and west walls at substage 4b. The evidence for detail relies heavily on the accuracy of the planning and the observations of the recorder. Along the southern wall the stepped character of the thin black organic stain (F198, F199) suggest the walling was staggered or slightly overlapped. Individual wall units of between 0.35 - 0.40m were identified and confirmed in the shape of their bedding trench (see substage 5). A similar pattern of slightly stepped stains was repeated along a short strength of the north wall (e.g. F204, F205) and each length was approximately 0.35m. Although interrupted the character of the walls down the east and west sides was different - the wooden planks appeared to be thinner and there is no evidence for overlapping joints nor were the units of walling any regular length.

On balance, it is likely that the long north and south walls were constructed of overlapping planks probably set vertically (?0.90m long and 0.35m wide) but the shorter west and east walls were made of single planks laid horizontally @ 1.30m long). This identification relies upon reading and shape of the thin organic stains which trace the line of the decayed walling and it is worth noting that often it was only one edge of each decayed wall that survived. Along the whole length of walling one joint was isolated and kept as a sample for later analysis (F204-205). The ephemeral bedding trench defined against the subsoil supports the proposed constructional model. A slight trench continues around the perimeter of the chamber floor (varying in depth 0.10 - 0.04m) with the steepest cuts along the longer north and south sides. The steep, almost vertical subsoil walls suggest the structure was 'box-like' in construction and at least 0.90m high. The sections cut across the extant walling can only provide a broad indication of shape, for example the lack of consistency in shape, angle and preservation suggests they have been subject to substantial distortion. On balance the evidence does not argue against a vertical structure although it should be noted that the excavator at substage 1 described the north wall as vertical and south wall as sloping in.

The evidence for supporting posts around the chamber walls is also ambiguous. A set of four corner posts were described by MOHC but none was defined or recorded by MJ. At substage 1 discolourations in the four corners of the chamber were planned. In the NW and SE corners the clearest candidates for posts were subsquare in plan with a width of 0.12 and 0.17m respectively. Although the shapes in the remaining corners were not consistent, none of these stains was investigated. All we can say of these two corners is that none contained any organic staining. The clear stains remain the clearest evidence for supporting posts within this structure but it is just as surprising that no cut survived within the subsoil. Two extra post stains were recognised by CLR (Fig. 4 Bull. 6 1989) at either end of the chamber but this identification is incorrect; the stain immediately outside the east wall was a mineral stain on a higher ledge and is on *no* account consistent with a post stain. This mineral deposit was later sampled.

#### The finds-stances

A total of 21 Find stances were described and excavated on the surface at substage 1. These varied widely in size and shape from the larger features e.g. F160, F168 and F171 to the smaller e.g. F175, but none is more than 0.10m deep. It is clear from the plan (D550) that not all shapes drawn in outline were allocated context or feature numbers. We must assume that they were either too shallow and disappeared during re-cleaning, when presumably they were described, or were considered as irrelevant by the excavator. Not all the stains observed were drawn on this plan, or survived long enough to be drawn. An example is the swirling 'chain stain' which has not been drawn in any detail or even outlined. The plan does have to be supplemented by the relevant Category 2 photographs.

The omission of the occasional Find stance does not alter the overall character of their distribution. The majority of these stances are small and scattered, although localised concentrations do occur around the perimeter. There are fewer large stains, e.g. F159, F160, but the dominant stain occurs just off centre F168, F170, F171. This stain complex is remarkable: apart from the size it is the only Find stance complex aligned north-south and transversely across the axis of the chamber. As the excavator remarked it may belong to the

structure of the wooden chamber, e.g. a floor. If all the Find stances are scored for the presence/absence of particular attributes this complex stands out. Two particular attributes were chosen for this analysis - organic stains and charcoal. Organic stains were chosen because it appeared to be an attribute specific to the wooden structure of the chamber. All the wall stains contained traces of organic debris visible as either a dark brown/black line or a slight textural change. Unfortunately, the presence of organic stains within the components of a context were inconsistently recorded so a comprehensive survey of all the written data, including the diary entries and drawn plans (coded as black) was completed. Charcoal was added to the list of scored attributes since the stains may have been observed but described rather ambiguously at different times. A significant association between these attributes and the large transverse stain is clear. A few of the smaller features belonging to this group which are around the perimeter of the chamber are clearly coincident with the walling - e.g. F183, F174, F164 and F165. In these instances it is possible that the presence of organic staining actually refers to the walls rather than the Find stances.

It cannot be coincident that the north-south stain also separates two distinct contexts on the floor of the chamber. To the west a clean orange-yellow fill (1506) was described but to the east a dirty mid-brown fill (1476) also contained more iron staining and this pattern generally continued onto the surface of the subsoil. The excavator also mentions the difference in the depth of the surviving fill at both ends.

In 1938 Brown retrieved a number of fragmentary finds off the floor of the chamber and although not securely in situ, the group generally reflects an original pattern. A similar bipartite division of the chamber is discernable in the distribution of these finds. Apart from a scatter of rivets, only one item of regalia (H) was retrieved from the west side of the chamber. The partition again separates two distinct areas on the floor of the chamber, in this example the majority of the finds (and Find stances) occur on the east side.

The pattern is echoed by the results of the chemical microsurvey from samples taken off the subsoil floor beneath the chamber. In this analysis significant differences in the chemical trace elements were recorded either side of the partition. The partition itself is remarkably sterile but to the east Cu and Fe elements predominate, to the west the character changes dramatically and is dominated by strong bone residues.

Altogether, the archaeological evidence connected by the three independent analyses confirms the separation of the chamber into two discreet rooms. The partition formed by the line of discolouration seen at substage 1 is convincing. There is no doubt this was an important element in the structure of the chamber separating the burial chamber itself from a room set aside for the regalia and grave furniture. On analogy with the perimeter wall the central partition containing traces of wood must be a collapsed wall, and therefore an essential element of the built chamber. Although this burial had been ransacked, we can show that the essential geometry of the burial can still be mapped in some detail. These results supported our contention that Find stances do exist and were successfully recognised on the floor of the robbed Chamber.

Over the Chamber floor only a few pathetic scraps of Early Medieval metal work were recovered e.g. from F162 and F168. None of the chamber walls produced any substantial fragments of wood but a few soft lumps were picked out of the Find stances - (F160, F169 and F171) and plank stains (F159 and F163). From F160 the excavator observed structural detail within the fill.

The final class of feature from the chamber are the 'planks'. A total of eight planks were recognised by the excavators, but five of these should be re-classified as components of the walling - F197, F198, F199, F204 and F205. The three remaining planks are all situated in the SE corner of the chamber, though F161 and F163 was drawn on the hachure plan of F159 (see D474). F159 lay horizontally on the chamber surface and contained fragments of wood.

#### 7.1.2 *The 'Corner-Pits': F 269, F 271, F 272, F 308 (MOHC)*

### 712.1 Discovery.

The 'corner-pits' were observed as shallow 'smudges' on the base of the quarry ditch, and were excavated and recorded as parts of the Quarry Ditch F 153 or as prehistoric features. They were subsequently discovered and identified by Madeleine Hummler as possibly early medieval, during her phasing of the prehistoric sequence in INT 41 (see section 4). The four pits were symmetrically sited with respect to the Mound 2 platform, were similar to each other in shape and fill, were located at the base of the quarry ditch, where no other prehistoric features had been contacted, and contained a mixed assemblage of finds, in two cases including Roman pottery. The group of pits then became the subject of this 'Selected Study'.

#### 7.1.2.2 Definition on the Ground.

All the excavators concerned found the pits hard to define, and their stratigraphic position with respect to the mound, the quarry ditch and the buried soil was often reported as equivocal. Each of the features was sealed beneath the silt of the quarry ditch F 153, and none was seen until the quarry ditch had been excavated. All were very disturbed by rabbits.

F 269 [N 323/34] was at first thought to be much earlier than the quarry ditch, and to be sealed by the buried soil under Mound 2. When the buried soil was removed, however, the soil stain on the buried soil platform turned out to belong to a different and separate feature F 539. "This makes me very suspicious" opined AJC "I am sure that the stain [F 269] belongs with the quarry ditch F 153. From its shape I do not think it is a separate feature that was cut by the quarry ditch.....[it] must represent a deep scoop taken by the original mound-makers as the[y] cut a fairly irregular quarry ditch". It was further reported that the pit had "probably filled up by silting.....from the mound"

F 271 [N 324/6] was first seen at Horizon 7; it was "obviously truncated by the Mound 2 quarry ditch".

F 272 [N 324/5;330/16;330/17] was also defined at Horizon 7, against the natural subsoil. It was thought to be earlier than the quarry ditch and possibly much earlier: "presumably it is of pre-quarry-ditch origin and so has been severely truncated [when] the ditch was dug"....."Although physically cut by the quarry ditch, Horizon 6 [in] the Mound 2 buried soil seals this feature".

F 308 [N 326/3] was cut by the quarry ditch "which caused the southern half of the feature to be a lot lower than the north" [KHS]. The significance of the last observation is not clear; it simply means that the pit become lower towards its own centre.

#### 7.1.2.3 Character of the Pits

##### 7.1.2.3.1 Shape

F 269 none recorded.

F 271 3m N-S x 2m E-W. Hachure plan.

F 272 Said to be 'grave-shaped'. Plan shows charcoal flecks clustered on surface of unexcavated pit. Partial hachure plan and section show plan of top 2.60 m N-S x 1.50 m E-W.

F 308 About 2 x 2m . Long axis is 2,8m NW-SE from hachure plan and section.

##### 7.1.2.3.2 Lowest Point

QUAD	Feature	Base AOD	Local BS	Section	Depth
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F	F 269	31.92	33.40	G-M	1.33
J	F 271	32.63	33.50	J-K	0.87
T	F 272	32.76	33.40	N-O	0.64
Q	F 308	32.48	33.50	M-L	1.02

#### 7.1.2.3.3 Fills

SOURCE	CONTEXT	COLOUR	GRAVEL	CHARCOAL
F 269	1262	5 YR 3/3	11%	Flecks
Adj Quarry D.	1341	5 YR 3/4	10%	None
F 271	1642	5 YR 4/6	11%	Flecks
Adj Quarry D.	1326,1327	10 YR 2/2	4%	None
F 272	1643	5 YR 3/3	3%	Flecks
Adj Quarry D.	1359	5 YR 3/3	15%	None
F 308	1679	5 YR 3/4	20%	Flecks
Adj Quarry D.	1349,1350	5 YR 3/3	20%	None
BS at Hor 4	1455	5 YR 3/4	8%	Flecks
BS at Hor 5	1545	5 YR 3/2	8%	Flecks
BS at Hor 6	1269	5 YR 4/6	5%	None

All the contexts cited have a matrix of silt sand.

The pits had some individual characteristics which might be significant.

F 269 (1262) is described typically as silt sand with charcoal flecks present in very small quantities. Stones tended to concentrate at the base of the fill. Also : "At the base of the fill there were a noticeable amount of ceramic smears, these were usually small, red and soft and were not kept due to their size and fragile nature"(KHS). [It is possible that these were fragments of natural red crag.]

F 271 (1642) reports 'only occasional flecks of charcoal'.

F 272 (1643) noticed a 'few concentrations of charcoal' on the surface of 1643. A sample was recovered for C 14 dating. "Surprisingly no charcoal was seen below the surface scatter and so may indicate the charcoal is [intrusive] and associated with the original creation of the quarry ditch."

In F 308 (1679), charcoal was present but in no great quantity and not in any concentrations. " The fill was stonier near the base of the fill and here the stones were larger".

#### 7.1.2.3.4 The Assemblages

Find	F 269 (1262)	F 271 (1642)	F 272 (1643)	F 308 (1679)
All	238	113	13	79
Pottery	123	13	4	19
Identified	3 BA;4 R; 1 EM	1 R		
Flot		1	1	1
Pollen S	1	1	1	2
C 14 S			1	
Other	37 flint	20 flint	2 flint	16 flint
Artefact T	160	33	6	35

Pottery that might be Roman or later:[ Report from Suffolk Archaeological Unit]

F 269: 42070, 42131, 42132, 42133, 42172.

F 271: 34312

#### 712.4 Reasons for supposing that the pits are early medieval

- The depth reached by the four pits is much lower than any prehistoric features. It is comparable with the depth of the early medieval quarry ditch. The depth analysis of the prehistoric features shows that the depths reached by the corner-pits would be unlikely to have reached by any prehistoric features.

- The fills of each of the pits have most points of resemblance with the buried soil. They differ from the fills of the quarry ditch principally in that they all contain charcoal flecks. Of the 43 contexts recorded in the quarry ditch F 153, only one (1370) was reported as containing charcoal. This context was however interpreted as a dump on top of quarry ditch fill, and sealed 1428 which contained 20 rivet fragments. 1370 is therefore assigned to the robber trench fill.

None of the pits therefore, including F 269 are likely to belong to the quarry ditch excavation itself. The resemblance between the fills of the corner-pits and the buried soil (to Horizon 6), suggest that the pits had been cut through buried soil, rather than being sealed by it. The fills therefore suggest a stratigraphic position for all the pits after the buried soil of Horizon 4 and before the cutting of the quarry ditch, which was responsible for truncating the pits in every case.

- The finds contained in the pits were highly varied, and fragmentary and the pottery mostly unidentifiable to fabric; this suggests a secondary assemblage. F 269 contained 5 Roman or early medieval sherds: Finds nos. 42070 [a post-Roman base sherd], 42172, 42133, 42131. F 271 contained 1 Roman or post-Roman sherd 34312. F 269 also contained 4 identifiable Bronze Age fabrics. Notwithstanding the high probability of intrusive material from rabbits (including rabbit bones), the indications are that the fills derive from a mixed (eg ploughed) assemblage with a TPQ in the Roman period. This is compatible with the fills having derived from the ploughed layer of the buried soil (ie F 158).



- The distribution of finds in the buried soil shows that the highest concentration lay in the NW corner and the least in the SE. This appears to be reflected by the quantities recorded in the assemblages of the pits, (see especially the artefact count), F 269 in the NW having the largest and F 272 in the SE having the smallest group of finds. This implies that the fill of the pits is buried soil that was local to the pit.

- The position of the pits in plan is symmetrical, having the form of a rectangle aligned to the compass, in which, however, the eastern side is slightly shorter than the western. The dimensions measured on the ground centre to centre are:

NW[F269] to NE[F 271] 24.0 m, or 78 ft or 26 yds

SW[F 308] to SE [F 272] 24.0 m, or 78 ft or 26 yds

NW [F 269] to SW [ F 308] 14.0 m, or 45.5 ft or 15 yds

NE [F 271] to SE [F 272] 12.0 m, or 39 ft or 13 yds.

Diagonals NE to SW and NW to SE are both 28m, 91 ft, 30 yds with the chamber half way at 15 ft.

With the caveat that we have only the very bottoms of much truncated pits, the following points might be noted:

\*The diameter of the circle on which the pits lie and which formed the template for the burial mound is 30 yds, with the centre of the chamber at the centre of the circle.

\*The triangle 15, 26, 30 is a right-angled triangle. Its corners lie on a circle whose centre is half along its long side.

\*The pits form a rectangle running E-W, inside and touching the circle formed by the quarry ditch.

\*The causeways lie half-way between the N and S pairs of pits.

Since a circle of radius 15 yds could easily be laid out from a chosen centre point, the choice of these particular pits ought to have a purpose beyond the indication of where the quarry pit was to run (although they achieve that too).

712.3.5 *After Note.* The eventual dating of the pottery from the "corner pits" by Suffolk Archaeological Unit showed that one of the pits at least must be late 12th century or later. The pit and the symmetric arrangement implied below cannot therefore be early medieval and must post-date Mound 2. They have been re-interpreted as medieval warreners' pits for the introduction of ferrets and the "farming" of the rabbits (see Research Report, Chapter 12). What follows is of historic interest only, exposing the folly of premature imagination,.

#### Interpretation

712.3.5.1 *Function of the Pits.* The pits are irregular and offer no evidence that they have ever been structural. Their back-fill is unstructured, and closely resembles the buried soil. It is likely therefore, that the fills in all cases represent a segment of the adjacent buried soil which had been dug out of the pit, mixed with a little subsoil from the same excavation, stacked (as in a spoil heap) and then returned to the pit either as slippage or deliberate backfilling. The soil and the finds in it (including the C 14 sample) are secondary and have therefore little potential for further analysis.

Of the potentially diagnostic information recorded on site it would be worth calling attention to the observation of the stones which lay at the bottom in two cases. This is symptomatic of the use of such pits as a sump. There is no deposit evidence or staining which might suggest a latrine. But they could have been used

to pour away liquids, for example for waste disposal or as votive libations. The charcoal which has separated out from the shallow deposit in F 272 might have a similar explanation (the charcoal being floated out of a buried soil segment which had fallen in while the libation pouring continued).

The pits presumably also functioned as demarcation points of some kind, although they are too large to be only that. Whereas any pit on the circumference will make a right-angled triangle with two points at either end of a diameter, there is only one triangle with long side 30 and short side 15. The other side has to be 26 to ensure a right angle. These distances in yds derived from the measurements on the ground seem a little too suggestive for coincidence. The distance 26 yds is also appropriate for the length of a ship which would be covered by a barrow 30 yds in diameter, leaving only the stem and stern showing. But the implied link via a right angled triangle between a 30 yd barrow and a 26 yd ship seems a little esoteric.

It would have been possible to lay out pits, barrow and ship in a number of different ways. The most obvious is to begin with the decision to have a 30 yd barrow. The burial place is chosen first. A 30yd rope folded in two gives the perimeter of the circle. The same (15 yd ) rope aligned N-S at the west end until it touches the circle gives the west end of the rectangle. The southern point of that chord extrapolated through the burial chamber marker-point at the centre of the circle arrives at the N point of the eastern side.

The burial could thus have been laid out with the aid of a 15 yd or a 30 yd rope and a knowledge of how to find N (from the N star). The procedure would not have been strictly necessary to put a rectangle into a circle - any E-W chord would make a rectangle with a diameter as diagonal. But the choice of 15 yd as the length of the short side suggests that this is how it may have been done. These measurements invite other tests for a Sutton Hoo yard.

### 7.1.3 *The Burial Chamber* [MOHC]

#### 713.1 Digging the pit.

##### 7131.1 The Old Ground Surface.

The mound was built on the surface of a buried soil [N 288/5] which had, at one time been ploughed. The ploughing had scrambled the upper 25 cms of the remaining buried soil and the prehistory it contained, probably during the Roman period (section 6).

According to the excavator (3.8.2.1/2;contra the specialist in VOL 9/5.27) there were no signs of the buried soil having been truncated; but the evidence is ambiguous. In the same section, he remarks that it was often difficult to distinguish the buried soil from the make-up on top of it, which implies that there was no interface as in a turf layer between them. However, since there was turf in the mound make-up itself (eg 3.7.2.4), the surface had been most probably been truncated at least by the stripping of turf.

The ploughing was discovered at horizon 5 [N 303/29]. No plough marks were visible at horizon 4 (3.8.2.4), and although the surface of the buried soil was undulating (3.6.3.2) there is no suggestion that this was the regular undulation of a ploughland. The surface at the time of the burial was therefore a plough zone which had re-turfed.

Patches of crusty mineral deposit on the surface of Horizon 4 may be from leaching (3.8.2.2).

There was no strong evidence that prehistoric earthworks were visible at the time of the burial. A *prima facie* case can be made for F 500, a linear ditch located suggestively E-W stride the chamber [N 325/9]. The fill of this gully suggested that it belonged to the family of IA field boundaries, and had been backfilled with buried

soil during a ploughing episode, not with make-up during mound-building

7131.2 A path. The northerly area (G and HN) was crossed by a 'path' which ran from the perimeter of the mound on its NW side, along the surface of the buried soil towards the NE corner of the burial chamber (3.8.2.2). This shallow depression although barely recorded or recordable (3.8.2.2) belonged to the latest activities on the buried soil before the mound was constructed.

7131.3 Finding the pit. The edge of the burial pit, as finally relieved of its fill and taken back to an interface with the buried soil and subsoil, was plainly very much larger than the chamber (N295/10). It was possible that the digging of the pit for the chamber would have been larger than the chamber itself: a vertical shaft, although reasonably stable in this subsoil, would be inconvenient to excavate. However the large oval finally defined was an exaggerated access to excavate a pit 2 metres deep, and unnecessary for Anglo-Saxon technology; this is demonstrated by the vertically-sided pit under Mound 17 (Vol 6). The fill removed from the edge of this ovoid depression was (with a few exceptions, see 3.10.5.1) attributable either to the robbers or to Basil Brown, being part of the one or the other stratigraphic system. The hard edge against the natural of the ovoid locus itself is not due to Brown, since it lies partly outside his trench; but it is possibly due to the robbers, whose trench includes most of it. Did the robbers *dig* the ovoid shape, or *follow* it? It is hard to see a reason why they should dig such a shape through the buried soil and the natural sand and gravel subsoil themselves. If there were no boat, then the procedure would have been to follow the surface of the buried soil until the central cavity was located. This was the procedure followed at Mound 6 and 7, and essentially the same as that still used by Basil Brown in 1938. If there was a boat, then its rivets would have betrayed its presence. The fact that the rivets had been found and dispersed by the robber-trench diggers is indicated by the rivet pattern. No rivets were found in situ against the face of the ovoid edge. On balance, therefore, the likelihood is that the ovoid edge could be due to the ship but excavated by the robbers who were tracking metal and finding the rivets. However this conclusion will depend on the reconstructed shape of the ship, and whether an ovoid such as that found (F150) could have been caused by a ship of early medieval form, either intact or broken.

The edge of an original pit cut by the burial party was thus interfered with on all sides by :

- (1) the imposition of the boat, the seating for which must have 'smudged' or depressed the chamber cut, both when it was lowered in position and during its subsequent collapse under the weight of the mound.
- (2) The excavation of the ship depression by robbers in search of rivets and
- (3) re-excavation by Basil Brown in 1938.

However, it can be inferred that the burial pit whatever its original shape, was smaller at its top than the ovoid and originally cut through buried soil and subsoil. It was most probably a rectangular pit, about 4 by 12 feet, and 6 feet deep from the contemporary ground surface [the dimensions at the base are :width 1.4 -1.5 m and length 3.7 -3.8m. The undulating floor lay c. 2.00m beneath the contemporary surface of the buried soil (31054.2)].

The upcast from this pit was presumably located on the mound platform. It may have been backfilled in to the pit, before the boat was dragged into place over its beam (see 7.1.5.4). If left on the edge of the chamber-pit, it will have been removed by smudging and subsequent excavation over the area of the ship seating. An area of sand, probably deriving from upcast was seen on the surface of horizon 4, under the mound make-up and near the burial pit (N265/5mono;D163-5, 121,95). It lay up to 150mm thick in places (3.7.2.4). The sections suggest that the south and west parts of the mound are the richest in unmixed natural sand over the first loading, which is as likely, at that stage to derive from the chamber upcast as the quarry ditch. Some endorsement for an uneven distribution of the upcast comes from the description of layers beneath horizon 3;

here were found lumps of bedded subsoil, which were confined to quadrants Q, R and M (south and west) (3.7.2.2.1). This should mean either that the upcast from the chamber was stacked in the SW corner or that during mound building, the natural subsoil was reached first in the quarry ditch in this area. The first turfs however were reported from quadrants G and H, on the north side ('possibly as the first dump from the quarry ditch', 3.7.2.4), rather than underneath the sand, as would be expected if the loading reflected the excavation of the adjacent quarry ditch. There are hints here that the upcast from the burial chamber was sited at the SW corner of the Mound platform; presumably with a view to the activities of the anticipated burial rite.

Also belonging to the same pre-mound period were splashes of coarse sand on the NE part of the buried soil platform (1384(R) and 1388; section J-D) which 'resembled the weathered deposits seen on our spoil heaps after rain'(3.7.2.4).

7131.4 The sequence of operations suggested for the first phase of the burial rite are therefore:

- 1 - turf stripped and stacked to one side, may be to the NE
- 2 - burial chamber dug; the upcast removed to the SW corner.
- 3 - during these or subsequent operations: a path is worn from the NW to the centre of the platform; and
- 4 - rain washes coarse sand from a heap - perhaps the putative turf-heap to the NE

#### 7.1.3.2 The structure of the Chamber

N 292/4, N300/9-10 show the fully excavated chamber.

The structure at the base of the chamber was a rectangular box, of which only the lowest 150mm remains. The traces of this structure were given by areas of dark sand, often speckled with carbonised wood pellets, flakes and grains. The darkening was often discontinuous, making it hard to trace the locus of planks [N 297/27, N wall; N 291/5, N Wallan 299/17, S Wallan 297/37, S Wallan 295/1, S wall] the shape of which suggested planks originally about 350-400mm (ie 1 inch) thick set side on, edge on of lying flat on the sand. Where the planks were set into the sand they penetrated 40mm or less (31054.9). The planking could not be excavated in elevation unless sectioned, since they often sloped *inwards at an acute angle* (31054.2).

There was no doubt within the excavation team that the traces around the edge represented planking in situ (31054.9) or that it was the remains of a chamber.

The planking along the south side(F198,199; N300/9) was observed to have been set vertical and sometimes overlapping (N289/0; N 299/34). On the north side, some of the planks were set vertical (E end), but were not shown to have been overlapping. The planks of the north and south walls were 350mm © 1 in) thick. The planking along the east and west sides was thinner, and continuous: that is, the planks appear to have been set on their long side; if so they would have been about 1 m long (AJC;31054.9).

No evidence was recorded as to how the corner joints were achieved and the best evidence (eg SE corner; N300/3) was equivocal. There were no rivets in situ, and only one nail found loose in the NE corner. A number of post-settings was fleetingly seen, but their stain was exceedingly thin, they had made no impression in the subsoil and did not survive attempts to define them by excavation. A square post-form was originally seen at each corner, with some circular candidates along the wall lines (31053.13;N 269/14). Those at the NW and SE corners were 120mm and 170mm wide, respectively and remain as possible structural elements

(31054.9). The posts shown in the interim report in Bull 6, fig 4 are no longer valid. The cylindrical sockets seen at the SW corner and midway along the west wall (eg N300/11) were attempts to relieve the bedded subsoil of anomalies which did not, however, result in comprehensible structural elements which could be related to the chamber.

The structure was built up against the cut face of the subsoil (31054.6), and would have risen vertically to at least 900mm, assuming it conformed to the vertical faces of the subsoil cliff that survived (31054.9).

The central band of stains F168, 170,171 belonging to the anomalies on the chamber floor discussed in the next section, were thought by AJC to be of wood; this is shown by the analysis of the diagnostic components of the contexts. The marks were interpreted as planks from a N-S partition (31054.9). If so the planks were not in situ; there were no traces of plank impressions either edge on or side to suggest that such an unusual arrangement was actually adopted.

The structure does not display in its remaining traces that regularity of design seen in a buried ship. Such a regularity is owed more to the position of nails, which do not move, rather than the wood traces which buckle and twist before assuming their final resting place. This gives all coffins, for example a contorted look. In the present case, there were no nails used in the construction, and therefore any interpretation would be dependant on the distorted locus of decayed wood, even if the site had not been raided twice. The observation that, whereas at least one of the long sides had vertical planking, the short side had horizontal planking, implies that notwithstanding the ingenuity of Anglo-Saxon nail-free joinery the character of the structure was a simple revetment: the two long sides revetted with vertical shuttering, held in place by horizontal waling boards and stressed with horizontal beams - of which the F168 complex might be a residue. The unstressed short sides could then be filled in with horizontal planks held between the shuttering and the natural face.

#### 7.1.3.3 Furnishing the chamber

The evidence for the furnishing of the chamber was obtained from three sources:

- (1) The artifacts which were found during Basil Brown's excavations of 1938 (INT 3) and during the subsequent excavations of the present campaign, in 1984 (INT 26) and in 1987-9 (INT 41). These are listed in the Assemblage (7.1.6).
- (2) The 'Finds-stances' impressions left on the chamber floor and attributed to the base of artifacts which had once stood there [N 261/31;N 271/3;N 277/18;N272/1-3)
- (3) The chemical mapping of the chamber floor, carried out as part of the Leverhulme Trust Project (LTP) for the investigation of taphonomic process and the detection of human remains in corrosive acid soils (N 307/32; VOL 9/7).

Linear anomalies were seen on the chamber floor during the re-excavation of Basil Brown's trench in 1984; they were designated as 1114 in INT 26. Some then investigated were shown to have been caused by bracken roots (31052.8) Three years later, they were exposed, first over the area already visited by Brown and then over the whole chamber floor including the NW and SW end where he had not excavated (N274/10). The anomalies were set into two slightly different layers of final fill: 1506, a yellow sand, to the east and 1476, a dirty yellow sand to the west. These were separated approximately by the line of anomalies F168 etc. The fill was up to 150mm deep (31054.2); and the anomalies nowhere deeper than 100mm(31054.9).

Altogether 21 anomalies were defined and excavated [N 275/19, F 164; N 252/34, F 168; N 276/6, F 171]

The principal difficulty with this evidence is that its status and date are uncertain: the anomalies like the finds, may derive their context from the excavations of the 19th c or 1938 rather than the burial rite adopted by the Anglo-Saxons. Both positive and negative arguments can be advanced.

Arguing positively, the general layout presented by LTP, with a body at the west end and a concentration of iron and copper products at the east end is a credible tableau. A central discontinuity is also maintained by all sources: the final fill, which differed either side of it, the stain from planking, the absence of chemical traces and the absence of Basil Brown finds.

Arguing negatively, very few of the finds stances admit of any identification. Of the two exceptions, the 'chain' was so ephemeral it could not be planned (31054.9) and the iron-bound bucket, although implied by Brown's findings and surviving as a circular finds-stance was reported as a copper product by LTP. Given the exceedingly fragile character of the finds stances and the chaotic distribution of the finds which remained, the chances of the robbers leaving such stances unmolested, or Brown leaving them uninvestigated, seem remote.

On balance, it would seem safer to accept the chemical mapping of the LTP as a coarse account of the original tableau, and to reject the 'finds-stances' as being more probably derived from the activities of the robbers or Brown, and reflecting the position of finds at second or third hand. It should be noted that whereas anomalies sealed by the false shoulders are *prima facie* evidence that they are not due to Brown, there are in fact hardly any anomalies which fall into that category, those at the west end either deriving from timber stains or occurring within the V-shaped gap between the shoulders. If as suggested by LTP, the body lies at the east end, this would not exempt that end from finds stances. Indeed some of the most persistent stains would be expected from a sword or helmet, both of which were represented in the fragmentary assemblage. Given that Brown noticed 'several formless black patches' during his excavation (Bruce-Mitford 1974, 147), it would seem that some at least of the anomalies were already there, and can be attributed to the robbers. Of these, we could, with extreme caution, propose that among the turbulent horizon of their depredations remain a few chance forms which bear witness to the stances of original finds. Of these, the iron bound bucket and perhaps the chain, are the only candidates which might be held to reinforce the overall picture of the assemblage.

#### 7.1.4 *The assemblage*

##### 7.1.4.1 Location

##### 7.1.4.2 Index to artefacts known to have originated in the Mound 2 burial

Int 41 F4/141/150/157/159-212

##### 7.1.4.2.2. *The Assemblage*

##### 1. The 1938 group (Bruce-Mitford 1975, 115-123)

1. Gilt-Bronze disk [text]
2. Blue glass squat jar
3. Gilt-bronze hemispherical stud
4. Fragments of silver-gilt foil with zoomorphic design (drinking horn mount)
5. Fragment of cast bronze-gilt strip
6. Small silver buckle
7. Bronze ring
8. Tip of sword blade

- 8a Replaced textile
- 9. Iron knife
- 10. Iron knife
- 11. Iron blade
- 12. Double sheath containing two knife blades
- 13. Objects of wood and iron
- 14. Iron nail
- 15. Ship rivets
- 16. Iron ring and attached rod
- 17. Lengths of iron bands
- [18. Segmented bead of blue faience]

2. The 1983-92 group.

- 1. *Silver mounting from box, cup etc:* **14160, 14260, 14620, 14660, 14975**
- 2. *Gilt-Bronze disc:* **4534**
- 3. *Decorated Foils:* **14624, 17950, 17967.**
- 4. *Fragments of bronze bowl(s):* **13717, 13718, 13852, 14621-3, 15515, 15517-8, 16706, 16807, 16813-6, 18804, 18843, 19587,**
- 5. *Drinking horn terminal(s):* **11262, 17967**
- 6. *Cauldron(?):* **14575-7, 14990**
- 7. *Spearhead:* **17966**
- 8. *Buckles or chain-links:* **1810, 12915**
- 9. *Replaced Textiles* [H Granger-Taylor]: **14160a, 16778, 17447**
- 10. *Tinned-Cu-alloy stud:* **19061**
- 11. *Amber (?) :* **19377**
- 12. *19th century horseshoe:* **14458**
- 13. *Leather :* **14515**
- 14. *Iron/wood etc for investigation/identification:* **1235, 3011, 5044, 9082, 9345, 9447, 10472, 11545, 11780, 12290, 12318, 12681, 12700, 12991, 13173, 14000, 14141 [stone], 14651, 14657 [organic], 14735, 14736, 14802, 14860, 14920, 14943, 14953, 14955, 15558, 17010, 17037-8, 17094, 17096, 17126, 17153, 17174, 17185, 17317, 17511, 17513, 17514, 17516, 17600, 17942, 17953, 18049, 18086, 18214, 18277, 18487, 18488, 18492, 18493, 18499, 18637, 18643, 19233, 19402, 19403, 19585-6 [bronze], continued / 19631 14 (continued): 19631[organic], 19682[organic], 19696, 19817, 19818, 21220-1[bronze], 21214, 21328, 21402, 21873, 22051, 22479, 22729, 22772, 22842, 23206, 23341, 26515, 27842.**
- 15. *Roman coin* [context 1022] [R Bland; rep received 21/8/87): **12488**

16. *Slag* [Prehistoric] 19988-21028, 22367-22389, 22771, 22820, 23350-1, 27828, 27844, 28054, 28539, 32384, 32608, 33286, 34302.

17. *Wooden plank* For C14 dating: **21233**

18. *Burnt bone?* : **21239**

19. Unidentified Iron/wood [The majority of these objects are fragments of iron or ferrified wood and generally thought to derive from rivets and/or wood associated with a ship]: 528, 640, 668, 691, 1558, 2722, 3072, 4010, 4941, 4974, 4999, 5016, 5017, 5024, 5029, 5048, 5085, 5202, 5207, 5421, 5639, 5685, 6222, 6889, 7317, 7518, 9092, 9093, 9345, 9447, 9993, 11227, 12318, 12317, 12319, 12555, 12564, 12565, 12679, 12680, 12687, 12688, 12798, 12913, 13248, 13602, 13764, 13781, 13974, 13975, 14185, 14187, 14439, 14457, 14464, 14497, 14499, 14510, 14511, 14512, 14513, 14518, 14543, 14552, 14561, 14571, 14598, 14605, 14617, 14618, 14619, 14625, 14632, 14633, 14641, 14656, 14714, 14736, 14752, 14792, 14802, 14849, 14856, 14857, 14859, 14870, 14871, 14872, 14897, 14915, 14921, 14948, 14949, 14950, 14954, 14956, 14990, 14992, 15214, 15215, 15516, 15522, 15537, 15539, 15540, 15559, 15560, 15561, 15562, 15563, 15564, 15565, 15571, 15572, 15595, 16776, 16777, 16953, 16954, 16958, 17009, 17011, 17039, 17062, 17105, 17106, 17107, 17120, 17121, 17122, 17123, 17150, 17151, 17152, 17154, 17161, 17168, 17169, 17188, 17206, 17207, 17240, 17242, 17245, 17311, 17312, 17314, 17315, 17335, 17336, 17356, 17357, 17373, 17445, 17446, 17448, 17510, 17512, 17515, 17598, 17599, 17601, 17602, 17603, 17604, 17725, 17882, 17901, 17940, 17941, 17943, 17944, 17945, 17946, 17947, 17948, 17949, 17951, 17952, 17954, 17955, 17956, 17957, 17958, 17959, 17960, 17961, 17966, 18045, 18046, 18047, 18048, 18050, 18051, 18062, 18063, 18064, 18065, 18066, 18067, 18085, 18087, 18088, 18094, 18095, 18098, 18155, 18207, 18208, 18209, 18210, 18213, 18215, 18216, 18217, 18218, 18219, 18220, 18221, 18229, 18233, 18241, 18244, 18245, 18246, 18281, 18317, 18340, 18341, 18373, 18392, 18400, 18444, 18448, 18465, 18466, 18488, 18489, 18490, 18491, 18494, 18495, 18496, 18497, 18498, 18500, 18501, 18502, 18504, 18505, 18507, 18538, 18539, 18540, 18541, 18542, 18543, 18544, 18545, 18546, 18547, 18548, 18549, 18550, 18551, 18552, 18553, 18554, 18555, 18557, 18558, 18559, 18560, 18561, 18562, 18563, 18571, 18642, 18648, 18665, 18667, 18696, 18753, 18799, 18800, 18806, 18844, 18861, 18905, 18907, 18929, 18953, 18961, 18963, 19015, 19027, 19059, 19061, 19134, 19138, 19225, 19244, 19268, 19401, 19408, 19517, 19518, 19537, 19538, 19540, 19547, 19548, 19555, 19556, 19559, 19580, 19599, 19611, 19614, 19635, 19695, 19706, 19720, 19733, 19835, 19837, 19843, 19854, 19869, 19963, 21055, 21191, 21192, 21193, 21214, 21215, 21229, 21236, 21259, 21390, 21391, 21392, 21216, 21217, 21218, 21393, 21395, 21397, 21399, 21400, 21402, 21403, 21405, 21407, 21408, 21409, 21705, 21707, 21708, 21709, 21716, 21745, 21865, 22051, 22061, 22478, 22481, 22482, 22665, 22666, 22702, 22757, 22832, 23052, 23054, 23084, 23361, 23503, 23611, 23616, 23618, 23620, 23624, 23627, 23628, 23647, 23749, 23750, 23751, 25518, 26518, 26519, 26541, 33337.

#### 7.1.5 *The Evidence for the Mound 2 Ship*

##### 715.1 The Rivets and their distribution

###### 7151.1 Note on the Rivets [by AJC]

###### 7151.2 Note on the Rivets by A C Evans

Complete rivets (properly 'clench nails') consist of a head and shank forged out of the same pieces of iron with a rove cut out of iron strip or sheet. The tip of the shank passes through the planking to be fastened and then through a hole in the rove and is hammered down against the rove to clench it in position. The heads of the Mound 2 rivets appear to have been circular and slightly domed originally and generally have a diameter of 25mm and 35mm in the corroded state. The shanks are subcircular in cross-section and have a diameter of



15mm in the corroded state. Broken samples reveal a metallic core 10mm in diameter. The shanks do not taper except at the very tip. The roves are rhomboid rather than square. Their sides are generally 30mm to 35mm long. The roves seem to have been slightly thicker than the heads and are better preserved.

The length of the shank between the head and the rove is between 35mm and 45mm long in the great majority of examples. There are some exceptions such as 15603, described as a 'rib bolt' which has a head and rove of standard sizes but a shank measuring about 110mm. Another 'rib bolt', 14626, has a shank length of 70mm and 17158 has a shank length of 60mm. Wood grain observable in the corrosion products around some of the standard length shanks indicate that the rivets were fastening two planks of equal thickness. I was unable to determine whether the longer-shanked rivets fastened two pieces of equal thickness or one thick and one thinner component.

Very few rivets seem to have shanks shorter than 35mm. That of 13538 measured only 20mm between its head and rove which were of standard dimensions. This suggests that it was not a 'land' rivet (one used to fasten the edge of one strake (run of planking) to the top of another) but rather a scarf rivet used to join two planks in the same strake end to end. Plank ends are feathered so that where they overlap in the scarf their combined thickness does not exceed that of the rest of the strake.

In most of the complete rivets, the head and the rove are parallel to each other and the shank is perpendicular to them. There are exceptions such as 12240 where the head and the rove are both tilted, showing that the nail was driven into the planking obliquely. The examination of other clinker built vessels shows that this tends to happen most where the planking is curving tightly towards the stems.

14646 has been described as a 'gunwale spike'. It has a head of standard size and a shank 85mm long with a pointed tip. There is no indication that it ever had a rove.

Over 200 rivets have now been recovered and it may be worthwhile to consider what proportion of the total number required to build a vessel this represents. Using a rough rule of thumb that rivets are spaced 6 inches apart, a ship with 10 rows of rivets per side (20 rows) measuring 100 ft long would require 4,000 rivets. (The Mound 1 ship had approximately 3,000). A boat 20 ft long with 8 rows of rivets would require only 640.

#### 715.2 The Distribution of the Rivets in Plan.

All rivets found in the excavation were plotted in two dimensions. Those which are 'angled', that is are said to belong to the stem or stern of the vessel are distinguished.

It can be seen that the rivets are no longer in the position which the shape of any known vessel of the period would require. Neither were any found in an attitude in the ground, or in alignment with another, which would suggest that they were still in the position that the rotted strakes of a ship had left them.

The pattern of the distribution of the rivets is therefore due to the robber trench and in fact both endorses its known locus, and can be used to fill in the gaps of the locus where it is not known.

There is nevertheless a relict pattern within this distribution, which must refer to a ship. Those rivets designated as belonging to the ends of the vessel are distributed at the east and west parts. This would be unlikely if we were dealing with totally random debris. The meaning suggested is that the ship originally lay east-west, and that the rivets although dispersed have been dispersed systematically from the area where they were found. In general it is possible to say that the rivets which relate to the ends of the vessel are situated in spoil heaps relating to the area where the ends lay on the ground. There was no provision for a ship below the old ground surface longer than 4m. For reasons given below, such a length could not account for the assemblage of rivets found. This implies that the ship was empaled at ground level from W to E over the top

of the burial chamber, and that it was in this position that the mound covered it, and it was in this position that it rotted away, leaving a three-dimensional rivet array in situ within the mound make-up.

During the excavations of 1987-8, rivets were generally located by metal detector and excavators were always alert to the possibility of aligned rivets, implying some element of a hull in situ., None was found. This in turn implies that not only did the robbers trench coincide with all the rivets that were found, but that the robbers must have deliberately sought them out. It is not impossible that they were aware of the character of the object they were destroying.

#### 715.4 The form of the Vessel implied by the Rivet assemblage.

The report on the rivet assemblage (7.1.3.2) lists 117 angled rivets such as would be used at the stem or stern of a vessel, out of 466 rivets found. The Mound 1 ship had 72 angled rivets at each end, or 144 in all. Allowing for the attrition of the context, this implies that the ship was equivalent in size to that Mound 1, with 9 strakes. A vessel of 8 strakes would require 64, 128, and of 7 strakes 56, 112. The Mound 2 ship must have had at least 8 strakes per side, and 9 is preferred given the fact that both spoil heaps were incompletely excavated, spreading as they did beyond the confines of INT 41.

The Mound 1 ship had a further 2952 rivets, so that the angled rivets constitute 4.65% of the total. Using the multiplier for the Mound 2 assemblage, the total number of rivets should have been 2700-3000 for an 8 or 9 strake boat. Of these only 349 remain, which suggests that the greater [part of the central length of a 20-30m length ship is missing.

The expedition of 1860 described in the Ipswich Journal of 24 November in that year speaks of "nearly two bushels of iron screw-bolts" which have been attributed as being derived from the Mound 2 ship (Carver and Evans 1988; Carver 1992, 357).

Within the coarse netting of this information we can catch a vessel of early medieval type about 20 m long. To come closer to the form of this vessel is more a matter for design than for observation and deduction; but we can accept that since the rivets at least are identical to those used in the Mound 1 ship, the lines of the Mound 1 ship would offer a reasonable point of departure for the reconstruction of the ship in Mound 2.

The beam and the lines of such a vessel present profiles that encourage the supposition that the 'ovoid' depression found concentric to the burial chamber would provide a seating for a ship that had rested with one end over the chamber. This is because at the east end the ellipsoidal form can be seen to curve around; while at the west end this is less clear. Neither of these observations are secure, however.

#### 715.4 The Profile of the 'hull' found in INT 26

The section in INT 26 (N 57/44-5) appeared to offer evidence for the profile of the hull at that point.(31052.7). But a hull profile was unlikely, since it did not continue west (31053.13). Could it be a prow? Was BB right? No too many rivets. But no rivets in situ, and none here. Possibilities: a rut from the robbers or a collapsed section of hull marking the west end of the burial chamber. Type of fill more like BB. Could he have cut it during his excavation? Most likely explanation is Basil.(31053.8) Colour of "keel" doesn't conform to black wood or brown stance, therefore prob not ancient.

715.5 The 'Seating' (31053.2). The ledge F150 which lies approx half way between the surface of the buried soil and the base of the chamber might be the ledge on which the boat sat. As such it could be supposed either that the ovoid cavity was cut to seat the hull, or the prow, or that it was simply a depression made by the settling of a ship under the mound and above the chamber. Not mapped by AJC.(31054). Shape clear

(31053.2). No rivets were found in situ along this locus (31053.9), suggesting that while the size is approximately correct, the detail of the edge cannot be used to ascertain details of naval architecture.

715.6 Two beam-slots, F214,215, were defined on the surface of the buried soil at horizon 4, one each side of the burial pit (N 303/13,14,17,18). They are not quite aligned in plan. If this was a single beam, it would have passed over the chamber at a point coincident with the 'wood' partition on the chamber floor (F168 etc) raising the possibility that the 'partition' is in fact the broken beam dropped to a lower level. The slots imply a beam. The slots were backfilled with clean sand, derived from burial-chamber up-cast. This means that the features are firmly connected to the burial ritual(3.8.2.6). It also means that beam was either removed before backfilling, or that the beam rotted away without trace and the sand upcast was the nearest thing to fill the void, or that the beam was up-ended suddenly out of its trench, presumably by a sudden upward lift. The second is the least likely since all timbers rotting in situ are thought to have left some trace at Sutton Hoo. The other two are equally possible; if the beam was removed it could not also have descended into the chamber. If the beam had broken, it should have scarped the slots as it did so.

The position of the beam amidships offers strong circumstantial evidence that it was intended to support the ship, the presence of which is implied by the rivets; but it would in this case rest its keel on the old ground surface and require props to hold the ship upright. In this case too the ovoid cavity observed around the chamber could not have been prepared to seat the ship either at its stem or amidships.

If the ovoid cavity is accepted as seating (see 7.1.3.5), some other explanation will be required for the beam. In this case it might be suggested as a method of access, to lean a ladder against without bringing down the sides, much as we did during the excavation.

715.7 Model: emplacement and collapse of the Ship. (see RR Chapter 6)

#### 7.1.6 *The Quarry Ditch*

The Mound 2 Quarry ditch was reported by Brown and thrown into relief during the evaluation by means of floodlighting (3.1.1). The outer edge was clear at Horizon 2. (36210.4) The inner edge (F153) became clear during the preparation of Horizon 3, but was always a problem, since the contrast was here provided not by sand/gravel subsoil but by the banded buried soil and mound make up, heterogenous and difficult to define on the slope (3.6.2.10;36210.10). The maximum width of the quarry ditch within the excavation was 7m. The outer edges lay beyond the edge of INT 41.

The fills of the ditch showed two major episodes: a stone-free pinky-brown fill (36210.5, 8) attributed to erosion products (wind or water lain) predominated above the primary fills of gravel and soil derived from the mound (3.7.2.7.5). Primary layers and the pinky-brown secondary fill were separated here and there by a recognised turf line (36210.9) AJC suggests that the secondary fill accumulated during an episode of severe (rapid) erosion, possibly by surface ploughing. Note the occurrence of ship rivets in the secondary pinky-brown fill (36310.9) implying either that the erosion episode was responsible for dragging in situ rivets out of the mound, or that it came after the robbing of Mound 2. The rivet pattern shows those that were found inside quarry ditch secondary fill. It reinforces the interpretation that the Mound was robbed first and then ploughed. The soil which was deposited in the quarry ditch as a result of ploughing was very poor, a broken podsol(?). It implies that heath was being taken into cultivation after a long period of waste.

The Inner quarry ditch, F153, was recognised only at Horizon 3, and then only after the mound make-up had started to be removed from that horizon (3.7.2.7). The key was the 'stone roll' which marked the first sorting after construction [N252/2,,1348]. This interpretation was endorsed by observations on our spoil heaps and by the behaviour of the apron around the reconstructed mound 2 [ See 7.1.6; experiment with the reconstructed Mound 2] and our own spoil heaps during the excavation [N252/1, 1987 spoil heap]. Stone rolls were recorded in R, S, T but not in FL,L,JO,O. R.S.T should have corresponded to the areas of final loading

according to the experiment with the reconstructed mound. The width of the stone roll band varied from 0.2m in G to over 1m in R. (3.7.2.7.1). Beneath the stones were seen bands of turfy material, though at first to have been a turf wall. However, there is no absolute certainty that this or any other material in the mound was actually turf since all shape had disappeared. If it was turf, it most probably represents turf slipped from the sides of the mound in the course of construction (3.7.2.7.2).

### 7.1.7 *The Construction of the Mound*

#### 717.1 Topographic Observations

At Horizon 1 Mound 2 was 31m in diameter and surrounded by a quarry ditch 4.50 m wide(3.5.1.1).. The spoil heaps found beneath the 1983 turf (3.4.1, 3.5.1.9) attributed to Basil Brown and/or the army confirm that the height had been approximately the same in 1940.

At Horizon 2, mound had become sub-circular, with a maximum recorded diameter was 29.0 m (3.6.2.1). At Horizon 3 ditto, subcircular with a max dia 29m (3.7.1.1). After definition of the 'inner quarry ditch', F153, the mound dia shrank to 26m E-W and 21m N-S(3.7.1.3)

#### 717.2 Stratigraphic Observations

N 261/29 shows turf and N 256/15 show subsoil, both within make-up in section N-O.

The edges of layers of mound make-up were definable only from the surface of Horizon 2. The intact stratigraphy of the mound is bounded by Horizon 2 (highest), and Horizon 4(lowest), the latter being the surface of the buried soil into which the burial chamber was cut. However, it was very rare that the complete perimeter of any layer could be even approximately defined (see 7.1.1.3) and the elucidation of the structure of the mound relied on the horizons and the sections.

At Horizon 2, the make-up across the summit was particularly sandy (3.6.2.2), but contained some dark soils, therefore not exclusively derived from quarried subsoil. Darker fills on down-slopes, not always certainly mound make-up. Mound slippage and scrambling due to **earlier?** ploughing. At least one turf, F138(3.6.2.2), unlikely to be ancient make-up.

From Horizon 3 down the make-up was a more uniform strong brown (3.7.1.1;3.7.2.1). Bedded subsoil lumps recorded in quadrants R, Q and M (3.7.2.2.1). 'This strongly suggests that make-up quarried from subsoil was being mixed with material from surface stripping' in this part of the make up(3.7.2.2.2). [May mean that spoil from the burial chamber was being pounded in specific areas , see 7.1.2.1].

After nearly a year dismantling and recording Mound 2 in all weathers, excavators had no confidence that turf, sand gravel or soil derived from the quarry ditch or elsewhere was being dumped according a pattern of any kind. 'The two types of make-up were being dumped simultaneously, no stratigraphic ordering was visible'(3.7.2.2.2)

AJC suspected that, although structure obscured by robbing rabbits bracken etc, 'the mound was not built in a structured fashion. Subsoil and turf debris was thrown together on to the buried soil (3.11.1)

#### 7.1.7.1 COMMENTARY ON THE COMPOSITE COLOURED SECTIONS THROUGH MOUND 2 by Cathy Royle

*Along the 205 Northing, F-K.*

*F-G; 108-117E (D 44, 45) The section crosses the quarry ditch, which occurs here and elsewhere as a primary wide ditch (F 153) and a secondary narrower ditch F 42. The primary ditch, F 153 is overgrown with 20mm of turf on its base. 100mm of mixed soil lies on this turf, which in turn is overgrown by another layer of turf, 50mm thick. In this turf, a rivet lies, and on it some 250mm of pale grey sand (1341,1342). F 42 is here a marked secondary cut containing yellow-ochre sand (1275). A mixed ploughsoil overlies and seals both F 42 and F 153. There is a possible 'bank and ditch' crossing the section at 115/205. This feature was not seen in plan.*

*G-H: 117-123 (D 95): In Mound make-up. The lowest layer is read as sand upcast from the burial chamber. It is 20-30mm thick and peters out at 121/205. Above lies 400mm of brown soil with turfs. Above that lies 900mm of sandy soil with occasional turf.*

*H-J:123-126 (D 121): The sand upcast is continuous on the undulating surface of the buried soil. It peaks at 170mm at 125/205. Above it, 400 mm of brown soil and turf, with a solid mass of turf filling a hollow at 122-124. The buried soil appears to rise to a [N-S?] bank at 125.5/205.*

*H-J; 126-132 (D 4): The sand upcast peters out at 130/205.*

*J-K; 132-140 (D 90): The mound appears to be slumped into the quarry ditch.*

*Summary:*

*Yellow sand of the burial chamber upcast runs from 121 to 130. Brown soil and turf overlie this from 115 to 132;*

*Above this a capping of yellow sand with the occasional turf.*

*In the (W) quarry ditch, turf had grown before soil was pushed in and the ditch recut; the turf had grown again before the robbing episode left a rivet on its surface. The quarry ditch was then refilled by a ploughing operation, beginning with the redeposition of pale grey sand (from heath?) and continuing with more humic ploughsoil (from the mound).*

*Along the 200 northing*

*FL-GM;108-117 (D 56): Quarry ditch. On the base at 32.37m AOD lies 220mm of slightly darker mixed brown soil (1379), with another 220mm of mixed brown soil above (1337). This contains a ship rivet. Above lies 200mm of pale (mushroom grey) sand.*

*GM-NH-JO-KP:117-140 (D 6, 39, 42, 55): Robber trench. A sand layer (upcast?) is visible at 119.7/200.0, and above this is 200mm of typical horizon 4-5 buried soil. This is redeposited, since we are here certainly inside the robber trench (F135). The redeposited buried soil is trampled at 33.70m - by robber trenchers?. There is a rivet just above this level at 1185/2000.*

*Summary: The robber trench seems to run the whole length of the section, from 108 to 140 E.*

*Along the 195 Northing*

*L-M;108-112 (D 41): 100mm of turfed-over sand lie in the quarry ditch, with pale sand 300-400mm thick above that.*

*L-M;112-117 (D 40): a slight bank and dip is visible at 113.5/195, echoing in that in the section along the 205 northing.*

*M-N;117-123 (D 37): A primary turf layer, probably deposited rather than in situ runs from 117 to 121E.  
N-O; 123-126(D 3): The make-up is sand with turfs directly on the buried soil. N 261/29 shows turf and N 256/15 show subsoil, both within make-up in section N-O.*

*N-O; 126-132;D62: There are square cuts through buried soil at 129/195 [200mm wide] and 131.5/195 [160mm wide], which are reminiscent of large posts. The make-up at this point is sand and turf.*

*O-P; 132-140;D 7: amorphous and scrambled by rabbits.*

*Summary:*

*No certain trace of upcast from the chamber.*

*Sand with broken turfs loaded from 112 to 128, with its summit at 123 E.*

*Brown soil loaded over, from 124 to 131 E, ie on east side.*

*Cap of yellow sand over whole mound.*

*Along the 117 Easting*

*R-M; 180-195 (D 24, 25): Quarry ditch. Stone-roll at 188.5-190 onto the base of the ditch at 32.60m AOD.*

*M-GM; 195-200 (D 38) ; Mound make-up. No sand upcast here.*

*GM-G; 200-205 (D 43): Mound make-up. No sand upcast here. The loading at 202 is 500 mm of dark brown soil (1398), and above that 600mm of light sand (1289).*

*G-B; 205-218 (D 93, 94): Quarry ditch. 200mm of sandy silt lies on the ditch base at 32.00m AOD, on top of which a turf line (1142) has developed.*

*Summary: The mound rises on the buried soil surface with no burial chamber upcast. In the south quarry, stones rolled from the freshly-made mound into the empty ditch. The north quarry received some soil (surplus from quarrying) which eventually grassed over.*

*Along the 123 easting.*

*S-N;180-187 (D 31): Quarry ditch. There is a stone-roll off the mound at 186-187. Brown mound make-up is pushed into the quarry ditch above it. On top, a pale mushroom-coloured sand comprises the upper layer of both the quarry ditch and the mound; it resembles a heavy ploughing.*

*N-NH;187-195 (D32): Mound make-up. Yellow sand and turf is loaded above the buried soil from 193-195. No sand upcast seen here, but the lowest layer may still be upcast from the burial chamber excavation.*

*NH-H;195-200 (D 166): Basil Brown's trench.*

*NH-H;200-205 (D 165): The sand upcast (from the chamber) is seen, peaking to 150mm at 201.4 and falling away north to 20mm at 205. Brown soil and turf mound make-up from 201-205.*

*H-C;205-212 (D 97): Mound make-up. Turfs lie on buried soil.*

*H-C;212-218 (D 96): Quarry ditch. 200mm of sandy soil (1143) lies on the base at 32.25m AOD. Above it, a turf line 100mm thick (1142). Then 200mm of light sandy soil, and above that, 400mm of pale sand.*

*Summary: Upcast from the burial chamber was loaded to the north as far as 205N. The mound make-up elsewhere consists of turfs. The southern quarry received a layer of humic soil (Mound surplus?) before the pale sand. In the southern quarry, (surplus soil) was pushed in and turf grew on it before being buried by the pale sand. Basil Brown's trench ran from 195 to 201.*

*Along the 132 Easting.*

*T-O; 180-195 (D 33, 34); Quarry ditch. A stone roll at 188 on to the base of the ditch at 32.45m AOD. Mound make-up from 188.5.*

*O-JO: 195-200 (D 2): No sand upcast seen here, but the robber trench (F3) should run from at least 196 to 199.*

*JO-J: 200-205 (D 9): The robber trench (F3) would be cut by Basil Brown's trench (F4) at about 199 and run to 202.*

*J-D: 205-212 (D 91): The first loading of mound make-up looks like soil and turfs up to 500mm thick, with redeposited subsoil on this.*

*Quarry ditch begins at 208, with much slumping of mound at this point.*

*J-D: 212-218 (D 92): Quarry ditch. 200mm of sand lies on the base at 32.40m AOD; above this a turfy chain [1129]; and above this pale mushroom coloured sand (1053) 300mm deep.*

*Summary: The central part of the section crosses the line of the robber trench, F3, from about 196 to 200, and Basil Brown's trench, F4, from about 199 to 202. The mound make-up is soil and turf with no burial-chamber upcast. The north quarry ditch contains a deposit of sand covered by a turf layer, which is sealed in turn with pale sand.*

#### 717.2 COMMENTARY ON Tintogram (M Carver)

*This analysis was carried out in three stages:*

*Stage 1: Preparation of the Stratification Model for Mound 2 and its quarry ditch, following standard procedures.*

*Stage 2: A colour-coded distribution in time space (tintogram) of the contexts by texture. The descriptions were taken from the context cards and subjected to an error trapping-test (to monitor variations due to recorders) and grouped in the three dominant themes : (1) more than 90% sand silt or silt sand, which characterises the buried soils, (2) more than 80% sand which characterises the upper levels of the natural subsoil and (3) more than 80% gravel which characterises the generally lower levels of the natural subsoil.*

*Interpretation:*

*The primary mound, F 143, is composed of buried soil and subsoil derivatives. The buried soil derivatives are to be found in L (west edge), HN, N and O (centre). Sand subsoil is found in F, G, H, J (north edge), R,S,T, (south edge) FL (west edge). There are some mixtures which may be intrusive [eg from robber trench, 1332,1390]*

*The primary quarry ditch F 153, is filled with mixtures on all sides. There are gravel concentrations in R (south west) and J (north east) which probably derive from F 143, with stones rolling from the final loading.*

*The secondary mound, F137, is composed of subsoil derivatives in the lowest levels in R, S, (south edge) FL, L (west edge) M,N (centre). The higher levels everywhere are buried soil or turf derivatives.*

*The tertiary mound F3 is composed of buried soil or turf derivatives. Similar material also fills the quarry ditch in its secondary phase, F42.*

#### COMMENTARY

*Stage 3 : A distribution of contexts in time-space by the Munsell Colour recorded on site.*

*Colour is in many ways the most sensitive diagnostic for telling one deposit from another. The principal categories here were noted to be:*

*80% 5YR 3/2-4 : the colour of the top two layers of buried soil (F158,206)*

*80% 5YR silt sand: the colour of the lowest level of buried soil (F213)*

*80% 7.5 YR sand: the colour of the sand subsoil*

*80% 10 YR sand: the colour of the sand subsoil*

*80% 7.5 YR silt sand: origin unknown*

*80% 10 YR silt sand: origin unknown*

*If the assumption can be made that the colour recorded in the mound has not changed greatly from that of its place of origin, the soils can be tracked through their colour from their place of deposit on the mound to their place of origin in some cases.*

*The primary mound, F 143, is composed of mixtures, with buried soil/turf concentrations in N, JO and O (south east edge), and sand subsoil concentrations in F, H, J (north edge), T (south edge) and M (west).*

*The primary fill of the quarry ditch, F 153, consists of stone/gravel concentrations in J (north east) and R (south west) and mixtures or silt sands of unknown origins. These are presumably formed by mixing sand and humic silt sand.*

*The secondary mound F 137 is dominated by 10YR silt sand, which occurs in the primary quarry ditch F153 in J and again in the final fill of the quarry ditch F 42. There is no obvious episode to which all these eventualities could relate, unless all represent degraded podsolic turf. The final fill of the quarry ditch was interpreted as being erosion product from wind or water, or ploughed podsolic heath.*

*The tertiary mound, F3 carries the colours of the buried soils inverted.*

#### 717.3 Calculation of the original size of the Mound [CLR]

C L Royle performed the following analysis:

##### Objectives



1. To see whether the quarry ditch was big enough to provide all the material for Mound 2.
2. To reconstruct the possible profile and calculate the height of the original 7th century mound.
3. To calculate the possible volume of Mound 2.

#### Objective 1

The top of the buried soil was projected across to the far sides of the quarry ditch, and the total areas in section of the two parts of the ditch were calculated.

An examination of the coloured section drawings through Mound 2 show that on top of the buried soil, there is a deposit consisting largely of orange sand and harder dark brown layers. This seems likely to be redeposited buried soil and the natural from underneath it. The area in section of this deposit was also calculated. The total area in section of mound make-up plus slippage into ditch plus projected slippage into ditch was calculated.

#### Results

<u>Section</u>	Area of	Area of orange + brown deposit in _____ section	Total of original ditch make-up in _____ section	original mound _____ section
FL-KP	----	986m <sup>2</sup>	3,898m <sup>2</sup>	
S-C	1,342m <sup>2</sup>	1,709m <sup>2</sup>	4,560m <sup>2</sup>	

It is obvious that the quarry ditch was nowhere near big enough to provide all the mound make-up for Mound 2. However, it looks as though the orange sand and dark brown silty material would fit quite nicely into the ditch on either side. In the above Sketch A plus B would provide C, allowing for a little slippage.

The material above the orange and brown layer is a more homogenous reddish brown. This may be due to the fact that the uppermost mound make-up suffered more slippage, rabbit disturbance and disturbance from robbing and excavation. In section FL-KP it is apparent that nearly all the mound directly above the buried soil has been disturbed by the robber trench and Basil Brown's excavation. The orange and dark brown material, directly on top of the buried soil, probably suffered the least disturbance, and therefore is clearly seen in section S-C.

#### Conclusion

The quarry ditch provided approximately 37.5% of the material needed to build Mound 2. The rest must have been brought/scrapped up/quarried from elsewhere.

## Objective 2 (See D900)

### Section FL-KP

The area in section of Mound make-up plus slippage into ditch plus projected slippage into ditch plus possible collapse into burial chamber ( $350\text{m}^2$  if the chamber stood 1m high) =  $3,898\text{m}^2$

A drawing was made of the buried soil platform and surrounding ditch, in section, and a "mound" with an area in section of approximately  $3,898\text{m}^2$  was drawn on top of the buried soil platform. The approximate height of Mound 2 according to this section would be 2.8m (7th cent. AD) as opposed to 1.5m (20th cent. AD).

### Section S-C

The area in section of mound make-up plus slippage into ditch plus projected slippage into ditch =  $4,560\text{m}^2$

A drawing was made of the buried soil platform and surrounding ditch, in section, and a "mound" with an area in section of approximately  $4,560\text{m}^2$  was drawn on top of the buried soil platform.

The approximate height of Mound 2 according to this section would be 3.4m (7th cent. AD) as opposed to 1.8m (20th cent. AD).

## Conclusion

Allowing for irregularities in the shape of the mound in the 20th century which affect calculations, the approximate height of Mound 2 when originally built would have been 3.1m, i.e. around the 36m contour.

## Objective 3

Volume =  $\frac{1}{2}$  height x area of base

Area of base =  $\pi r^2$

Let us assume that the buried soil platform which Mound 2 stood on was a perfect circle. It is in fact vaguely rectangular.

Its N-S diameter = 19.0m

Its E-W diameter = 22.3m

∴ Let us assume that its radius is 10.3m

$$\begin{aligned}\text{Area of base} &= \pi r^2 \\ &= 333.291564\text{m}^2\end{aligned}$$

Calculated approximate height of Mound 2 in the 7th century = 3.1m

$$\text{Volume Mound 2} = \frac{1}{2} 3.1 \times 333.291564\text{m}^2$$

$$= 516.6019252$$

$$= \underline{516.6m}$$

If Mound was 2.8m high, the volume would be  $466.6m^3$   
 If Mound was 3.4m high, the volume would be  $566.6m^3$

7.1.8 *Model: the Burial rite at Mound 2.* [see Research Report, Chapter 6]

7.1.9 The Aftermath: the excavation and ploughing of mound 2 [section 8]

719.1 The 'Robber Trench' F135

7191. 1 Definition

71911.1 A large trench was cut through Mound 2 in an E-W direction. Its edges were rarely seen, but the locus of the trench could be implied from the scatter of ship rivets and other early medieval finds.

N 263/9 shows the line of the robber trench marked by excavators with spades. It can be seen that Basil Brown's 1938 trench is virtually contained by it.

N 292/2 shows the features excavated in to the buried soil and subsoil underneath mound 2; the square-ended trench is owed to Basil Brown (INT 3), and the excavator in the foreground is within it. The oval depression is thought to be due to the ship (see section 7.1.6). The rectangular pit at the lowest level, also containing an excavator in the picture, is the chamber. There is no trace of the robber trench itself, but it is likely that all the limits observed, whether of chamber, or ship represent the limits reached by the robbers during their excavation. Other than where he cut through buried soil, Basil Brown was also re-finding the limits of excavation of the robbers.

71911.2 The Robber Trench was first noted at Horizon 2 (361.1; N 236/3). It proved difficult to define at this horizon, but the edges were visible on the north-eastern side. The fill here was a very dark brown or black, and resembled the fill of tree-pit F 139 which derived from a tree which had stood on the opposite side of the Mound 2 summit (3625.5). The darkness of the fill suggested back-filled turf.

The back-filling of the robber trench in L and FL was virtually indistinguishable from mound make-up (3625.4). At Horizon 2, the robber trench was not defined east in INT 26 (3625.5) or in quadrant N (3625.6).

The shape and extent of the robber trench was indicated by the distribution of rivets, which were systematically located by metal-detector and plotted from Horizon 2 onwards (362.3)

At Horizon 3, the Robber Trench was represented by F 135 and F 142 (3725.2). The descent of Robber Trench fill into the Burial chamber began on the western side (3725.3).

The east and west sides of the mound were reported as much more disturbed (3727.3). This might be due to the extent of the robbing activities.

Dark brown fills 1373 and 1374 in FL, contexts recorded as part of the quarry ditch, contained lumps of bedded subsoil and sealed context 1428 a gravelly deposit containing over 20 rivet fragments (3727.3). These contexts should therefore belong to the robber trench too.

71911.3 The shallow Pit F 257 in quadrant O also contained 3 rivet fragments (392.9; N 330/25). F 261 was a recognisable turf backfilled into F 257. "Only a very shallow amount of fill remained at Horizon 7 but I really think this feature has been with us since at least Horizon 2 on mound 2.....The concentration of rivets in this area from at least Horizon 2 is significant". F 257 could therefore have been cut into the back-filled robber-trench at a later date OR have been a scoop integral with the original trench.

71911.4 The Robber steps. F 501 [N 300/15] appears to have been a shallow scoop with a post-hole at the bottom. There is some doubt about its stratigraphic position: it could be prehistoric, or part of the burial chamber, or more likely part of the robbing episode. The fill was partly removed in 1987 with the mound-make-up/robber-trench fill, suggesting that it resembled these. Excavation halted when the profile descended, with the danger of entering a prehistoric feature (eg F 216, the gully which lay beneath). The initial shape was interpreted by MOHC as a step cut by the robbers. The attempt to distinguish F 501 from the prehistoric gully F 500, the EM burial chamber and the Robber Trench was resumed the following year, when the remaining context (1923) was removed, and a 'hollow' 300x 400mm by 30mm deep defined. AJC's verdict was "The hollow is certainly not a step cut by the robbers. It could be an extension to the gully F 216 - if so it has been cut back beyond the edges of the gully - or it could be a post-hole which cut the gully F 216 (perhaps related to the burial chamber and boat complex).....I favour the feature as a post-hole.....a sub-circular stain was visible during the multiple cleanings the feature received.." The post-pit would have been 1.5m in diameter with the post c 300mm in diameter at its centre.

Fills compared

F 501	1923	7.5 YR 4/4	silt sand	charcoal	
F 216	1576	5 YR 3/3	silt sand	charcoal	
F 214	1572	10 YR 5/8	silt sand	clean	
F 215	1573	10 YR 5/6	silt sand	clean	
F 143	1394	10 YR 6/8	sand	clean	
F 151	1527	7.5 YR 4/4	silt sand	clean	

F 216 is a gully, now thought to be prehistoric.

F 214, 215 are slots cut into buried soil, apparently to support the ship (EM)

F 143 is the lowest make-up of the mound; 1394 is the context belong to it in quadrant M.

F 151 is the oval dishing of the robbers' excavation of the ship impression

Prima facie the hollow F 501 is most likely to be robber-period and least likely to be prehistoric. Its identification as a step cut by the robbers remains plausible. The sub-circular depression at its centre may have held the base of a post; if so the post could be EITHER something put in place by the robbers (eg to tie a rope to) OR a marker-post for the burial (cf Mound 17, Mound 5(?) and graves in group 1 ).

71911.5 That the robbers left their trench open was inferred by a layer of silt which appeared to have washed in during a long (or heavy) process of erosion under rain ;N 266/0].

719.6 The 1938 Excavations by Basil Brown [INT 3]

N 241/2 shows Basil Brown's 1938 trench under re-excavation

N 53/28 shows part of the boat-shaped feature found by Brown re-excavated in 1985 [INT 26].

N 264/5 shows the whole boat-shaped feature, re-excavated in 1987 after the removal of mound 2 [INT 41; view from E].

N 48/34 shows BB's backfill, including evidence for sieving

N 60/1 shows the `prow" of the `boat" , the edges marked by bracken roots.

N 58/36 shows square-shaped anomalies on the chamber floor, encountered or instigated by Brown.

N 53/14 shows trowel or tool marks cutting the subsoil, refilled by Brown's backfill and probably owed to him.

N 271/8 shows the `prow"; two erosion shoulders sealing the line of the burial chamber already excavated by the robbers.

N 266/9 shows the erosion-shoulder sectioned.

## 7.2 MOUND 5

### 7.2.0 *The Naming of the Parts*

F 2 Mound 5 at horizon 1

F 18 wooden box left by Longworth and Kinnes [INT 12]

F 36 **Quarry Pit** in V [=F 437]

F 57 **Quarry Pit** in Q

[F 58 Definition spit]

F 71 **Quarry Pit** in Q

[F 125 Definition spit]

F 129 **Quarry Pit** in X

F 130 **Quarry Pit** in X

F 131 **Quarry Pit** in X/Y

F 133 **Quarry Pit** in X

F 134 **Quarry Pit** in X

F 390 **Robber Trench**

F 394 **Quarry Pit** in S

F 395 **Quarry Pit** in S

F 401 **Quarry Pit** in T/S

F 407 **Quarry Pit** in Q/R

F 417 **Burial Chamber**

F 425 **Robber Trench** (lower part)

F 426 **Robber's Pilot Pit**

F 437 **Quarry Pit** in V [=F36]

F 508 **Quarry Pit** in S

F 556 **Quarry Pit** in Q

F 557 **Quarry Pit** in Q  
F 558 **Quarry Pit** in Q  
F 559 **Quarry Pit** in Q  
F 560 **Quarry Pit** in Q

#### 7.2.1 *Description of the Investigation.*

[MOHC from notes by ACE]

721.1. The Burial pit for mound 5 was located by Longworth and Kinnes in their (INT 12). It lay at the north west of their excavation [N231/4; N269/10].

721.2. [Stage 1] Excavation began on 1 Aug 1988, in the hands of Angela Evans and Sarah Calvert. The outline of the supposed burial pit was already visible, at two levels: (1) at the surface of the newly cleaned buried soil platform, Horizon 2/4, where it presented a short E-W trench butt-ending to the west, where it was called F390; and (2) against the natural sand subsoil (=Horizon 7+) inside Longworth and Kinnes' excavation [INT 12, ; called by us F 11), where it presented a short E-W trench butt-ending to the east, and was to be called F417. This feature was cleaned, photographed, planned and the section drawn [N344/1; N357/2-5]. The visible fills were yellow sand and dark soil with a grey silt patch at the lower level (F417).

721.3. [Stage 2] The outline was divided into six quadrants by three axes, and excavation began at the upper portion (F 390). The leading quadrants were lowered in 'levels' [called stages here to conform with normal terminology for graves]. Excavation was carried out at recovery level E. A metal detector scan was done at each stage. Plans, photographs and sections were generated at every stage to provide a continuous record. Distribution plots of all finds were made in 3-D. For the greater part of the excavation, a soil sample array was taken at each stage to feed the LTP. This was abandoned only when the disturbed state of the burial was finally acknowledged by the director.

721.4. [Stage 3] 16 Aug. The first rabbit hole disturbance was encountered (1770; in 1806). The height was now 33.195 AOD at the west end of the E-W axis [D1229; N355/10].

721.5. [Stage 4] The west end of F 390 "petered out into a scoop like depression" (ACE, p5) N360/9.

This represented the completion of the upper part which had been cut through the buried soil. It had been dominated by rabbit disturbance, and contained no early medieval finds..

The bulk of the fill at the east end was 1811, a deep layer of sand.

721.6. [Stage 5] At this point (reached 18 Aug) the levels achieved at the east and west ends of the whole feature were equivalent. The main context filling the feature was 1772, 'a mixed dark brown deposit with distinct areas of sticky compact silt.' There were 'No signs of disturbance'. At this level, however, early medieval finds in the form of fragments of Cu alloy and burnt bone began to appear in abundance in quadrants 3 (1811 which continued to descend), 5 and 6. These were plotted using the code oriental blue=bone; dark green= Cu alloy. The buried soil meanwhile began removal, so that the Mound 5 burial pit was henceforward dug against the natural sand.

A square-shaped dark patch to the west, F415, was shown to be a rabbit hole (ACE, p7)

The whole burial pit, which was not then accepted as having been disturbed, was now renamed F417. Excavation continued within quadrants, combining the definition and recording of each context with the planning and section drawing of the stages, and the sampling array for LTP. The process was thus extremely slow. The excavation of the remainder of the pit, little more than 200mm, took a further month to complete.

The grey silt at the lower level, 1826, filled a shallow depression and resembled the dried puddles created by rain wash by our spoil heaps and the mounds stripped of turf.

Layer 1811, which was present at later stages in the upper levels of F390, continued below the silt 1826. 1811 contained EM fragments at stage 5 and lower but not at Stage 4 and higher.

721.7. [Stage 6] 2 Sep 88. D1507. Context 1811, the sandy fill in F390, began bottoming out against the natural subsoil. It produced many scraps of finds including the knife in its sheath. On 6 Sep, ACE recognised that the burial had most likely been a cremation originally placed in Bronze bowl, as at Snape. Silty fill 1833 first thought to possibly undisturbed (ACE p9), then (9b) thought to represent a natural silting process. It suggested that the burial pit had been robbed and then left open to fill with rain-washed silt and wind-blown sand.

721.8. [Stage 7]. 13 Sep 88. The shape of silty hollow 1833 had become square and was designated as a feature F425. However this coincided with the burial pit, which implied that the position of the burial must have been accurately known before robbing (ACE, p10). The containing feature F390/417 now resembled an E-W trench to gain entry to a small burial pit. The fill of this trench was uniformly 1834 a brown mixture of soil and pebbles, 'with a hole in the middle filled with sand and silt'. The latter was F 425. At the time it was thought that perhaps 'the cremation was hacked out and the pit in this area was left to weather'. Alternatively there had been two robberies. F 425 was defined to have cut 1811 (and 1840) (ACE, p 12) which meant that F 425 was more likely to have been a second robbing, than the silting up of the first.

Although the burial pit was now being defined against the natural subsoil, there were still difficulty finding the edges due to the adjacent prehistoric features which the burial pit had cut. It became clearer that the fill was still part of a robber entry: a knife blade was found with the point uppermost on 21 Sep. It was then accepted that the burial had been ransacked and that the whole feature under excavation was a backfilled robber trench. MOHC directed that chemical mapping should cease.

ACE's interpretation on 26 Sep was as follows:

- (1) A burial pit was dug, the grave deposit, a cremation in a bronze bowl, placed within it, and the pit back filled with 1834 (brown soil and pebbles).
- (2) The cremation was robbed from the centre or the centre-west, leaving behind scattered pieces of bone metalwork and other grave goods, in a matrix of the sandy 1811.
- (3) Another hole was later cut through 1811 and 1834, and left to silt up with 1840.

Finds retrieved at this time (29/9) included much bone (in 1811), the fragment of silver cup (40746), the ivory piece (40839), textiles and cu alloy fragments.

The excavation was suspended for the period 29/9 to 12/10.

721.9. [Stage 8]. The excavation recommenced on 12 Oct but was badly damaged by a storm on the night of 13 Oct. Water had penetrated the covers on the west side, filling the chamber with silt. A part of the shears (40784) was lifted.

1834, and a new version of it 1924, were carefully inspected and pronounced not to be primary fills by ACE, AJC and CLR. These contexts, and 1925 proved to have fragmented finds in them. Only context 1926, also dark brown soil mixture, was 'virtually empty of finds'.

721.10. [Stage 9] The excavation suffered another deluge on 20/10. When cleaned tableau had been recovered the final thin deposits were removed. The lowest fragments of bone were found to be directly on clean subsoil. "When all the fragments had been lifted (including two more gaming-piece-fragments), the surface was carefully cleaned to - well nothing! Not a sign of a proper bottom, no decent edges, no wood staining, just an undulating surface of sand, gravel and iron pan, with hollows and scoops and a vaguely rectangular shape. It looks as though the burial was ripped out by hand - people scrabbling for the best finds, scattering bone and Cu alloy fragments etc as they went"

### 7.2.2 *The Burial Chamber*

722. Before the Chamber was dug. The location of the old ground surface was uncertain. Whereas there was no doubt that some buried soil had survived and that its platform marked the position of a former mound [see below], it was no easy matter to distinguish buried soil which was intact from buried soil which had been disturbed by recent ploughing or from mound make-up. The consensus was that no mound make-up was present, the mound having been removed to the level of the old ground surface, and most probably a little beyond, by the most recent ploughing.

There is no doubt that the buried soil had also been ploughed in antiquity. The marks of cultivation, which showed at Horizon 5 were of two kinds: (1) WNW-ESE plough furrows, as under Mound 2. Here there was also an orthogonal set [N 344/13]. (2) Root spots in orderly rows, as though left by cabbages or carrots [N 359/8].

722.2 Digging the burial pit. Very little is known for certain about the burial chamber that was constructed and covered by Mound 5. It is likely to have been smaller than the pit excavated in 1988 (F390/417; see 3.10.6) which was considered to have been the truncated trench owed to one or perhaps two robbing expeditions. The burial was a cremation, of which the centre piece was a consignment of cremated bone wrapped in cloth and placed in a bronze bowl. Other finds were small or derived from small objects. The burial as known would have been served by a small chamber little more than a metre square (cf Mound 7). Larger objects might have been laid beside the chamber on the buried soil (cf Mound 3), which would have encouraged the total clearance of the mound by the robbers.

722.3 The robbing had taken place at a time sufficiently remote from the burial for the Bronze bowl to have fragmentary. Thus although the accuracy of the excavation might suggest an ancient robbing, and the scattered bone can be explained as desecration, the robbing is more likely to be recent than Anglo-Saxon times.

722.4 Within the fill of this robber trench, none of the contexts at first designated as original fill survived the test of being entirely free of fragmented finds. The primary group, 1834, 1925, 1926 were dark brown soil and pebbles and contained finds, eg of cremated bone which lay directly on the sand subsoil. If these comprised the primary fill of the robber trench, a secondary fill was provided by the sand 1811, and a tertiary by the silt 1834, 1840.

A possible model might be:

(1) cremation in pit, with grave goods laid on buried soil beside it.

The tableau covered by a mound thrown up from quarry pits (see below).

(2) A robber trench cut from the west, sloping downwards within the body of the mound towards its centre. The sand filled pit is located and the sand removed (1811). The cremated bone and the fragmentary bronze bowl are discarded in the trench as the burial; pit is emptied. The emptying continues well into natural, allowing the heap of find-free 1811 to build up in the western run of the trench (=F 390).

(3) Finds are discovered protruding in the section at the level of the old ground surface (our Horizon 4). The mound is dug away, some of the make-up being trodden into the empty burial pit (1925, 1926, 1834). Some of



the spoil heap in the lead trench also collapses into the pit 1811.

(4) The search for finds eventually leads to the clearance of the whole mound, at the level of the old ground surface. The pit in the centre was left open and acted as a sump for the mound 5 platform.

(5) The mound 5 spoil heap was levelled over the mound 5 platform and rubbed smooth by subsequent ploughing, which filled up the grassed over quarry pits.

It was in this way that the earlier excavation campaign succeeded in levelling Mound 5 with precision to the old ground surface.

### 7.2.3 *The Assemblage*     **MOUND 5 / Burial 5**

#### 723.1 Location [see RR]

#### 723.2 Index

Int 41 F390/417/425

1. *Cremated Bone* : [separately indexed]. Report by F Lee (report received.)

2. *Bronze sheet & Fragments of bowl(s)*: **36936-37233, 38928, 38986, 40224, 40668, 40669, 40742, 40745, 40765, 40772, 40783, 40811, 40815, 40832, 40833, 40836, 40881, 40887, 40963, 40971, 40992, 41360, 41406.**

3. *Ag Cup mountings*: **40746, 40883, 41358, 41407**

4. *Fe Shears* : **40601, 40602, 40603, 40771, 40773, 40784, 40835, 40852**

5. *Fe knife/leather scabbard*: **38938, 38987, 40787**

6. *Unidentified metal*: **40802, 40886, 41357, 41359, 41405**

7. *Bone gaming pieces* : **38086, 38912, 40228, 40596, 40741, 40774, 40775, 40792, 40819, 40840, 40895, 41351, 41353**

8. *Comb* : **40857, 41404, 41557**

9. *Bone casket facings(?)*: **40757, 40758, 40759, 40760**

10. *Unidentified Bone or ivory objects*: **38081, 40839**

11. *Textile*: **38982, 39199, 40219, 40597, 40601, 40602, 40603, 40672, 40673, 40766, 40767, 40770-1, 40773, 40787, 40803, 40810-1, 40815-6, 40833, 40852, 40857, 40886, 41111, 41354, 41355, 41356, 41402, 41403, 41408.**

12. *Garnets?*: **40747, 40768,**

13. *Unidentified organic*: **38413**

14. *Unidentified mineral*: **41352 [glass?]**

15. *Slag* [prehistoric] :35321, 35746, 39741, 40242,

16. *Fibula* [Roman]: 36800

### 723.3 Descriptive Inventory [see RR]

#### 7.2.4 *Digging The Quarry Pits and Constructing The Mound*

##### 7.2.4.1 Topographic Observations

The existence of Mound 5 was suspected by the British Museum team which set out to investigate the site in 1966-70. The buried soil platform was quadranted and the putative burial chamber located (Longworth and Kinnes 1980 ). In 1983, the mound was still visible as a faint elevation. Attempts to remove the vegetation by smothering it revealed nothing of the mound's structure. Once the scrambled surface material had been removed, ie at Horizon 2/4, a perimeter to the mound was sighted from the air although it was said never to have been seen at ground level (3522.3; see however N 163/14 which seems to pre-echo the locus of mound 5, and N 191/5, which shows quad R at horizon 1, and seems to record a relic stone-roll)..

The presence of a former mound was implied by the robbed cremation, which would have been hard to find unless it was centrally placed under a mound.

The existence of a mound is also implied by the ring of pits which have filled mainly in a natural manner.

The presence of mound was also inferred from position of graves - the satellite burials which are clearly focussed on something visible.

##### 7.2.4.2 Stratigraphic Observations

The excavators were aware that some contexts around the perimeter of the platform defined from topography had the (firm) character of buried soils; while others did not(3.5.2.2.1). In general the surface defined at Horizon 1 was interpreted as intact buried soil on the flat summit; while at the periphery, the contexts were more disturbed versions of the same buried soil. No contexts were assigned to mound make-up. Although the perimeter of a mound seen from the air was not found on the ground (see above), the arc of Fence 17/53 and some possible stone roll defined at horizon 2/4(363.2; see N 191/5).

But how was mound 5 removed with such precision that it left the exact thickness of buried soil encountered under Mound 5? (3.11.2) [One possibility is that the mound was removed at the time Mound 2 was built. But if so, what became of it? Wouldn't we expect to find the quarry pits backfilled with old mound make-up? Possibly, but not if the mound 5 make-up had been used to build mound 2. It would have to be the first load of make-up ,for mound 2, to explain why they didn't dig the mound 5 platform deeper. In other words there would be only one moment when the mound 2 platform could be left the same height above the subsoil as the mound 2 platform; that is just before the construction of mound 2 while there is a still a landscape at that level to compare it with - immediately around mound 5 are its partially backfilled pits. All this suggests symbolic action: the removal of mound 5, using it to build mound 2 rather than backfilling mound 5 pits].

No lumps of bedded subsoil were recognised in the back-fill of the quarry pits, although some should have been present if the make-up of mound 5 was partially backfilled into them. This implies that the make-up of mound 5 was either removed elsewhere (as on to Mound 2) or thoroughly dispersed at the time of robbing (3.11.4).

##### 7.2.4.3 Analysis of the Quarry pit fills with a view to classifying the pits and establishing their role in mound

building and after [AJC]

The following analysis of the different types of backfill from the excavated quarry pits surrounding Mound 5 is drawn from memory and from the written excavation records - the features and context cards.. Originally, it was hoped that the components list would provide a reliable body of data, but later analysis has shown that a significant amount of variation in the record of each context was created by the number of excavators recording each context. It is also clear that a valuable set of attributes were noted only in the descriptive field. Therefore, as an alternative greater weight is given to the notes from the description field, and the patterns drawn from the different types of backfill are based primarily upon these descriptions.

In the components table the list of contexts for each pit have been listed in stratigraphic order. The list of pits used for this report is restricted to those features which lie within the boundary of Int.41, these were selected as a relatively closed group which were dug by relatively few excavators.

The pits can be separated into two general groups according to the number of contexts within the feature.

#### Multiple Fills   Single Fills

Feature	Feature
57	131
129	394
130	401
133	508
395	558
407	
556	
557	
559	

Total section depth = 4.89m   Total section depth = 1.73m  
Average                      = 0.543m   Average depth                      = 0.346m

The height of each section and depth of each context within each pit was drawn. Our superficial impression is that pits with single fills are not as deep as those pits with multiple fills, however there are exceptions to this general rule. There are shallow pits with multiple fills - F57, F133 - and deep pits with single fills - F558. If we calculate an average depth for both classes of pit, their group identity becomes clearer; Class 1 pits have an average depth of 0.543m, Class 2 pits 0.346m.

The majority of the pits which contain graves (3:4) belong to Class 1. This is potentially of great value since we often need to read the discontinuities of as many contexts as possible within these pits to identify whether the grave has cut the pit and the level from which the grave was cut (see sections F129).

Is it possible that the Class 2 pits have suffered more erosion than Class 1? This question can be addressed on a local level. The Class 2 pits occur in three relatively distinct areas - in the SE corner outside Mound 5, F131, NE (F394, 401, 508) and NW corner (F558). If we look at the heights of these pits and compare them to the height of the adjacent Class 1 pits, we can reveal whether there has been any differential erosion. In the SE group F131 with a maximum height of 32.93m is within the range of heights for the Class 1 pits (F129, 130, 133), 32.90 - 33.04m; the second group are an isolated unit with no pits of Class 1 in their immediate locality, the nearest members are F395 and F130 and they provide a height range 32.90 - 33.04m, but this range compares favourably with the range for the Class 2 pits of 32.78 - 32.98m. Finally in the NW corner the height of F558 at 32.83m compares favourably with the height of the Class 1 pits (F57, 556) between 32.65 - 32.84m. To answer our original question, it would appear that the Class 2 pits are a shallower group and this

observation is not a function of their differential erosion.

One particular type of fill had already been identified by the excavators during routine recording and observation. From a total of 13 pits within the scope of this study, 4 contained distinct silt/sand fills described as 'pinky' in character. Their distribution is restricted to the East side of the mound plateau and through 3 of these pits were cut, at some stage, a grave. Why do only a few of the pits contain these pinky fills? Since the fills are always on the surface of the pits, it is possible the pinky fills may have disappeared once the pits were truncated.

The relative height of each pit/subsoil and thickness of each context has been measured and drawn. This shows that three out of the four pinky contexts were recorded to an identical height - 32.70m. This point marks the lowest recorded height of the fill in section; 1266 (F130) was 0.15m above this level at 32.85m.

In order to measure the significance of these results, we can again compare this evidence with the height of the pits in the neighbourhood. It was necessary to compare the evidence on a local basis in order to take account of any widespread topographic variation in the height of the subsoil. For this purpose the pits with pinky fills divide into two geographical groups. The most populous group (F129, 130, 133) lie conveniently adjacent to F131. If we look at the depth in section F131 it falls between 32.93 - 32.50m, within this band if our prediction is correct we would certainly expect to identify a deposit of pinky fill. In the second group, we only have a single member - F395 - and once again the nearest pit adjacent to this F407, lies within and beyond the measured height range. Both the neighbouring pits which provide our control condition lack any characteristic pinky fill.

On the floor of F559 and F407 were two distinct contexts which cannot be matched elsewhere within the population of pit fills. These two contexts, 2048 2018 respectively, contained a specific set of attributes. On a superficial level both were from our Class 1 category of pit types and neither were cut by later graves (or overlay earlier graves). This last point should not be underestimated since it is possible that similar fills may have existed on the floor of other pits, particularly those which were later cut by a grave. Both these deposits were described as relatively stone-free and had a generally silty texture to the matrix (note free-hand description is in contrast to the set of recorded components which lists the material for both fills as siltsand). Furthermore, 2043 was described specifically as a 'damp' dark brown deposit, an unusual description on an often dry sandy site. If we look back across to the components table both these contexts have basically the same component profile, the only difference lies within the structure field. Unfortunately, this profile set is not exclusive, it cannot be used to isolate this group since it is repeated for many other unexceptional contexts (e.g. 2036, 1184, 1959 and 1535). The attention drawn to these contexts reflects their exceptional character. The most obvious source for these comparable deposits must lie within the layer of ancient soil through which these pits were originally cut. Although this explanation may appear attractive, it fails to account for the variety of backfill types seen on the floor of all our pits - why are these two silty deposits so clean? Why do they also not contain erosion products from the exposed subsoil?

A total of three pits do contain a sandy yellow/orange coloured fill which could be described as the erosion products of subsoil surfaces or alternatively as attempts at deliberately backfilling the pits - F129/1962, F407/2017, F557/2046. All these contexts belong to pits of Category 1. The tentative interpretation of deliberate versus natural backfilling episodes rests primarily upon the physical position of the backfill in these pits. The deposits occur in all three possible physical positions - 1962 was excavated on the floor of the pit F129 and would belong to the set of backfill accumulating through natural processes, in contrast 2046 and 2017 were excavated on the surface of the pit and immediately beneath the latest fill respectively. One alternative hypothesis which should be considered in this context is the strong possibility that the source of these fills was not solely the eroding pit sides but also the unstable make-up of Mound 5 itself. On balance, the very clean subsoil fills which retained a smooth, stone free texture - 2046 (F557) and 2017 (F407) seems to be deliberate attempts aimed specifically at filling the pits.

Can we identify any erosion products from a Mound ? It could be argued that the erosion products of an unstable mound would produce a deposit rather heterogeneous in character containing a high proportion of stones accumulating off the slope of the mound, lenses of washed sand and an undistinguished, uniform coloured matrix. All three of these principle attributes have already been observed around the perimeter of other extant mounds/quarry systems.

The discovery of a group of relatively stony fills within the pits surrounding Mound 5 was a recurrent theme. A total of eight pits contained fills that were considered to be exceptionally stony - F57 1114, F130 1823, F133 1271, F 395 1182, F407 1184, F557 2038, F558 2039 and F559 2040. Apart from F558 all the pits belong to our Class 1 group. The majority of these fills were situated on the floor of the pits (F57, 130, 133, 395, 557 and 558). This complete list also includes F558 which contained a single fill. In contrast only two of the stony pit fills were excavated above the floor, in practice they were from the pit surface (F407 and 559). Within the overall group of stony fills two general patterns emerge. If we look at the thickness of deposit represented by these particular fills it is clear they regularly compose the thickest deposit of each pit, (the only exception to this rule is F57); and secondly in two of the pits which occur immediately west of Mound 5 (F558, 559), the inner slope of the pit immediately above the slope of the subsoil was covered in a dense accumulation of gravel.

Lenses of clean washed sand grains were excavated from one of these stony fills - F407 1184 and can be matched with another discovered in F556/2037.

Although the colour of the fill containing the gravel and lenses of washed sand varied they were not as distinct in character as either the group of silty fills or the group of sandy yellow/orange fills discussed earlier. Put another way, it may not be a coincidence that the exceptional fills do not contain either concentrations of gravel or lenses of washed sand.

We can summarize the rather confusing picture produced by the discovery of a variety of backfill types excavated from this set of quarry pits. The bulk of the deposits in the majority of these pits contain fills which derive from material eroding off an extant mound. At present all the pits involved in the study are located on three sides of the hypothetical mound. From a total of 13 pits, 9 contain fills which derived off this eroding mound. The position of these 9 pits is even more revealing since this group are nearly all situated nearer to the hypothetical perimeter of the mound, the only exception to this rule is F129. Correspondingly, the pits which do not contain this type of fill e.g. F131, 394, 401 are all located further away from the perimeter. Moreover, apart from F407 and F559, these particular types of fill were repeatedly discovered against the floor of the pits. It may not be a coincidence that these two features which do not conform to this pattern themselves contained peculiar 'primary' fills. These dark brown silty fills cannot be matched anywhere else. From the evidence discovered during the excavation it would appear that attempts to deliberately backfill the pits were rather limited in scope and localised in extent, but we should recognise that this impression could be misleading since all the pits have been truncated and we lack the final backfilling episodes. Indeed, truncation has had a dramatic effect on the survival of one particular type of fill - the 'pink' deposits. However, the current work presented here suggest that this particular type of fill has not been differentially removed from the surfaces of the other pits and it remains obvious that if this type of deposit was originally more widespread in its distribution, we would have discovered evidence for its presence in more than these pits alone.

#### 7.2.4.4 Mound 5 - Reconstructing the Mound [AJC]

The Mound 5 quarry pit system fell principally within Int.41. At the point of their excavation all the features apart from two overlapping pits F133 and F134, were identified as isolated units and all of the pits were archaeologically excavated at Horizon 2/7 (under buried soil). Both horizons are broadly equivalent outside the buried soil platform. Down the western side of the Mound 5 plateau immediately above the series of larger pits, an additional spit was removed; this was described at F58/125 and was removed as a single entity to

expose a series of separate pits. This definition spit will not be discussed any further.

Superficially these quarry pits can be separated into two groups. A western group, which includes both F407 and F395 form an arc of relatively large pits but contain no graves, and an eastern group composed of relatively smaller pits which are often paired. Some of these pits contain graves.

In order to reconstruct the original depth of the pits it is necessary to establish a realistic value for the height of the ancient soil. Two different values for the height can be obtained from the available data. From the principal drawn sections the shape and height of the ancient soil was recorded, here the E-W quadrant line along N166 was chosen and a maximum height of 33.37m A.O.D. was noted for the buried soil surface (E12350). The E-W axis was chosen because the current ground surface shows relatively little physical variation but along the N-S axis the ground surface slopes away toward Mound 2. Above this height the environmental specialists have predicted a further capping of ancient soil to a depth of 0.50m. From a practical viewpoint this would seem rather excessive and so a conservative figure of 0.25m will be accepted. Combined with the depth of the excavated soil (0.40m) we have a total depth of 0.65m. On the drawings illustrating the reconstructed pits a red line marks the extent of each pit following the height of the ancient soil as excavated, and the green line the hypothetical height of soil using the environmentalist's figure.

The depth, width and length measurements of each quarry pit were tabulated (Tables 3, 4 and 5). For the depth and width categories a maximum value was calculated, depending upon the different heights given to the ancient soil, displayed as either (BSOIL) or (ENVIR). The measurement of the excavated pit is also given as a percentage of their reconstructed value.

Depth: measurements taken from the horizon surface to the deepest point on the floor of the excavated feature as illustrated on the section.

Width, Length: maximum values measured across the relevant axes.

Although the majority of the pits were confidently reconstructed, it was difficult to draw the shape of the pits where the line of the sections did not fall across the axis of the pit, consequently some pits retain their rather eccentric shape in the reconstruction. None of the pits had been severely affected by the later cut of the Mound 6 quarries. The basic method used to reconstruct the shape of the pits was to follow the line of each pit section up to the height of the ancient soil. This point could then be isolated in plan and used as a guide for the shape of the reconstructed pit. Occasionally, the shape of the reconstructed pit fell within the perimeter of the excavated feature, e.g. F131 or F134. In these cases, the shape of the original pit profile was too shallow to follow with confidence and instead the principle cut of the feature was followed.

A schematic section showing the excavated and reconstructed depth of each pit section illustrated the degree of truncation which has affected each quarry. For each pit which was crossed by more than one section line the depth measurements were averaged. Unfortunately, some pits were dislocated by an intervention boundary but for reference it is necessary to describe each pit as one feature.

It is possible to quantify the effect of erosion upon the depth of each pit. To some degree the result depends upon the height of BSOIL, but even for a conservative value (33.37m), we can see that between 40% - 60% of fills have been lost. This significant figure has implications for the interpretation of the extant pit fills since the recorded sections provide a picture predominantly of the earliest backfilling episodes. The entry point of later features, such as the graves, will never be established. Moreover, our current view of the pits as a series of essentially separate quarries will need revision. Clearly our ability to quantify the degree of erosion is an important step in reconstructing the geometry of the original quarry system.

To be confident we have correctly identified the features as quarry pits, we require an independent method of

grouping them together. This is provided by plotting a scatter-gram for their Depth/Width ratio and plotting them against their length. This ratio provides a scale or measure of size for each feature irrespective of the effects of erosion. Our model assumes that features dug for a particular purpose (i.e. quarrying) and at a specific time will have broadly similar characteristics and, therefore, a similar ratio.

The results show the majority of features falling within a narrow ratio band, between 0.17 - 0.33m. One rogue value is significantly isolated with a reading of 0.51m, this is beyond an acceptable value for the population of quarry pits. Consequently, F134 cannot be regarded as a genuine member of the set of quarry pits (**Note:** Level 3 report still describes this feature as a quarry). Plotted against Length the pits group into two broad size ranges - a smaller group with a length between 1.00 - 4.50m and a second larger group 7.50 - 9.50m long. Following the method outlined earlier, we can reconstruct the shape of the former pits. Irrespective of the value of the height for the ancient soil, two clear patterns can be defined, which cut across the superficial pattern defined earlier. On the western side a group of five pits overlap suggesting they may have belonged originally to a single linear entity. On the north and east side, the pits still remain essentially isolated. Significantly only one of the pits (F130) encroaches to any extent upon the flat plateaux of ancient soil (brown perimeter), but more pits sit on the sloping shoulders of the soil. The position of the pits against the inner edge of the ancient soil is crucial to the reconstruction of the former extent of any mound. Taking into account of the edge of the pits, the edge of the soil and the distribution of the graves, we can establish the potential extent of a mound.

If we assume the mound was circular and its centre lay within the original central burial pit (F417), we can reconstruct a mound with a potential radius of 7.50m. Conveniently, this mound would lie within the boundary of the graves and quarry pits.

From the dimensions of the reconstructed quarry pits, we can calculate the potential volume of make-up which was thrown onto the mound. The pits were separated into two classes depending upon their shape. Pits of class 1 were classified as hemispheres (formula  $\frac{2}{3} \pi r^3$ ), class 2 pits were half cylinders (formula  $\frac{1}{2} \pi r^2 L$ ) with rounded ends combined to form another hemisphere.

Essentially, the calculated volumes remain only broad volumes rather than exact amounts since the pits themselves do not conform to the regular smooth sided shapes required in the calculations. Also the measurements for the radius of the hemispheres were maximum values and only crude hemispheres could be created by combining the ends of each cylinder in the class 2 category. The combined value of volume from the pits reconstructed to the height of the excavated ancient soil is  $119.39 + 226.45 = 345.84\text{m}^3$ , when we increase the potential height of the soil the volume is greater,  $165.69 + 299.43 = 465.12\text{m}^3$

We can take our reconstruction a step further by re-arranging the volume calculations of a cone (formula  $\frac{1}{3} \pi r^2 h$ ) to reconstruct the potential height of the mound (formula,  $h = \text{volume} / \frac{1}{3} \pi r^2$ ). Using the two values above for the volume of make-up from the pits and assuming the mound has a radius of 7.50m,

(BSOIL)	(ENVIR)
$h = 345.84$	$h = \underline{465.12}$
formula	formula
$h = \underline{345.84}$	$h = \underline{465.12}$
58.90	58.90
$h = 5.87\text{m}$	$h = 7.90\text{m}$

The results of the exercise show unequivocally that these reconstructed pits, whatever the height of ancient soil

we choose would have provided ample make-up for a substantial mound. Taking account of the measurements involved and the formula employed, the value for the height of the mound must inevitably be seen as generous. However, it certainly alters our perception of the mound as an insignificant plateau of ancient soil. If the model is valid, suddenly we are faced with a substantial mound, at least originally similar in character to its adjacent cousins - Mound 2, 6 and 7. Instead a whole new set of questions arise - where is the make-up? Why was the make-up moved? How was it moved and how can we explain the almost clinical exercise which left the ancient soil beneath virtually intact, at least to a depth comparable with the buried soil beneath Mound 2.

The character of this mound and its associated scatter of quarry pits up to 7.00m away from the perimeter of the mound (e.g. F401) remains anomalous, and cannot be matched with the situation of any other excavated mound. Moreover, the vacant space between the pits and the mound, and between Mound 5 and Mound 6, were at a later date the focus of a small inhumation cemetery. This cemetery probably arrived before the mound settled and spread beyond its immediate perimeter. It may be possible to show whether the graves were cut through the make-up by considering the depth of burial and character of the backfill within the graves, but my current reading of the situation is that the graves would respect the contemporary boundary of any mound.

Against the background of a substantial mound, the presence of a large robber trench cut down through the make-up, 'buried' soil and into the burial pit is a familiar scenario. Indeed, there remain a number of inconsistencies in the excavation record which suggests the robbing did not begin on the surface of the ancient soil but actually within a larger mound.

- no scatter of Early Medieval finds discovered outside the immediate nucleus of the robber pit on or above the surface of the ancient soil, and it is worth remembering that our definition horizons, from Horizon 1 onward, were only achieved with careful trowelling.

- how were the robbers able to pin-point the central burial pit since geometrically the pit lies off-centre to the perimeter of the ancient soil?

- the character of the lozenge shaped robber pit with an undulating floor, steeply sloping sides which were cut beyond the nucleus of the burial itself fits conveniently into a pattern established elsewhere (Mound 2 and 6). There is no doubting their potential ability; the robbers in Mound 2 were able to read the archaeological layers and carefully followed the surface of the buried soil before diving into the backfilled burial chamber.

If we accept this mode for the robbing of the mound then it follows that the removal of the mound must be post-robbing. According to the current views on this activity a relatively later date, in the nineteenth century for the robbing could push forward the removal of the mound almost into the present century. It is certainly surprising that there was no sign of the 'modern' ploughing over the ancient soil yet it was so clear, if ephemeral, in Quadrant Y immediately to the east and intermittent to the north. This would lend weight to the impression that the mound was removed at a later rather than earlier date.

### Addendum

A second formula for reconstructing the height of a mound has been proposed. This formula assumes the shape of the mound in section is a segment of a sphere given the volume of make-up and a base radius the height of the mound is provided by the formula below.

For Mound 5, if our volume of make-up is **345.84m<sup>3</sup>** and our base radius is 7.50m, we can use the formula to reconstruct a mound with a height of 3.63m. If we increase the volume variable to our larger value of **465.12m<sup>3</sup>** then the height of the mound increases to 4.66m.



#### 7.2.6 Model - see RR

#### 726.2 Medieval and post-Medieval ploughing of Mound 5

A set of plough-marks was observed at Horizon 1 between Mound and Mound 5 (3.5.3.2). The marks ran east-west and overran all defined strata in this area. They were seen nowhere else, and were not traced on the mound 5 platform itself (N174/18).

A 'surprisingly uniform' light orange brown deposit (1022) lay over the area between Mounds 2 and 5. This could have derived from the ploughing of a thin soil lying on a subsoil denuded by quarrying.(3.5.3.7.) . 1022 did overrun the fill of quarry ditch F42 .

A plough-zone seems to have been picked up by the digital enhancement of the contour survey (3.1.1).

#### 7.3 Burial 12 Mound 20

GR:135/156 NW-SE comprising: F112 post hole, between grave and ring-ditch  
F113 ring ditch  
F114 grave  
F147/1402,1410 body/coffin  
Before excavation:N250/0;N250/10;N202/18  
Tableau: N259/3;N256/2  
Section:D552, 346, 348, 1316-7

#### Description of the Investigation

The grave (F114) and its surrounding ring ditch (F113) were first recognised during the preparation of Horizon 2 in quadrant Y. The features appeared as a dim "cloud" of lighter soil, against the subsoil to the north, and the infilled Early Bronze Age ditch (S23, F562) to the south, and were spotted by Cathy Royle. It was recognised that the traces were extremely elusive and that the ring-ditch would stand very little trowelling. The *ring ditch* was the first feature of Burial 12 to be excavated and recorded; after excavation (width c 300mm, depth c30mm) it was filled with sandbags for protection.

A *posthole*, F112, was also seen at Horizon 2, adjacent to the grave and inside the Ring Ditch; however it may have belonged with a set of postholes which are otherwise prehistoric.

The grave, F114, was defined by gentle trowelling and continual enhancement with water to maintain a contrast with the prehistoric ditch-fill which it cut. The silt-sand of the grave fill 1213 at first appeared darker than the pre-historic ditch fill, but at a depth of 250mm began to look lighter again. The grave-fill contained some flecks of charcoal and was removed in 100mm spits (stages). The fill was sampled in a continuous array along three axes.

At a depth of 32.54 m AOD (440mm below the surface) a linear stain appeared on the east side. This was the first indication of a coffin. At the same level, it was decided that we were overcutting the grave, and a length of 300mm of soil, rich in iron pan, at the side of the east end of the grave was re-assessed as ditch fill. The redefined grave was located with greater symmetry with respect to the ring ditch.

There was then an attempt to recover the coffin and the body presumed to be in it in three dimensions. The patchy dark soil dished (downwards) from all sides towards the centre. An iron arrow-head (or miniature spearhead 1 [36522] (at first thought to be a nail) sloped gently downwards towards the south east. The excavator was uncertain as to whether it had lain inside or outside the coffin: "although coffin lid stains have

been removed from over part of it, it may be the case that an object as heavy as this would have fallen through the decayed coffin lid and into the internal area of the coffin itself". Given the attitude of the object, as a spearhead the shaft would have sloped downwards towards the far end, implying that the whole spear lay inside rather than outside the coffin.

The coffin "lid" merged with the outer patchy remains of the coffin and with the remains of the body, and it proved impossible to resolve either clearly. Removing the "lid" a new configuration was achieved. At the centre of the stain lay a small buckle **2** [36523] which appeared to lie on a patch of decayed leather. Towards the south east lay a small pin **3** [36524] oriented NNW.

Although the distinction of the coffin lid from the other remains was not straightforward, the evidence is in favour of all three finds lying by or on a body within a coffin.

#### The Assemblage

The child was buried with miniature possessions appropriate to his rank - a spear **1**, a simple belt buckle, **2** and a dress pin, **3**. These artefacts are described in Chapter 7, p. 000.

#### Interpretation of the Burial Rite

The burial must have been that of a child (height about 1m, 3' 3") who had been laid, judging from the body stain, probably on the left side, slightly flexed. The child was equipped with a small buckle probably to fasten a belt, a bronze pin (positioned by the upper tibia) and a spear of maximum length 1.10m (3ft 6ins). The position of the objects with respect to the body was ambiguous. If the head lay to the SE, the pin is in the right position to have fastened a cloak, but the spear-head is point down near the feet. If the head lay to the NW (as the excavator thought), then the spear head lay by the shoulder and the pin lay near the feet. If this was a cloak pin, then the cloak must have been thrown over the body the wrong way round with the pin attached. The body was laid in a wooden coffin with the spear and the grave back-filled and covered by a small mound not more than 2.50m (or say 3 yds) across. Soil was excavated for this purpose from a ring ditch. The mound had later been flattened and the ring ditch filled in, probably by ploughing.

## 7.4 Group 2 Burials In Int 41

### 7.4.0 *Naming the Parts*

#### Int. 41

F27	Rabbit Hole
F54	Slit trench (WW2)
F55	Body, F154 (Int 12)
F81	Grave, Burial 40
F82	Grave, Burial 41
F87	Spread in S = Grave F486, Burial 48?
F123	Empty Grave
F124	Grave, Burial 44
F127	Slit trench (WW2)
F140	Turf
F144	Animal burrow
F148	Body in Burial 42
F149	Body in Burial 43
F154	Grave, Burial 45 (Int 12)
F193	Animal burrow

F194	Animal burrow
F245	Part of quarry pit, F58
F418	Body in Burial 47
F424	Grave, Burial 46
F426	Robber pit for Mound 5
F435	Grave, Burial 47
F486	Grave, Burial 48
F499	Body in Burial 46
F507	Body in Burial 41
F509	Body in Burial 41
F510	Body in Burial 41
F517	Grave, Burial 49
F524	Body in Burial 49
F525	Wood? in Burial 49
F542	Body in Burial 44
F555	Body in Burial 48
F588	Burial 50 (Int 12)
F589	Body in ....
F590	Burial 51 (Int 12)

#### 7.401 *Description of the Investigation*

##### The Interventions

The majority of Group 2 burials and features was located in Int 41. There was one outlier in each of Int 41 or Int 48 and two in Int 50. All burials had the characteristic of being located around Mound 5, within or beside quarry pits. Burial 55, however, was cut within a quarry pit which more probably served Mound 6.

#### 7.402 Methodologies

The methodology was established from the beginning of the excavation of the Group 2 features, although it continued to be refined in the hands of AJC.

AJC was responsible for excavating or overseeing the definition of most burials. The recording is generally more consistent than in those of Group 1.

The standard operating procedure was excavation at Data Acquisition Level E.

That is:

- Definition of grave at Horizons 2, 4 or 7: generating plan and colour photos
- Excavate in stages of c. 100mm depth: generating colour photos and plans where anomalies presented
- Running section along long axis
- Body tableau, recorded as: colour photos, colour plan indicating where bone survived, hachure plan
- Body dismantled, each part being separately measured and plotted in 3 dimensions

- Empty grave, recorded as colour photos and hachure plan

In general, these elements were rarely omitted.

### 702.3 Difficulties

There were two special challenges to the methodology in excavating the Group 2 burials.

7023.1 The first was in defining the graves which had been cut into buried soil or mound make-up. Where graves were cut into buried soil (Burials 43, 44, 48) the contrast between grave fill and surroundings could be minimal, and relied particularly on the tell-tale presence of lumps of concreted subsoil. However, there was the fail-safe that if a grave had not been visible against the Buried Soil (Horizon 4) it would be found at Horizon 7. On this basis, the success rate of detecting graves cut into buried soil was 100%.

Graves 45, 50 and 51 had already been defined (at Horizon 7) in Int 12.

Graves cut into mound make-up were more tricky. There would be no subsoil, concreted or otherwise, in such secondary burials, since they would not usually reach as far down. There was also a strong presumption that the body decay-trajectory would have proceeded further towards the invisible within mound make-up than with subsoil. The slopes of Mound 2 were also much visited by rabbits which tunnelled deep and wide, throwing buried soil and even subsoil out through the mound shoulders. The Army had dug slit trenches in the shoulders of Mound 2 (and 6 and 7), the shape of which closely resembled graves.

Each anomaly was carefully investigated and the identification depended on the eventual shape and the presence or absence of the body decay products. In most cases, the identification was unambiguous.

7403 The second major challenge to our methodology came from those graves which were cut into quarry pits. The quarry pits, which contained a vast quantity of erosion products, were generally quadranted and excavated at Data Acquisition Level C or D, which allowed the sighting of any major anomaly in either plan or section.

Graves were found inside 6 quarry pits, but none was visible on the surface of the back-filled pit. The grave was always discovered during the excavation of the quarry pit, and was generally first noted as a cut against the base of a quarry pit within a leading quadrant (Burial 41, 46, 49, 53, 54, 55), but might retrospectively be seen in the section of a trailing quadrant (Burial 49) or in plan within a quarry pit fill (Burial 54).

Of these indications, the section demanded good fortune in the original placing of the quadrants; these were usually laid out symmetrically to the relic pit as known at Horizon 2, whereas the original pit cut from the old ground surface, which had apparently attracted the gravedigger, might have then presented different axes and a different centre point.

It is not easy to see how the methodology could have been made more secure. To dig all quarry pits and ditches at Level E (ie in spits) would have been, probably, only a little more effective against a massive increase of time and money.

Every grave, detected at whatever level, eventually touched the subsoil, however slightly (Burial 55): this then was a fail-safe. So although the actual height from which a grave was cut remains equivocal, we can be reasonably sure that all the graves cut into quarry pits and ditches were discovered.

The fact that the cuts against lower quarry back-fills were occasionally seen provides strong support for the general conclusion on their stratigraphic context. All the graves were cut into partially refilled quarry pits.

There were 16 bodies buried in 16 possible graves, all spatially related to Mound 5. F 86 contained three bodies (Burials 42a, 42b and 43). F 437 ("Burial 47") and F123 were empty graves.

4 graves (Burials 41, 46, 49, 54) were cut through quarry pits that had been slightly refilled, through natural erosion, silting or plant growth. This is likely to imply a time interval of between 1 and 15 years separating the burial from the construction of the mound.

1 grave (Burial 53) was laid directly on the surface of a freshly cut quarry pit. It should therefore be contemporary or nearly so with the construction of Mound 5.

1 grave (Burial 50) was cut through relic make-up of Mound 5.

1 grave (Burial 55) was cut through a turfed over quarry pit; it should therefore belong to a period rather later than the construction of both Mound 5 and Mound 6 (the quarry pit of which it cut).

Of 16 bodies, the age of 7 and the probable gender of 6 were identified. Burial 42b was a mature male accompanied by two young women. Burial 48 was a mature male. Burials 40 and 45 were young adult males. Burials 52, 54 and 55 were young people.

6 bodies (Burials 40, 42b, 45, 48, 52, 54) had been probably or certainly decapitated. 1 (burial 49) had been hanged. 3 bodies (Burials 42a, 43, 53) were buried face down. 1 (burial 55) had been dismembered.

The skulls of cattle and horses had been deposited in a quarry pit (F 129), later to be disturbed by burial 49. The long bone in quarry pit F 133 ("Burial 47") may also have been animal and represented an animal or part of an animal deposited ritually.

A complete cow was buried in a mound 6 quarry pit, contemporary or following burial 55.

From the locations of the graves and their relationships with the quarry pits, the following sequence can be proposed:

1. a person buried face down, head on a block of wood, covered over with planks and brushwood, on the bottom of a freshly dug quarry pit on the W side of Mound 5. (Burial 53)
2. a series of burials is made tangentially to the edge of the newly constructed Mound 5 (Burials 44, 45, 51, 50). One of these, 45, possibly exhibits ritual trauma.
3. a series of burials is made radially or tangentially to mound 5 (burials 48, 42/43, 40, 52). All of these contained decapitations. The skulls, and possibly other parts, of cattle and horses are deposited in one or more quarry pits.
4. a series of burials is made into slightly refilled quarry pits (burials 41, 46, 49, 54). One of these (burial 49) had been hung.
5. a dismembered body was buried in a turfed -over quarry of mound 6. At the same time or later, a cow is buried in the same quarry pit (F 2) beside the human. The quarry pit relates to Mound 6.

This sequence of activity is evidently ritual in character. It relates closely to Mound 5. There are no burials which are likely to have been earlier than Mound 5. All of the burials are positioned with respect to Mound 5,

this being arguable for Burial 55 too, even though it is buried in a quarry pit which relates to Mound 6. The term 'satellite burials' was invented to describe this relationship.

Since the earliest of these satellite is contemporary with the construction of Mound 5 (or nearly so: burial 53), and the latest is made into a turfed over quarry pit for an adjacent mound, the span of time over which Mound 5 is attracting ritual attention could be considerable. Much depends on the date of Burial 55. The human bone itself was insufficient for a C14 determination (teeth only).

The stratigraphic association of cow, body and pottery was such that the body could be contemporary or earlier.

The ritual treatment of the bodies begins in phase 3 and continues to the end. If a close reading of the sequence is permitted, it begins with beheadings, continues with hanging and ends with dismemberment. The sample is small, but this sequence is certainly suggestive of a developing system of social control. It is also possible that the sequence illustrates a seamless transition from sacrifice to execution.

In addition to the graves, a further 14 features were examined because they might have been graves or other early medieval features. 6 of these proved to be slit trenches from World war 2. 4 were animal burrows. One (F 426) was a robber pit for mound 5, dug during the main robing which is supposed to have been by a E-W trench. Only one, F 123, is almost certain to have been intended as grave, but equally certainly contained no body - an interesting episode of indecision at the probable commencement of the satellite burial habit.

#### 7.4.1

#### BURIAL 40

Int 41                      1987                      P Bethell

Also known as Structure 9

Grid:    129 170

GRAVE:	F81	Fill: 1163	Orientation: W-E
High point:	33.06m AOD	Max. length:	1.61m
Low point:	32.46m AOD	Max. width:	0.51m
Min. depth:	0.60m	Area:	0.82m <sup>2</sup>
Volume:	0.49m <sup>3</sup>		

Straight-sided, flat-bottomed grave, cut into the relict buried soil platform of Mound 5 [1127]. No evidence for a coffin.

Marker: F80 (1162)

BODY: F152, 1426

Length: c. 1.65m, measured from sand-limbs

Posture: Lying on right side, legs flexed and together (a hint that left foot was tucked under right, inviting the suspicion of bonding); right arm bent with forearm curved back towards shoulder; left arm indistinct. The head had been cut off and placed in the grave face-up and the wrong way round. The stub end of neck would have been lying approximately against the right ear.

Anatomy: A young adult male

### *Excavation*

The grave was visible (at Horizon 2) as a rectangular patch [N250/35]. Beside it on the North side was a supposed posthole, F80, initially thought to be a grave marker. This elusive (and badly recorded) feature was excavated first: it was later decided (by AJC) that it was more likely to have been an animal burrow. The fill of the grave (1153) was removed in 100mm spits (called "levels" in Group 2). It was mixed and homogenous at Level 2 [N261/3], but by Level 3 had become patchy [N261/5]. At Level 4 it is evident that there has been much rabbit disturbance [N261/6]. At Level 5 (or equivalent) the head of Body F152 appeared [N261/15].

The body was defined [N261/14] and found to be "a semi-flexed inhumation, with head to West, in a sleeping position; lying on its right side with its right arm bent to bring the hand up near the head, left arm slightly higher but in a similar position. The left leg was clearly revealed, but the right leg was lower (down) than the left and not revealed until later".

When the head was excavated, it was found to be lying at about 130° from its normal axis, that is with the jaw pointing North-west [N261/17; D402, 403, 404]. The end of the vertebrae would have been in contact with the right ear. The head had been damaged by rabbits when already a sand form. It could not have been rotated after burial.

### *Interpretation*

The excavator's conclusion was that the head had been severed from the body and placed in the grave at the neck end, but not aligned with it, at the time of burial.

The "grave marker" was more probably an animal burrow.

Draw teeth/jaw of head in place

## 7.4.2

## **BURIAL 41**

Int 41                      1988                      A J Copp

Structure 10

Grid: 131 167

GRAVE: F82                      Fill: 1164 [1165]                      Orientation: S-N  
1939

High point [32.93]: 32.50m AOD                      Max. length: 1.99m  
or 32.75m AOD

Low point: 31.88m AOD                      Max. width: 0.63m

Min. depth: 0.62m or 0.87m                      Area: 1.25m<sup>2</sup>

The grave was cut into the partially-backfilled quarry pit, F508.

BODY: F510, 1945, with body pieces F507/1938 and F509/1944

Length: 1.85m

Posture: Lying on right side, legs slightly flexed, both arms forward and hands together.

Identified

Bone: None

Anatomy: Stains only

*Excavation* (see also 3.10.3.4.6)

The first definition (at Horizon 2/7) was of the quarry pit that was to be designated F508. This pit was an elongated oval running North-South, cut away at its southern end by the excavations of Longworth and Kinnes (Int 12).

The grave lay in the same alignment and at the base of the quarry pit [N391/35]. Throughout the excavation, there were considerable difficulties in deciding whether there was one feature or two, and if two, what was the stratigraphic relationship between them. Considerable care and skill was also exercised by the excavator-recorder to achieve the most precise account possible.

Initially, there was no anticipation that there would be a grave. The pit, then called F82, was filled with a homogenous silt-sand, then called 1165. There was no sign of a cut in the surface of 1165, which was described as "homogenous. There are no subsoil lumps or lighter sandier patches .... striking absence of charcoal flecks".

The pit was quadrantised (following the standard procedure for quarry pits) and a small piece of body material [designated F507/1938/41017] was found in the Northwest quadrant at 32.50m (recorded on 24 October 1988). At the base of the leading quadrants (NW and SE), the grave was discovered, and it is at this point (31 October 1988) that the diary and all the remaining records were initiated.

Using the sections, among them the North-facing section in the Northwest quadrant [N385/36] and the East-facing section in the Southeast quadrant [N387/1], it was decided that the grave had been cut through the quarry pit fill. The number F82 was now given to the grave and 1165 was also allocated to it. The quarry pit was re-numbered F508, and its primary fill, seen at the West side of the North-facing section, designated as context no. 1940.

This interpretation was enshrined in the sections recorded on 31 October 1988. F508 was the first cut, its primary fill being 1940. The grave F82 had cut through this fill; body F510 lay at the bottom, and the grave was backfilled as 1939 (up to the level of the cut against natural, 32.5m AOD), then 1164, a blotchy sand, and finally 1165, a brown sand-silt.

The following observations were cited in support of this interpreted sequence:

1. A cut visible in the North-facing section, West quadrant [N385/36; D1585].
2. The fills in the centre of the feature are sterile, there is no charcoal and very few finds [an observation of uncertain significance].



3. "1164 contains many lumps of bedded subsoil which can only have been removed from a very deep hole". The pit (F508) was too shallow to have contacted the bedded subsoil. 1164 should therefore be considered as backfill from the grave, and shows that the grave cut the backfilled quarry pit at least from the top of 1164 (highest point recorded as 32.77m AOD).

In an attempt to provide additional scientific evidence, a soil block was extracted in a Kubiena box from the supposed interface between 1940 (pit) and 1164 (grave) at a height of 32.73m AOD [41032]. 1165 did not contain lumps of bedded sand, neither did 1939.

Examining the trailing quadrants, the excavator decided not to attempt to remove the different contexts in plan: "it would be very difficult ... not only would they be extremely difficult to see in plan, but we are now dealing with the trailing baulks".

After recording the sections, the trailing baulks were then removed "down to the level where the cut for the grave into [natural] bedded sand becomes clear".

A new section line was erected at this point, aligned not with the previous one, but with the axis of the grave [D1671, 1672].

The grave fill was lowered in levels, Level 1 (at 32.47m AOD) being slightly below the highest cut into natural. At Level 3, an isolated dark brown organic stain became visible at the South end. This was F509/1944 [N391/0]. It was not connected with any other body-stain, although its position was recorded as 50mm (measured at 90mm) above the head (32.24m AOD, head at 32.15m AOD). At Level 4, the head began to show [N391/3], and at Level 5-7, the whole body was revealed [N391/9, N391/32]. Its posture was described by the excavator as "slightly flexed at the knees, so that it fits into the grave. The back of the body is arched towards the West side of the grave and projects outward beyond the line drawn between the left shoulder and left side of the pelvis. It appears that the grave was cut to accommodate this shape because ... the grave was cut slightly under at this point."

The body (F510, 1945) had no observable bone and had clearly been disturbed by vigorous bracken root growth. Only a few pieces of soft bonemeal were noticed during the removal of the stain.

### *Interpretation*

There are two important matters of interpretation for this burial, neither of which can be unequivocally resolved; but they may be related.

### *The Body Pieces*

Two pieces of body-material were found: one (F507) was 100 x 50mm and found at 32.50m, about 0.5m above the left thigh, at a point where a piece of thigh stain of about the right length was missing.

The second piece (F509) was 40mm in diameter and 30mm deep, found at 32.24m, about 90mm above the head. The head could also have had a piece missing at the top. There is no recorded comment on it, but an indented area on the crown can be seen in Level 5 [N391/09].

This was one of A J Copp's early graves, but it is not likely that he would have mistaken a piece of sand-body for something else. An interpretation must explain how these pieces arrived, one in the lower backfill [1939], and one at the junction between 1939 and the upper backfill, 1164.

There are three possibilities:

1. The pieces were fragments from another body, backfilled as flesh or sand-body. This is very unlikely, since both pieces can be related to the body F510, already in the grave.
2. The pieces were cut off the corpse of F510 and backfilled into its grave. The model here would have to assume that two major amputations had been made, one from the scalp, and one from the lower thigh, from a body living or recently dead. This is not impossible, for example, during surgery. We would only need to suppose an attempt to remove a gangrenous joint and (at the same time) a standard trepanning operation.

However, an amputation generally removes the lower part or all of the leg, rather than a segment of it, and in any case it is quite clear that the leg itself was placed, and in an anatomically exact manner, with the rest of the body in the grave.

3. The third option is that the pieces of F510 were dug out when the corpse had already become a sand-body. The sand-bodies routinely removed from graves at Sutton Hoo can be broken into lumps which have some cohesion - equivalent to, say, lump sugar. It is quite conceivable that once formed, a small piece of sand-body could be dug out and backfilled and remain recognisable. The organic pieces, F507 and 509, can it seems be best explained by a re-excavation of this grave after the formation of the sand-body.

It might be noted that there is another area on the upper left tibia where the body stain is missing or damaged and has been replaced by yellow sand [D1718]. This would make three points at which the sand-body had been damaged by a hypothetical later spade.

The sand-bodies at Sutton Hoo form within 10 years (as suggested by the Leverhulme Trust project experiment, Int 54). Therefore the suggested re-excavation can have taken place within the timescale of the Group 2 burials.

#### *The Quarry Pit and the Grave*

The second and greatest difficulty to be resolved is the stratigraphic relationship of the grave and the pit. This relationship is of the greatest importance, since the location of the pit suggests that it was a quarry pit for Mound 5. The relationship between this grave and this pit also reflects the relationship between Mound 5 and the Group 2 burials as a whole.

The nature of the strata, here as elsewhere at Sutton Hoo, is such that a number of readings are possible, and the more crude the data recovery the more equivocal these alternatives must remain.

At Sutton Hoo, the graves were excavated at data acquisition Level E (the most precise), while the quarries were excavated at data acquisition Level D (the standard level used by "total excavators"). In the case of Burial 41, the existence of a grave was not suspected until the excavation of the quarry pit was well advanced. All the same, the precision of the recording and the wealth of observational detail provided by AJC make it possible to achieve a fairly tight reading of the stratification. There are a number of possibilities, which could be resolved into three alternative models:

1. That the quarry pit truncated a pre-existing grave.
2. That the grave was cut unconsciously into a backfilled quarry pit.
3. That the grave was cut consciously into a visible quarry pit, when it had already been backfilled to a certain level.

Model 1: The first of these models is not impossible. The grave backfilled with context 1939 is truncated by a pit eventually backfilled with 1164, 1165 and 1940. It would explain why no cut was visible on the surface. The strong argument against it is the presence of bedded sandstone in 1164, which it is thought must have derived from levels only touched by the grave. The quarry pit would have been, by definition, left empty so that the presence of bedded sandstone would need a further explanation, such as its rolling off the make-up of Mound 5. This is not impossible, but the section (E-W) is not supportive (see also Section 7.2.2).

Model 2: The second possibility is the one favoured by the excavator. In support are the cut in the North-facing section which is visible on both the drawing D1585 and, more arguably, on the photograph N385/36. The lumps of bedded sand in fill 1164 are another important factor in favour of this interpretation.

However, there are worrying anomalies in this interpretation. The records are clear that the cut for F82 could not be seen on the surface, that is in 1165. 1165 itself seals both the supposed grave fill 1164 and the supposed earlier quarry pit fill 1940, and the cut between them [D1585]. The excavator's explanation, that 1165 belongs to the grave but represents a "dishing" effect is hardly acceptable to the imagination.

The shape of 1164 is even less consistent with its being the fill of a grave. The grave is expected to have been straight-sided, like all other graves on the site. Where cut into natural, the width of the cut is 0.63m. But 1164 stretches eastward up to 0.75m; the East side is not vertical but seems to sprawl into the quarry pit surface.

It is also curious that, while the argument for bedded-subsoil as an indication of grave-fill remains convincing, 1939 contained none of it. To a certain extent the backfill of the putative grave is upside down; a more "normal" order would be 1164 on top of the body and 1939 on top of that. In fact, the section D1672 appears to show that on top of the body and in contact with it is a layer which, by its colour conventions, resembles 1164 more nearly than 1939.

It should also be noted that a cut from the extant surface of the quarry pit would have produced a grave 1.05m deep, without accounting for topsoil, almost 0.4m deeper than any other inhumation (3.10.3.4.9). A cut taken through a quarry pit that was only partially backfilled would produce a more standard depth.

There are therefore good counter-arguments against the explanation that a grave was cut unconsciously through a quarry pit that had already been buried.

Model 3: The third possibility, that the grave had been cut through a quarry pit that had been dug, but not (completely) backfilled has, *prima facie*, the most credibility - not least because of the symmetrical location of the grave in the pit.

It is extremely difficult, however, to determine the level from which the grave was cut; that is, how far the quarry pit had silted up when the grave was imposed within it. Assuming the grave was not there already (Model 1) the lowest possible level for the grave is given by the top of the highest vertical cut into natural (on the West side) at 32.50m AOD. The highest cut would be the top of that seen in section between 1164 and 1940 at 32.75m AOD. In the first case, the grave would have been cut into the bottom of the empty quarry pit, ie immediately after the construction of Mound 5; in the second case, the grave would have been cut later, perhaps very much later, but when the quarry pit and mound were still visible.

The first case does not explain the bedded subsoil; the second does not explain the profile of 1164; and neither explains the fragments of sand-body F507 and F509.

All of these can, however, be accounted for by supposing the existence of a secondary cut, say FX, which cut

Whether by accident or design, the damaged body in its original grave and its primary fill were covered by the silty 1939, presumably removed from the quarry pit silting; it included two of the body pieces sliced off when contact with the body was made. Subsequently, the excavated subsoil and the remains of the primary grave fill were thrown back in, as 1164. Later the soily 1165 was ploughed or puddled into the hollow in the still-visible quarry pit.

The reason for this later intrusion is unknowable. The shape and the location suggests it too was intended to be a grave, a project which was perhaps abandoned when it was discovered that there was one there already.

Judging from Section D1588, the deepest part of the quarry pit would be c. 32.25m AOD.

Int 41                      1987                      A C Evans

GRAVE: F86 Fill: 1171, 1409, 1420

Cuts buried soil and (more debatably) mound make-up for Mound 5.

**BODIES:** Elements of three different bodies were found:

F148b (1527): Highest point 32.95m AOD. Lying on the back, head decapitated and placed face-down, neck to West; damaged by rabbits; left forearm beneath head of F149.

Posture: Two bodies, probably female, were placed prone on top of a supine decapitated male.

Identified

Bone: See Table 1 (below)

Anatomy: Burial 42a, F148a, young adult, gracile, male or female

Burial 42b, F148b, middle-mature male adult, height 1.80m

Burial 43, F149, young adult, gracile, ?female

*Excavation*

The grave pit F86 (originally designated F85 and 86) was very difficult to define: five definitions were recorded in the first 20cm of excavation. The principal reasons for this were (1) rabbit disturbance, which was concentrated at this point and (2) the fact that the grave proved to have been cut through the buried soil platform of Mound 5.

In the early stages, F85 was being sought as the greater feature embracing the lesser, F86. Its edges were not discovered and it was ultimately assigned to Mound 5 make-up [since Mound 5 was not found to have any make-up, F85 was more probably a patch of buried soil]. Patches of some similar material (Mound 5 make-up, or more probably buried soil) were found in the grave fill.

At the level of the first definition (33.05m AOD) [N250/30; D317] a tongue of "fast-drying grey-brown" soil was seen half-way along the West side. It was thought to be a post-socket for a marker post, and then a rabbit hole; it was otherwise unrecorded, but is planned here as "F86a".

A small patch of "iron fragments" [15953, 15944] was located in the central fill of F86. They were later thought to be turfs, then modern iron or steel, but may have been pan from grave fill.

The upper fill was very heterogeneous and 16% clean sand mostly ascribed to rabbits. It was removed in 5 spits ("definitions"). Bone was encountered after Definition 4, becoming find 15955 (126.442/170.504/32.809). At Definition 5, (32.70m AOD) decayed bone was seen in an area of dark compact brown soil in the NW corner [N256/4]. Bone was seen to the East of this and at the West side in the centre [D352, N261/4\*, N252/14]. A new context, 1409, comprising 90% silt sand was defined at this level.

At Definition 6, (32.5m AOD) isolated fragments of bone and bone stains appeared amid clear interference by rabbits and bracken roots. In the SW corner, small mammals (moles?) had also been active. A large rabbit-run ran North-South through the centre of the grave, the edges of which were, however, becoming more certain. The body encountered at Definitions 5 and 6 is planned in D356. At this point, the clearest "skull-shaped" stain is at the South end [N252/14], but the body that was being recognised [F148b] had its head at the North end.

The side East side was lowered to achieve Definition 6, at which point it was confirmed that there was a second body (F149) initially thought to lie beneath the first [N261/10, N261/12].

Bone/stain samples 15958-15960 were then lifted, and a new attempt made to resolve the two bodies into their components. This proved difficult. "There seemed to be bits and pieces all over the place" commented the excavator. A piece of skull (26220) was thought to have derived from the head of F148b, the cranial remains of which were "in the same excellent condition", while the head of F149 was "crumbly and almost not there at all". This piece "ran deep under the fragments of skull embedded in the head" [ie the head/stain of F148b], and the excavator was convinced that 26220 belonged to F148b.

Three ribs were reported at the South end. (There were subsequently four and they were later lifted as 16035, 16017 and 16018 and designated as "feet").

At this stage, the excavator spoke of the spine of F149 as being curved against the East wall of the grave, such that F149 would be on its right side facing F148b.

There was no sign of any coffin. The excavator noted a large number of pebbles mixed with the bodies.

When the tableau of F148b and 149 was achieved at Definition 7 [N261/35; D430, 405, 675], F149 was interpreted as over F148b. A crescent of dark material between the heads of F148b and 149 was thought to be the shoulder or arm of F148b crooked under the head of F149. Samples removed from the centre, West [W11 and 12 on D410] were said to be a part of the pelvic girdle and the head of a femur, both "lying loose in fill". [They were assigned to F148b but note that the pelvis of F148b, with the arm of F149 apparently over it, was discovered later - see below. Thus these could belong to F148a]. The legs were described as "labyrinthine".

After the tableau had been removed, the remaining components of the bodies were dismantled in three separate operations. The first of these was undertaken by A Evans as a continuation of her excavation in September 1987. The other two were undertaken by J Rogers and M Johnson (December 1987) who lifted the remaining pieces assigned to F148 [and b] and A J Copp and K Dowse (in January 1988) who lifted the pieces assigned to F149.

#### *Lifting Operations - September 1987*

A C Evans first removed the head of F148b (16026). This revealed vertebrae (16027) and led to the identification of the posture of the head. "The upper jaw and part of the top of the cranium, [and] part of the lower jaw? still in contact with the upper jaw [are] all lying upside down on a very crumbly spinal column (rib, several vertebrae were found) ..... immediately to the West of the upper jaw complex lies the right arm, its junction with the ?collar bone lying to the North of the .... head [N275/3]".

"The impression this gives is of a body placed in the grave with its shoulders almost against the North edge, so that the head would necessarily fall forward over the upper rib cage .... however the head has not only fallen forward, but has mysteriously turned itself both upside down and totally askew; - the main line of the body is North-South, that of the upside-down head East-West. Even worse, the back of the head lay over and almost inside the "cup" of the top of the head - with part of the lower jaw pointing skywards. Rabbits could certainly have moved the jawbone - but could they have turned half the head upside down as well? Some rabbits!"

Next to come was the head of F149 (16030; 26211). "The teeth and presumably the jaw were found half under the head shape, facing East, suggesting that F149 was buried face-down". The excavator wondered whether F148b could also have been "lying face-down with the head flung back and askew over the collapsed ribcage?".

#### *Lifting Operations in December 1987*

The majority of the body pieces assigned to F148 [a and b] was lifted by J Rogers and M Johnson [Archive Z1.15(c)]. Unfortunately, the body pieces were labelled according to their [expected] "anatomical position", which therefore begs the question as to which part of the anatomy, and which body, they actually belonged to. Their 'identifications' have been added to the anatomical identifications of F Lee in Table 1.

#### *Lifting operations in January 1988*

The rest of F149 was lifted a month later by A J Copp and K Dowse. AJC records "F148(b) is certainly the first of this double burial, as it lies in places beneath F149. The right arm of F149 lay over the pelvis of F148(b). The body of F148(b) was "certainly facing skyward". The patella of the right leg of F148(b) was recovered immediately above the end of the well-preserved femur ... the right side of this person was very well preserved". Well-preserved ribs from F148b were also found "hard up beneath the skull of F149".

The posture of the head of F149 was confirmed as lying face-down. [Assuming that the head had not been severed and that the whole body was prone, it would have been the left arm of F149, rather than the right, which overlay the pelvis of F148b].

The excavators noted that more than two bodies may have been present and pointed to "a set of teeth and parts of a jaw" found hard up against the North wall of the grave - not in articulation or association with the other bodies. [This appears to be the sample isolated by F Lee as F148a, Burial 42a].

The skull pictured in N303/25 in the finds shed was recovered as belonging to F149 (26211), which is not a number listed by F Lee. It is virtually complete apart from the right side, and therefore does not fit the description of F149: "only fragments of the skull" or F148b (lacking the facial region of the skull); nor, however, does it conform to the description of "a set of teeth and parts of a jaw".

Judging by Table 1, the three skulls should probably be distinguished as follows:

#### Burial 42a

15980	Skull 12669/17141/32.60
16050a	Skull facial regions and mandible 12655/17163/-

#### Burial 42b

16026a, b	Skull 12655/17163/32.73
16506b	Skull 12655/17163/-

#### Burial 43

26211	Skull 12680/17130/32.66
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#### Unassigned

15995	Fragment of cranium, unassigned, probably part of 42a.
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The skull depicted in N303/25 should be, as recorded, that recovered from Burial 43, 26211

After the body pieces had been completely lifted, the empty grave was planned [D662, 3] and photographed [N306/14].

#### *Interpretation*

This was an exceptionally difficult grave to resolve, in that it had been much disturbed by rabbits and small mammals. The grave had also contained three individuals; the remains of the two clearest [F148b, F149] were not distinguished until excavation was well advanced; while the third [F148a] was not defined at all during excavation, but emerged during the specialist's analysis in the form of pieces belonging to an additional head.

The records are consistent with a mature male (F148b) being placed in the grave first; the head had been cut off and was replaced at the neck end, face-downwards; the rest of the body lay on its back. The positions of the arms and legs are not known, but were probably extended. The left arm, however, seems to have curved towards the left, since the head of body F149 lay upon it. At an estimated 1.80m, the body of F148b was too long to fit into the base of the grave.

The female F149 lay face-down on the crook of the left arm of F148b. The rest of the body was also thought to have been prone, but the legs, if correctly identified, were flexed westwards. The arms were probably by the side and the westerly arm is recorded as lying over the pelvis of F148b.

The female F148a is known only from her head and there is an inevitable confusion about where the body lay. This is only partly due to the fact that neither the head nor any other body-member was recognised during excavation as belonging to this third body. All pieces of body-material were recorded. The main obstacle to understanding was the scrambling of the upper part of the body-deposit by rabbits and small mammals. At the time, the bone was reasonably rigid, and this remained true of the body F148b which was still largely intact and in situ. The main victims of the rabbits were F148a and the legs of F148b and 149.

The position of the heads suggests that all three bodies were buried with their heads to the N. The mature male (42b) was decapitated and placed in first, his head being returned to the neck location, the remainder of the body being placed on the back.

Two young females were buried in prone positions, first Burial 43 beside 42b to the E, her head resting on his shoulder; then Burial 42a, prone over the other two. The remains of Burial 42a, being uppermost, were much disturbed by rabbits.

TABLE 1 BURIALS 42A, 42B,43:

Body parts recovered from grave F 86 and their probable attribution

Source: Identifications in lab. by F Lee. Locations on plan refer to D 675; items in square brackets are from information added by AJC. Parts thought to belong to burial 42 a in bold, to 43 in italics.

<u>Finds</u> <u>No.</u>	<u>Plan No.</u>	<u>Description</u>	<u>BODY</u>
15006		R humerus	?
15015		unident.	?
15027		C vertebrae	?
15955	[126442/170504/ 32809]	unident	42b?
15957	[unlocated]	frag. of cranium	42b
15958	[unlocated]		
15959	[unlocated]		
15960	[unlocated]		



15961	[unlocated]	L temporal	42b
15962	36	unident	
15963	59	unident	
15964	60	unident	
15965	61	unident	
15966	62	unident	
15967	46	unident	
15968	55	unident	
15969	15	unident	
15970	15	unident	
15971	56	unident	
15972	23	unident	
15973	[12621/17087 32.69]	unident	42b?
15974	58	unident	
15975	24	unident	
15976	19	unident [R pelvis of 42b]	
15977	23	L femur	42b
15978	24	unident [R femur of 42b]	
15979	15	R radius	42b
15980	[12669/17141/ 32.60]	Skull	42a
15981	40	unident	
15982	41	unident	
15983	42	unident	
15984	43	unident	

15986	37	unident	
15988	83	unident	
15989	50	unident	
15990	37	unident	
15995	[see D355]	Frag of cranium [excavated by rabbits from the skull of 42a or b?]	
15997	47	unident	
15998	48	unident	
15999	49	unident	
16000	51	unident	
16001	52	unident	
16002	53	unident	
16003	54	unident	
16004	65	unident	
16005	14	R femur	42b
16006	25	unident [R femur of 42b]	
16007	67	unident	
16008	68	unident	
16009	69	unident	
16010	70	unident	
16011	67	unident	
16012	68	unident	
16013	20	R innominate	42b
16015	21	unident [R pelvis of 42b]	
16016	71	unident	

16017	72	unident [feet?]	
16018	72	unident [feet?]	
16019	73	unident	
16020	73	unident	
16023	66	unident	
16026a	1	skull	42b
16026b	1	posterior skull	42b
16026c	1	sphenoid	42b
16027	2	unident [C vertebrae]	
16028	44	unident	
16030	74	unident [head of burial 43]	
16031	39	unident	
16032	80	unident	
16033	79	unident	
16034a	29	<i>L &amp; R tibia [42b]</i>	43
16034b	29	<i>Fibula side?</i>	43
16035	32	phalanges-foot	42b
16036	33	R tarsals	42b
16037	[12655/17022/-]	R ribs	42b
16038	7	R ribs	42b
16039	34	R m/tarsals	42b
16040	[12650/17145/-]	R clavicle	42b
16041	9	R ribs	42b
16042a	9	L ribs	42b
16042b	9	R ribs	42b

16043	6	R scapula	42b
16044-7	6	unident [R ribs, 42b]	
16048	7	unident [R ribs, 42b]	
16050a	1	Skull facial region; mandible	42a
16050b	1	Skull	42b
16050c	1	L zygomatic process, frontal	42b
16051	10	R scapula	42b
16052	12	unident [L scapula, 42b]	
16053a	16	Phalanges (3 x middle)	42b
16053b	1	L scapula	42b
16054a	17	Phalanges (proximal)	42b
16054b	17	M carpals (? right)	42b
16055	10	R scapula	42b
1605	13	R humerus	42b
16057	30	unident. [tibia of 42b]	
16058a	3	C vertebrae	42a
16058b	3	C vetebrae	42b
16058c	3	Thoracic vertebrae	42b
16059	18	L ribs	42b
16077	[12608/19935/ 31.44]	<i>L &amp; R tibia</i>	43
26192	26[12630/17080/ 32.53]	R femur	42b
26193	27[12628/17059/ 32.53]	R patella	42b
26194	22[12640/17110/	L innominate	42b

	32.53]		
26195a	4 [12645/17130/ 32.52	Thoracic vertebrae	42b
26195b	4	Lumbar vertebrae, sacrum	42b
26196	5 [12637/17135/ 32.48]	unident [R ribs of 42b]	
26197a	11 [12650/17145/ 32.53]	L scapula	42b
26197b	11	Thoracic vertebrae	42b
26198	28 [12626/17040/ 32.53]	R tibia	42b
26199	31 [12623/17040/ 32.50]	R fibula	42b
26200	8 [12672/17135/ 32.56]	L ribs shaft	42b
26201a	12 [12676/17138/ 32.59]	L scapula	42b
26201b	12	L humerus	42b
26202	[12673/17110/ 32.47]	L humerus	42b
26203	[12671/17103/ 32.46]	L ulna	42b
26204a	[12635/17035/ 32.49]	L tibia	42b
26204b		L tarsals	42b
26205	[12640/17066/ 32.51]	R tibia	43
26206	77[12633/17017/ 32.59	unident[R foot]	43
26207	76[12640/17025/ 32.53]	tibia [L tibia of 43]	42b

26208a	78[12646/16999/ 32.69]	L fibula	42b
26208b	78	L calcaneum, talus, <i>navicular, cuboid, 2 &amp; cuneiform</i>	42b [43]
26208c	78	L m/tarsals [L foot of 43]	42b
26209a	75	L femur	42b [43]
26209b	75[12650/17063/ 32.48]	<i>R femur</i>	43
[26210	[12657/17057/ 32.54]	<i>R femur [no bone reported on]</i>	43]
26211	74[12680/17130/ 32.66]	unident	
[skull of 43; boxed separately]			43?
26212	[12635/17035/ 32.49]	[L leg lower]	
26213	22	unident [part of 26194]	
26214	26	unident[part of 26192]	
26215	4	unident.[part of 26195]	
26216	11	unident	
26217	unident [with 26202]		
26218	24	unident	
26217	63	unident	
26219	57	unident	
26220	35	unident [piece of skull from 42b; from 42a?; coincident with 15980]	
26221	45	unident [thorax of 42b; with 26201]	
26222	5	unident [thorax of 42b; part of 26196]	
26223	[part of 26193]		

26224	64	unident [with 26203]	
26225	8	unident [with 26200]	
26226	15	unident	
26227	48	unident	
26228	38	unident	
26229	86	unident	
26230	24	unident[part of 26194]	
26231	24	unident	
26232	87[12670/17075/ 32.56]	<i>unident [pelvis of 43; no bone reported on</i>	43?
26233	82	unident	
26234	81[12676/17105/ 32.56 and [12685/ 17114/32.59]	unident [thorax of 43; no bone reported on]	43?
26236	84 [12640/17066/ 32.51]	<i>unident</i>	43?
26237	78 [12646/16999/ 32.69]	unident [L foot of 43?]	
26238	85	unident	
26239	74	unident [part of 26211]	
26240	75	unident [part of 26209]	
26241	76[12640/17025/ 32.53]	unident [lower leg of 43?]	
26242	77 [12633/17017/ 32.59]	unident [foot of 43]	
26243 - 5	[12656/17119/ 32.80]	Mandible	42b
34381	[unlocated]	frag of cranium	42b
34382-3	[unlocated]	unident	42b

Unnumbered samples

12652/17096/ 32.46	<i>L arm</i>	43
12671/17104/ 32.53	<i>ribs?</i>	43
12677/17095/ 32.56	<i>abdomen</i>	43



## 7.4.4

**BURIAL 44**

Int 41

1989

A J Copp

Structure 13

Grid: 111 157

GRAVE: F124

Fill: 1240

Orientation: NW-SE

High point: 32.64m AOD

Max. length: 1.9m

Low point: 32.37m AOD

Max. width: 0.50m

Min. depth: 0.27m

Area: 0.95m<sup>2</sup>

The grave was cut along the edge of the buried-soil platform for Mound 5 (F224).

BODY: F542 (2011)

Length: At least 1.75m

Posture: Lying on the back, extended NW-SE, arms by the side, head turned to SW, the well-preserved feet turned outwards.

Identified

Bones: None

Anatomy: Stain only.

*Excavation*

The grave was located at Horizon 2, partially cut into the buried soil platform for Mound 5 and excavated at Horizon 7, by which time the relict buried soil had been removed and the East side of the grave had been lowered by 0.15m.

On first definition (Level 1), F124 and its companion F123 (an empty grave) were clearly indicated as fast-drying lozenges [N241/10; N376/03].

The fill of F124, 1240, was a homogenous red-brown silt-sand [probably redeposited buried soil and/or mound make-up].

At Level 2, the head appeared [N412/22] and the whole body (F542) defined at Level 3 [N412/30, N400/12].

The stain had suffered some damage by burrowing small mammals (moles?), but was otherwise revealed as a three-dimensional sand-body of exceptional clarity. Individual rib bones were defined in the chest cavity [3.10.3.4.14]. The feet were particularly vivid, giving a three-dimensional locus which must refer to the live flesh-covered limbs.

The excavator reported that he was "surprised to find quite an amount of bone beneath the body stain - legs, head, pelvis". [The specialist, F Lee, however apparently encountered no bone at all in the samples, which she reported as "stain only"]. It was felt that sufficient bone had been isolated in the finds shed for a C14 assay.

A conventional extended burial, tangential to Mound 5. Its companion grave, F123, was empty.  
Plan [D1983, 1958, 1959, 1960]      Profile [D1978, 1979]

## BURIAL 45

Structure 14, Int 12, Grave 3

High point:	32.98m AOD	Max. length:	c. 1.90m
Low point:	32.37m AOD	Max. width:	0.55m
Min. depth:	0.61m	Area:	c. 1.05m <sup>2</sup>

The grave was cut through the buried soil platform of Mound 5, F224.

Wooden box to protect body (1970) F18, 2027.

Length: c. 1.65m as computed from the body plan.

Posture: Uncertain. Probably sitting, legs extended and slightly flexed, right foot over left, shoulders hunched against West end of grave, arms by the side, head upright and turned slightly to the right (South-South East).

Identified Bone:

22548	Skull
22545	Lumbar vertebrae
22545	Sacrum
22547	R. innominate
22545	L. innominate
22547	R. femur
22546	L. femur
22544	L. & R. tibia shaft (side?)

C14 - 22548 Fragmentary, possibly sufficient

Anatomy: Young male adult, with some pathological comment.

The grave, F154, was first defined in the excavations of Longworth and Kinnes in 1966-70 [Int 12, Grave 3], and the legs of the body F55 then excavated. On completion of the 1966 campaign, the legs were covered by a

wooden box, which was re-excavated 1987 [F18; N172/3]. In 20 years, the wood had turned into black lamina pieces, but was not yet a stain. The legs were quite unchanged [N263/13].

The remainder of the grave was not seen at Horizon 2, but emerged 20mm below Horizon 2 level. The position of the grave relative to the buried soil should be visible in the North-South (East facing) section along the baulk. The fill, 1433, was a red-brown silt-sand [probably redeposited buried soil/make-up] which lay on a tip of yellow sand, 1436 [probably redeposited subsoil], which tipped in from the North side [D411, N261/22].

Of the remaining part of the body, the head was encountered first and then the pelvis. The dispositions of head and pelvis were by no means straightforward. The excavator decided that the pelvic girdle was "face down", with feet and legs twisted to point South. The "upper part of the body also twists round slightly on its front to face South with both arms by the side, possibly slightly under the trunk. The twisting of the upper half of the body explains the bunching up of the shoulders".

There was no confirmation of this, or otherwise, when the pelvic region was lifted, it being commented only that "several large pieces of bone [were] found - concentrating in the pelvic region".

It was established that the head contained lower jaw, teeth and fragments of the upper jaw and that these were facing in a South-South East direction [N277/14].

This is inconsistent with the pelvis being face-down, as is the position of the feet, and the tableau [N264/14; 265/15\*] suggests rather a sitting position with the head upright and the legs slightly flexed. The lower arms do seem to be behind the trunk, suggesting tied wrists.

The recording of this grave is not of sufficient quality to allow any support for ritual trauma. With unconscious irony, the excavator remarks "the burial is unusual .... though additional data would be helpful". Indeed, or even the standard data.

The missing segment of the lower left femur was taken as a sample in 1970.

#### *Interpretation*

A body with the hands tied behind the back buried in the sitting position in a grave tangential to Mound 5.

#### 7.4.6

#### **BURIAL 46**

Int 41	1988	A J Copp, M R Hummler, T Hedley-Jones, P Gentil
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Grid: 129 160

GRAVE:	F424	Fill: 1838	Orientation: WNW-ESE
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High point:	not known [32.70m AOD]	Max. length:	1.50m
Low point:	32.19m AOD	Max. width:	0.48m
Min. depth:	0.51m	Area:	0.72m <sup>2</sup>

The grave F424 had vertical sides and a flat bottom, with a gentle slope at each end. The grave had cut the fill of a quarry pit, F130.

High point:	32.96m AOD	Max. length:	3.70m
Low point:	32.42m AOD	Max. width:	2.70m
Min. depth:	0.54m		

First contacted in Int 12 [5/4, 5/6 Feature 3].

BODY: F499, 1917 (stain), 1928 (bonemeal).

Length: c. 1.70m

Posture: Lying on left side, legs flexed, left arm by the side, crossed by right arm bent at the elbow. The head slightly raised looking NE (ie downwards towards the right hand).

Identified

Bone: None

Anatomy: Stain only.

#### *Excavation*

The excavation, by M R Hummler, supervising student T Hedley-Jones, was initially that of F130, a pit with an inner pinky-grey fill (1266) and an outer (earlier) dark stony fill (1823), a configuration typical of the quarry ditches and pits that surrounded the excavated mounds.

At Horizon 2, the filled-in pit offered no trace of the grave that was later found [D255-8].

The pit was quadrantised over North-South/East-West axes and the SW quadrant removed. A patch of soft dirty sand (1838) was revealed at the bottom towards the centre of the pit; this was recognised as a possible grave, which was quickly confirmed by exploratory trowelling which lowered the grave fill (1838) by about 150mm.

At the same time, a small patch of dark silt was suspected under the pit fill 1823, in the North area not occupied by the grave [N381/16]. This did not, however, survive to be recorded. The bottom of F130 was otherwise described as a "dirty natural".

The remaining quadrants of the pit F130 were recorded and removed by Paula Gentil, establishing that the pit had cut buried soil (1588) and that the grave, F424, was sealed by the fills (1823 and 1266) of the pit F130 [sections D1427-30]. Fill 1823 appeared to have formed in 2 bands of slightly different hue, but similar composition and texture.

A number of hypotheses were examined at this point by M R Hummler, concerning the relationship between the grave and the pit, and the interpretation of each. These were:

1. That the pit had consciously truncated the pre-existing grave.
2. That the pit had been dug as access to the grave.
3. That the pit had been dug to rob the grave.
4. That the pit was a treepit, which had coincidentally grown there.

Numbers 2, 3 and 4 were thought unlikely on the evidence of the fills.

The grave F424 was defined by P Gentil on the base of the excavated quarry pit. The East end was said to be "unsure" and discovered "using the feel of the soil alone". The grave fill here was "very much like natural". The search for the East end left a section [D1437] which was drawn after the removal of the fill of F130 (1823) and during excavation of F130 of about 150mm of the grave fill 1838 [see Section D1427]. At this pre-definition stage the grave was thought to be very short [c. 1.20m, see D1427].

A possible overcut, with a triangle of unexcavated fill beside it, is visible in N381/16; but whether this is unexcavated grave-fill or unexcavated quarry-pit fill is unclear. This represents the size of the grave at Level 1 [1.75 x 0.65m wide; D1435]. Bracken roots were recorded "throughout" the grave fill [Section D1437 is thus a bit misleading]. A dark narrow band 20mm [wide] along the South edge of the grave raised the possibility of a coffin [for which no other evidence was found].

By Level 2, the East end had shortened and narrowed to 1.59m and 0.48m wide [D1436]. [The grave had therefore at no time extended beyond the limit of the pit as implied by photograph N381/16]. At Level 2, the head and right arm of the body [F499] had become visible [N382/01]. The head was unfortunately damaged when Paula Gentil accidentally dropped a sledgehammer on it.

The remainder of the excavation of the grave was undertaken by A J Copp, who lowered the surface by 10-15cm to Level 3 [N384/8] and fully exposed the body at Level 4 [N388/01; D1525, 1523, 1524, 1578]. The body lay on its side, legs flexed, arms crossed. Head, feet and knees were touching the vertical sides of the grave.

Some bone was showing, and was seen to be covered by a sand-stained jacket c. 50mm thick. An attempt was made to expose the bone, but was soon abandoned: "it was clear that very little of the bone had survived"; none, in fact, apart from the underside of the skull. The head was noted as "slightly raised up and clearly facing North-east", and there was no obvious sign of trauma or mutilation. The body was removed and the empty grave planned [N387/14; D1580].

### *Interpretation*

The grave F424 lay at the base of the pit F130. The relationship between them was by no means easy to establish, their fills and the natural subsoil all being closely related in colour and composition.

All observers would accept that the pit F130 had been filled in two principal episodes corresponding to the stony dark brown soil 1823, followed by the pinky-grey silt 1266. All would also agree that the grave could not be seen to cut either.

There therefore remained two possibilities only for the observed relationship: 1) that the pit had cut into and truncated a pre-existing grave, or 2) that the grave was cut into the bottom of a pre-existing pit and sealed by its later fills.

Prima facie, the evidence would support option (1). The grave, at 35cm from the quarry pit base, is shallow compared to the majority of graves, where the minimum depth is usually around 0.60m. Had it been cut through buried soil from the Anglo Saxon ground surface, the depth would have been about  $35 + 54 + 25 = 1.14\text{m}$ , which is acceptable for a conventional grave. The grave also appears to oversail the pit to the East. But here that is some doubt that the edge of the grave extended so far eastward (see below).

A J Copp favoured the interpretation that the pit truncated the grave, citing in support, if unspecifically the "composition of the fills" (3.10.3.4.9, 3.10.3.4.11).

The argument for the second option is not much stronger. It is clearly influenced by the idea that F130 was a quarry pit for Mound 5, and that a burial earlier than Mound 5 is unlikely, since all the known burials cluster

around it.

That F130 was a quarry pit for Mound 5 is almost certain. Its position, relative size and fill show that it belonged to a well-defined family of linked or isolated pits which surrounded Mound 5 [see Vol. 4, 7.2].

It is extremely probable that such a pit would have been left open, and allowed to backfill naturally. The quarry ditch experiment conducted on Mound 2 showed that after two years virtually no deposit had collected on the base of the quarry, which had however been colonised by plants. Such plant life could easily be responsible for dark patches such as were seen on the base of F130; root action would also create the "dirty natural" observed at the base, and most probably causing equivocal edges at the sides as well. It is therefore hypothetically possible to dig a grave into the base of a quarry pit after several years without leaving any observable stratigraphic trace.

The excavators reported repeated difficulties in finding the East end of the grave. Vertical in all other respects, the excavations at the East end have left a large tongue which apparently extends beyond the edge of the quarry pit. This is probably a false cut, either into rooted natural subsoil or into unseen quarry pit fill. If the line of the East end at the lowest level is projected upwards, the grave can be seen to fit inside the quarry pit. It follows that it could have been cut inside the quarry pit when the quarry pit was empty.

The composition of the fills, already cited in favour of truncation, can be brought in to support the alternative option. The grave fill is described as "very uniform yellowish-brown sandy fill (backfilled natural) containing very many rootlets (seeking nutrients in the grave?)". The grave is thus backfilled with subsoil, the colour of which is altered by the presence of the body and consequent root action. This is naturally strong evidence against the grave having cut through backfilled quarry pit (which is not suggested), but it is also evidence which does not support the grave having cut through buried soil before the quarry pit existed.

The data that we have does therefore allow the grave to have been cut into the base of an empty quarry pit.

The third option, that the grave was cut from within the pit fill is yet more strongly supported by the depth and location.

At 0.23 cm from the subsoil surface the grave is one of the shallowest recorded, barely deep enough to conceal the body. If it were to conform to the well attested average (50-70 cm) for group 2, the cut would be at about 30-70, taking a depth of 0.51 as in neighbouring burial 49. This is at about the level of the darker version of 1823 (a), which probably represents a turfed top-soil.

If the grave was cut below 1823 (a) and through it in 23 (b), it would conform to the pattern of its neighbouring burials 41 and 49. The third alternative is thus probably the most acceptable.

A body, with no obvious ritual or punitive treatment, had been placed in a grave cut into a Mound 5 quarry pit, radial for Mound 5, at a point when the quarry pit had acquired a little refilling.

#### 7.1.7

#### **BURIAL 47**

Int 41

1987-8

A J Copp, M R Hummler

Structure 18

Grid: 129 156

GRAVE: F435

Fill: 1852,1918

Orientation: NW-SE

High point:

32.52m AOD

Max. length:

1.50m

Low point:	32.31m	Max. width:	0.50m
Min. depth:	0.21m	Area:	0.75m <sup>2</sup>

Probably not a burial.

Cut into the base of quarry pit F133, or integral part of quarry pit F133, with a deposit probably of animal bone (F418).

BODY: F418/1827

No articulated body stain found but a fragment of possible long bone which may or may not be human.

High point: 32.51 drops down SW to low point 32.44m AOD

Anatomy: None provided by F Lee [\* find 40156?].

Quarry Pit: F133. Oval pit a line NW-SE back filled to 12.7.71 (probably the same 1852) and pinky grey fill 1270.

F435 seems to be the bottom of the quarry pit, cut rather than a separate feature.

#### *Excavation*

The study began with the excavation of quarry pit F133 which had been seen and planned at horizon 2, and was re-defined and re-planned at horizon 7. This pit is seen to be cutting all neighbouring features (F134, 128, 132, 224). It was an oval pit lying NW to SE with a pinky grey fill (1270), and was excavated at level D in quadrants with orthogonal axes NW to SE / NE to SW.

The east quadrant was removed first, later fill 1270 being followed by earlier darker fill 1271.

The excavator, A Towle (a student under supervision of MRH) encountered (at 31.51m AOD) a black spongy strip of organic decay product thought at first to be wood. It was assigned context number 1827, feature number 418, planned and then left in situ.

Since F133 was now suspected of being (or containing) a grave, the data acquisition level changed to level E and the procedure for recording graves. In addition, an internal array of samples was taken along the axis in the hope that this would allow body detection via by the Leverhulme Project (P Bethell). The excavation was continued at this point by P McCarroll under the supervision of MRH.

Context 1852 was assigned to the depression in the base of F133, which was expected to be a grave (feature number 435).

1852 was removed from the area of the depression, and the southern edge was reported to "go down virtually vertically for at least 10 cm". Fill 1852 was "a more compact, more orange sandy fill" (called 1918).

The excavation was then referred to AJC who decided 1918 was natural subsoil: "at this depth the subsoil is quite stiff with blocks of concreted in situ sandy subsoil. The subsoil is rough and appears to be composed principally of very small gravel" [N384/30].

The excavation of depression F435 was therefore declared complete.

### *Interpretation*

MRH felt that F435 and F133 were different features, and offered various models for the relationship between them:

1. that F133 was a quarry pit that had cut grave F435.
2. that F133 was a robber pit or access pit to the grave; and
3. that F133 was a tree pit, over a grave.

As with the other examples of graves in the pits neither MRH nor AJC considered the option that the grave had cut the base of an empty quarry pit. This would remain the least contradictory option in this case too but, in view of the lack of an articulated body stain, the question must be raised as to whether there was a grave at all.

In favour of there being a grave, F435 at the base of quarry pit F133 are MRH's comments on the fill and orientation, together with the shape of F435.

Fill 1852 was found to have very many rootlets in its surface, a phenomenon associated with grave fills. The shape of F435 was undoubtedly grave-like although short, and its orientation matches the graves F424 and F517. Excavator, P McCarroll reported a vertical edge to F435 on the south side.

On the other hand, the records do not offer strong support for the independent existence of a feature 435. MRH remarks on the "different orientation" of F133 and 435 which caused a change in section line. The hachure plan and photograph [N384/30] would certainly allow them to be the same feature. The profile [D1414] can be construed as a continuous interface between the natural subsoil and a pit, uninterrupted by any earlier or later intrusions. This becomes clearer still if the opinion of AJC on 1918 is accepted, that it was subsoil. In this event, the "cut" for F435, never strong, can be seen as the normal locus of the lowest point of the quarry pit, presumably excavated with spades.

MRH also mentions the fill of F435 (1852), and the lower fill of the pit (1271), stating that they are of "different colours and texture". They are not, however, recorded as being different: the colour is identical (7.5 YR4/4) and the texture only differs in the gravel component.

The expectation of the grave began with the discovery of the organic fragment F418 which, as is clear, from the diary, was encountered in 1271, the quarry pit fill, and redesignated to 1852, grave-fill, when the outlines of the grave F435 were being sought.

The conclusion here seems to be:

1. there was no grave; quarry pit F133 had two fills, 1271 = 1852, and 1270. 1271, the lower fill, contained the long bone, probably of an animal.
2. If there was a grave, it was dug from the bottom of an empty quarry pit, left in complete and a single limb deposited at its end.

Since there seemed to be no way the analysis of phosphate or ICP samples would affect this interpretation one way or the other, the analyses was not taken further.

#### 7.1.8

#### **BURIAL 48**

Int 41

1989

A J Cop



Grid: 125 172

#### Structure 16

GRAVE: F486                      Fill: 1902                      Orientation: NE-SW

High point:	33.01m AOD	Max. length:	1.73m
Low point:	32.61m AOD	Max. width:	0.61m
Min. depth:	0.40m	Area:	1.06m <sup>2</sup>

Not seen cutting buried soil platform, but probably did so.

BODY: F555, 2033

Length: Circa 1.6m as estimated reassembled.

Posture: The decapitated body lay prone, legs extended, feet together, slightly flexed at the right knee. The right arm, apparently detached from the shoulder, lay beneath the left arm and shoulder blade. The head had been placed over the left leg, neck towards the feet, eyes and mouth facing NW.

#### Identified Bone:

43232        Skull  
43227        R. femur  
43228        R. tibia  
43225        R. talus  
43230        L. innominate  
43229        L. femur  
43226        L. tibia  
C14 432342 sufficient for C14

Anatomy: Middle - mature adult male 33-45 years old.

#### *Excavation*

The grave F486 was first defined at Horizon 7 (on the subsoil) and was not seen cutting the buried soil platform of Mound 5, at Horizon 2/4, unlike its neighbours F86 and F81. "However, there is no reason to suppose that this grave is not early medieval".

At Level 1 (32.88m AOD) the fill (1902) was very sandy, and the edge unsure at the NE end, probable due to scrambling by burrows [D2114].

At Level 2 (32.78m AOD) the head, arms and length of femur of body F555 had appeared [N425/32; D2117].

The full body was exposed on the base of the grave at Level 3 (32.62-32.68m AOD). [N426/12; D2136, 2139, 2140, 2142, 2143]. There was no sign of a coffin.

During the dismantling of the body, the bone on the underside of the skull and along the lower right leg was found to be exceptionally well preserved.

The empty grave was planned and photographed [D2147; N426/13].

## Decapitated body buried in a grave radial to Mound 5

## BURIAL 49

Structure 17

High point:	32.09m AOD	Max. length:	2.60m
Low point:	32.32m AOD	Min. length:	2.60m
Min. depth:	0.58m	Area:	
Volume:			

Anatomy: Body stain only.

## *Excavation*

[N400/4]

### *Excavation of the Quarry Pit, F129*

Alerted by the experience of Burials 41 and 46, it was here assumed that a body would be buried in or under the quarry pit, F219 that had been previously defined at Horizon 2 and seen in the excavations of 1970 (Int 12, 5/4, 5/6). The procedure devised was to lay out two transverse and one longitudinal section lines, one of which must cross both anticipated grave and pit fill.

In the event, the 1970 excavations (Int 12), had already lowered the pit on the north side well below the subsoil, and at less than 3m in diameter, the pit was too small to carry six quadrants. Two central orthogonal section lines were therefore adopted, N-S/E-W.

The NW quadrant (inside Int 12) was removed first and resulted in immediate contact with body material at the centre of the section interchange. This was the head, which lay, in, and rose above, a small rectangular area of fill. At this point the sections were read in support of the pit having cut through a previous grave.

In the SE quadrant, the excavator encountered the first of several fragments thought to be decayed animal horn [actually jaws], 70mm long (41646), and then made a second contact with the grave: "excavation stopped and the sections were drawn when a clear rectangular area of fill was defined in plan".

[At this point which, was still 5-10cm above subsoil (see entry for 28 November 1988), the locus of fill against the subsoil was rectangular; that is, was it thought to represent East end. "The western end runs under the baulk so its termination should be discovered beneath the SW trailing quadrant". But it is not clear whether this east end was a strong return, or whether the fill simply stopped on an east line which had been assumed to be the sloping east edge of quarry pit F129. If the latter, then obviously no grave cut was seen in that sloping edge. Since the grave did subsequently extend eastwards, the whole quarry pit or at least its eastern side had been dug too small. If, however, there was a strong return (recorded on plan 1805) then this must represent a later feature, say F517X, which showed, at least on the SE side, 5-10cm above the subsoil].

At this point the sections were drawn [D1793-6] and photographed.

In the NE quadrant, more pieces of horn [jaw] were encountered, and observing the grave, it was decided that grave fill and lower pit fill were identical. Returning to the SE quadrant, the 5-10cm remaining above subsoil were removed and the S side of the body was immediately revealed.

On 28 November 1988, with the last trailing quadrant still standing (SW), AJC wrote "the stratigraphic position of the grave is clear. It cuts the pit F129. In the section D1793, which is really the only section to coincide with the grave, it can be seen cutting the fill of F129. This relationship is ONLY clear from the section. The situation could not be revealed in plan".

On the basis of this section much of the central area of pit fill (called here 1265) was redesignated as 1961, the grave fill within the pit, and the majority of finds of jaw reassigned to this context accordingly. 41385 (at 32.56m AOD) and 41388 (at 32.42m AOD) were the two pieces of jaw not to be reallocated to 1961 (Grave F517). "These remain unquestionably in the back-fill of the pit F129". [Both were in the NE quadrant, neither of whose sections record context 1265 at that level. 41385, as 41388, would belong more properly in 1962].

A Kubiena box was taken from section D1793 at the observed interface which was thought to be the trace of the grave cutting the pit fill. The microbiological analysis of this box (41384) was to show conclusively that two

different deposits had interfaced. Until then "I cannot prove independently that F517 cuts F129" and 1961 was to be regarded as a "holding context".

An extra section line was now laid out in the remaining quadrant (SW) such that it crossed the visible grave at right angles. This was D1800 [N405/22], in which "F517, 1961 can be seen cutting the pit fill 1265".

The SW quadrant was then removed and the "clear outline of an a small grave (circa 1m long)" seen to be cutting across the base of the pit. It was then assumed to be the grave of a child. The grave was cut only slightly (100mm) into the subsoil, (which accounted for the lack of bedded subsoil lumps in the putative grave - fill 1961. The head at the west end rose 100mm proud of the pit floor.

#### *The Excavation of the Grave F517*

The excavator began his record with the unheralded statement "the situation is now that the vague outline of the east end of the grave can be seen on the surface on Horizon 2-7" [N406/13].

This east extension, having been made, was sectioned [D1828] and then fully excavated [N406/9]. The filling was designated 1974, the same context as surrounded the body. There was some animal disturbance which made the normal edge hard to define at Level 1 (the surface); a small lump of bedded subsoil was noted in the fill at this level [D1813].

Level 2 was taken as the top of the body [N406/9; D1822], which was given context 1990. The south half of the remaining fill, 1974, was removed [N406/12]. It contained "a few moderate sized lumps of bedded subsoil". The whole body was exposed at Level 3 [D1823-25, D1846; N406/16-17; N400/6].

#### *Excavation of the Body F524*

The Excavator commented on the position of the body: "it appears that it is lying face down but the contortion at the top of the spine is exceptional". Only one arm survived as a clear stain, the other was "strikingly indistinct".

Otherwise the majority of the body - locus was very well preserved as a dark brown sandy stain. No bone or bone meal was visible. The head was on its [left] side and facing N-NE. The pelvis and legs were lying buttock to base of grave although the pelvis was tilted up on its side. The knee-caps of both legs were visible as slightly darker brown stains, the feet were pointing down -the toes being the furthest point east of the body stain.

The arms were identified as the two nearly parallel dark lines on the N side of the grave. Both arms, in this case lay under the shoulders, and to the north of the pelvis, implying that the top half of the trunk lay face downwards. The top half of the vertebrae (which rose from the pelvis and continued to the head) was also curiously bent. "The posture of the body" says the excavator, "would have been quite normal except for the abrupt bend at the top of the spine. The head is in an unusual position tight up against the N corner of the grave. It is possible that the grave was originally too small for the body and so the body was pushed in tight against the sides of the grave. In favour of this explanation is the discovery of the feet and pelvis hard up against the end and side of the grave. Another explanation to account for the posture could be the post-depositional processes of decay and displacement. The head may have slipped gently northwards and sideways as it rotted".

"My favoured explanation" he goes on, "is more straight forward: the body had been hanged or constricted around the neck and it had been thrown into the grave, probably after *rigor mortis* had set in".

"In favour of this explanation was the discovery of a "extra" stain around the neck. [This] stain F525/1991) coincided with the abrupt bend in the neck" [N406/18]. After the removal of context 1991, as find 41859 "the line of the spine could be traced up to the head [N406/20]. There is absolutely no way in which Stain 41859 was part

of the body".

The description of this stain, 1991, was significantly different from the body 1990, in colour (5 YR/3 as opposed to 10 R 2.5/1) and in the behaviour of roots. 1991 was penetrated by very thin white rootlets, as opposed to the bracken root penetration of 1990.

The Stain F525/1991/41859 was 100mm long and 120mm at the widest. It was 30mm deep on excavation. No structure was observed on or within the deposit. It was at first identified as wood, but later considered as possibly rope. The material recovered as 41859 was sent to the EAU for identification.

The excavation was completed on 12th December 1988 [N406/23; D1853-4] twenty days after the grave had been discovered.

The "horn" fragments were examined [8th February 1990] by Terry O'Connor (EAU) who identified them as teeth of large herbivores, among which horse was certainly and cattle probably present (Table 1).

He commented "I frankly doubt that any further examination would yield further information, as the materials are so friable that any handling will just destroy it. As to the significance of these teeth, cattle and horse teeth are particularly large, dense and robust and thus durable in an aggressive environment. It is not out of the question that these are last relics of a formally substantial assemblage of bones which included horse and cattle skulls".

#### *Interpretation*

The excavator considered that Section 1793 "clearly illustrates the grave cutting the pit [fill]", while in Section D1800 "1961 [fill of the grave] can be seen cutting the pit fill 1265". Fragments of jaw were present in the back fill assigned to both grave and pit; this could mean either that the pit had cut through a grave containing a jaw deposit, leaving the jaw scattered in pit back fill; or that the grave had cut through a jaw deposit in the pit, allowing jaws to become incorporated in grave back fill. Of this scenario, the excavator commented "since the horn [jaws] survived after being disturbed from the pit fill, it is probable that the grave was dug through the pit quite soon after the pit had silted up".

The body F524 lay in a cut less than 100mm deep on the pit floor. The head therefore rose above the level of the pit floor and would have been unlikely to survive had the grave been truncated by the pit to the level of the grave edge at a later date.

This eastern outline of the grave had proved elusive, but after the grave had showed in the bottom of the pit, an extension was sought and found. On this basis the excavator decided that the whole grave had been cut from Horizon 2, ie the grave had cut all the pit fills.

In spite of the excavator's conviction, however, and thanks to his objective recording, the relationship between grave and pit remains equivocal, and will be considered in detail.

#### *Quarry Pit fills*

The Sections D1793 and D1800 are, at best, inconclusive. The interface line seen on D1793 is not coincident with the grave. The locus of 1961 and 1265 on D1800 resemble normal quarry pit fill patterns and would never have implied a grave if were not, or had not already been discovered. The remaining sections, D1796, 1794, and 1795, all of which contain strata which is stacked above the grave, show no signs of a cut.

It is clear from the sections that interfaces between deposits are present, although they do not give a consistent picture, and to this extent it is doubtful if the micromorphology could be taken as "conclusive" either way.

An examination of the quarry pit fills as represented in section shows that there were considerable inconsistencies in the labelling whatever the exact character of the sequence seen in each section. None of the strata seen in any section matches those seen in any other, even in the east facing [1793] and south east facing [1800] sections which were very close to each other.

The reason for this could either be that the pit fill was turbulent so that the sections would not be repeated, or that the layers are in fact very similar. The latter conclusion is reinforced by the section colouring which at some places equates 1265 and 1962, and at other places equates 1959 and 1961, and others 1962 and 1961.

[In parentheses, it might be noted that this feature was put in jeopardy by a fundamental error of strategy by MOHC. The grave and pit were by this time expected, and the relation between them known to be crucial. But instead of just laying out more section lines, we should have dug the whole quarry pit at Level E. The excavator comments that the grave would have been impossible to see within the pit fill in plan, and was only visible in section. But that should have been tested. Whilst the section remained the only satisfactory way to observe large scale vertical systems like Mound make-up or buried soil, the pit-grave system had already shown itself to be multi-dimensional, with arguably a greater sensitivity in the horizontal plane, since the one feature had backfilled the other. The discontinuities were less likely to be captured in a single line of intersect, even supposing the section line actually hit both features. Another error of both strategy and technique is that neither plan nor section (or both if Level E had been adopted) continued into the bedded subsoil. This was a point of contention on site, MOHC considering that everything should be overcut on completion as a matter of routine, and endorsing Longworth and Kinnes on this point; while AJC considered (and consistently practised) the precision recording of the observed limit as being sufficient.]

It could be argued from the photographs that the east, and possibly south sides of the quarry pit, were underdug. N406/1 and 3 show a clear jacket of dirty subsoil up to a metre wide. N400/6 and N406/17 show a triangle of dirty subsoil above bedded subsoil 20-30cms or so above the feet of the body, F525. There were no features discovered later which would account for this.

This material could of course refer to the subsoil sides of F129 which had become subject to plant growth and root action as described in the experiment on Mound 2 quarry ditch. But, if so, it should have been present at the lower levels, where in general a more a confident contact with bedded subsoil was achieved [see N406/3; the dark band to the north is the fill of unexcavated ditch F128].

With this in mind, we could reconsider the fills of quarry pit F129. The south-facing section, D1796, offers the clearest stratification. The primary fill is brown silt sand 1962, overlaid by dark reddish brown 1959 and the brown silt sand 1265. These are all acceptable as back filling episodes in a quarry pit [see 17.2]. 1959 has the same description as 1823, the primary fill of quarry pit of F130 and is not dissimilar to 1940, the primary fill of quarry pit of F5208. 1962 and 1265 have similar descriptions.

The most consistent account of the strata is the west-east section in which a layer, mostly called 1265 crosses the inner part of the pit. This layer can also be accepted as being in the east-facing and west-facing sections too. Its lowest point is at about 32.74m AOD. This first layer (Layer A, say), seals the central area of the pit. Nowhere was it seen to have been cut.

The next layer down, most called 1959 (Layer B, say) is more equivocal. A case could be made for its east-west continuity, including over the grave, but in the north-south section, it hardly exists. "A" or "B" may have sealed the grave or been cut from its surface, in which case the grave was cut from about 32.70-74m AOD.

1962 ("Layer C") is the lowest stratum filling pit F129. There is an observable vertical discontinuity in Section D1975, where 1962 is cut by a vertical line. To the east of this is grave fill lying directly over the head.

Using these generalised fills A, B and C, it can be seen that the bulk of the information coming from the records is consistent with a pit cut by a grave at the point at which it is acquired two layers ("B" and "C"), and the grave is then sealed by a third ("A").

The east extension of the grave, which appeared to suggest that the grave was cut from Horizon 2, need not contradict this proposed geometry. The section (D1828) shows the primary grave fill 1974, and above it a blotchy mixed fill, also curiously labelled 1974, although it is represented quite differently. The grave as fully excavated extended 1.50m flat along its base. The body extended 1.68m from head to toe. There is a vertical discontinuity in the section at about 1.60m, but the section is small and was subject to animal disturbance, so should not be read too fine. It could be said that the fill visible in this section would equate with the later grave fill 1961, although not with the primary grave fill 1974. For the purposes of the present model, these can be designated as Layers "D", and "E" respectively.

The cut of the grave is from 32.74m AOD, so that the so-called "Horizon 2" surface is actually some 20cm below the top of the pit fill. This was no doubt caused by deep trowelling in search for the east extension. One reason that it was never easy to see, already advanced, is that the cut was made through quarry pit fill, not through clean subsoil. Such hypothetical fill as remained could probably be equated with 1962, our "Layer C".

The first east edge of the "Child's Grave" was thus a false edge caused by the shoulder of the pit edge meeting a flat subsoil face. But it also shows that the shoulder was a false shoulder. Had the rest of the pit edge been back to bedded subsoil, the east continuation of the grave would have been obvious.

The geometry of pit and grave can therefore be modelled, from observations of the written, drawn and photographic records, as follows;

The large pit, of at least 3m in diameter at old ground surface, was cut through buried soil into subsoil. It acquired a layer of brown soil about 30cm deep ("Layer C") and another about 10cm deep ("Layer B"). At this point the quarry pit would be about 0.50m deep from old ground surface. A grave about 0.50m deep was then cut through Layers B and C and penetrated 10cm into subsoil. It was back-filled with a mixture of B, C and bedded subsoil (Layer E) and then with a mixture of B and C alone (Layer D). Subsequently the pit became filled with a layer of brown soil about 50cm deep, no doubt mainly derived from buried soil.

#### *The animal jaws*

Whatever acceptance this reading of the sections might have, it is clear that the pit cannot have truncated the grave, because the head of the body contained in it protruded above the pit floor. The grave must therefore have cut into a pre-existing pit and we have been trying to establish from what level this might have occurred.

The grave cannot have been cut from the pit floor into subsoil alone. The body would not have then been buried, but this does not itself exclude the possibility. The body could have simply been placed in its shallow grave and left exposed. [If it had been, bones would probably have survived].

The group of animal jaws was an assemblage of sufficient rarity to be decisive in the matter of the stratigraphy. Since the grave must have cut the pit fill and not the other way round, and since the jaws occur in the grave fill and in the pit fill, it follows that the jaws were originally in the pit and the grave diggers had disturbed them.

Looking at the distribution in plan, it is evident that 41385 at least, could not have been in the grave, lying 70cm from any conceivable cut.

The three jaws that were vertical, and four of those that lay horizontal, were certainly within the locus of the grave cut. Those four possibly outside the locus and the one certainly outside it lay flat.

That discovered at the highest level (41391) was at 32.71m AOD. It was less than 10cm in the horizontal plane from the grave cut and thus could have been in the grave. If not, it would have been in 1959.

The bone that cannot have been in the grave, 41385, was at 32.56m AOD on the north-east shoulder of the pit. Although it was said to have been in 1265, the south-facing section would place it in 1962, or at the interface between 1962 and 1959.

The lowest recorded level of a jaw which is probably not in the grave, is 32.42m AOD for 41388. This is within 1962.

This raises two possibilities for the original assemblages of jaws. The first is that they compromised an assemblage of jaws - or cattle and horse heads - which lay together in the centre of the pit. They were stirred by the digging of the grave which returned the majority of them as back fill. The exception was 41385, which thus represents the ground surface in the pit at the time of digging.

The second possibility is that the jaws are the "last relics of a formally substantial assemblage of bones which included horse and cattle skulls" as suggested by the specialist (T. O'Connor). In this case all were buried in or at the very top of 1962, our "Layer C". This option is preferred since the other requires the highest cut of the grave (32.71 to accommodate jaw 41391) to be higher than the contemporary surface of the pit (32.56, where 41385 fell on the shoulder).

A wide scattering of jaws in 1962 would be easier to countenance if they had actually belong to whole animals. Only fragments of molars (including upper molars) have survived, which says little of whether long bones could have done so. Teeth were recovered in cylinders or strips of dark soil up to 70mm long which presumably were jaw-bones. 41391 and 41394 were certainly upper molars and were each 50mm long. Therefore it seems likely that, if upper jaws (maxilla) could be traced, long bones or indeed lower jaws would be traceable too.

We should also note that human bodies and horse and cattle carcasses, where we had them, produced a strong sand body. The likelihood is that only the heads and perhaps the upper skulls of cattle and horses formed the original deposit. The minimum number is the head of two animals, one cattle, one horse; and the maximum number 12. These were placed in the deposit 1962 ("Layer C").

#### *The Body F524*

The position of the body appears to be clear. It lies on its back with the arms behind the back and the head crooked over to lie almost on the left shoulder. Both arms converge to a point approximately half way down and just outside the left thigh. The toes point down (east).

The fragment of organic matter, F525, which is not part of a human body decay product was placed between the bend in the neck and the head, that is - around the neck.

The posture is exactly, and chillingly, that of a person with their hands tied behind their back, cut down from a gibbet.

#### *Model*

The sequence of this complex is therefore as follows:

Phase 1: Pit F129 was cut through buried soil. Its position suggests strongly that it is a quarry pit for Mound 5. The excavated material went to build Mound 5.



- Phase 2: The heads or upper skulls of horses or cattle are placed in this pit, and covered, or become covered, with a brown sand silt derived from the buried soil ("Layer C"; equals 1962).
- Phase 3: In this phase the grave was dug, through a soil containing the decaying heads of cattle and horses. A layer of reddish brown soil ("Layer B"; equals 1959) develops over the pit either before or after the grave was cut. On analogy with other quarry pits, this layer may have been a turf line. Was the grave dug before or after this turf developed?

The argument from the quarry pit fill requires the grave to have been cut either from the top of "Layer B" (1959, height 32.83-32.71m AOD) or from the top of "Layer C" (1962, height 32.66-32.71m AOD). Either would accommodate the highest jaw bone at 32.71m AOD, to be in either grave fill or in Layer C. However as the excavator points out, the jaws would have had to be disturbed and redeposited quite soon after their initial deposition. It is perhaps unlikely that a deep turf line would have developed in the time. But it should be noted that the Mound 2 quarry ditch (bare subsoil) had acquired a plant cover while the back-filled excavation areas (soil) had developed a self-seeded turf within two years. The episode of the burial of the hanged man and the episode of the deposition of the animals skulls are therefore separated in time, perhaps as much as the time required for turf to grow, but not more than two to three years, allowing the animal bone, if decayed, to remain intact.

The buried person had been hanged. The grave is 0.50m deep and just long enough to accommodate the body of a hanged (man), his hands tied behind his back and the knot of rope still around his neck where it was cut from the gibbet. The grave was back-filled with its own upcast containing fragments of jaws from the previous deposit (Layer D and E).

- Phase 4: The turf line "Layer B" (equals 1959) now covers the grave.
- Phase 5: Erosion from the buried soil, or from Mound 5, or from ploughing, fills the hollow which is still visible, ("Layer A"; equals 1265).

TABLE 1: The Jaw Fragments in Burial 49

F=lying flat; U= lying upright or on end; L=length; W=width; P=in the quarry pit; G=in the grave

LH = Large herbivore; C = cattle; E = horse

Find No	No. on Plan	x	y	z	F/ U	L/ m m	W/ m m	context	P/ G	Ident
41385					F	70	20			molar of LH
41386					F	30- 50	30			molar of LH
41387					F	50	30			molar of LH
41388					F	60	40			upper pre molar of E
41389					F	40	20			molar of LH
41390					F	50	25			upper pre-molar of E
41391					F	50	30			upper molar of C
41392					U	70	30			upper pre-molar of E
41393					F	70	40			molar of LH
41394					U	50	40			upper 3rd pre-molar of E
41646					F	40	20			molar of LH
41656					U	40	30			molar of LH

7.4.10

# **BURIAL 50**

INT 12[INT41]

1970

I Longworth

Grid:

GRAVE: Grave 1 in Area C 5/2 and 5/4

Orientation: S-N (feet to N)

High point/low point: not known

Length: 1.64 m [for 5'4",  
read 5ft 4ins]

Depth : 0.51m [20"]

Width: 0.46m [18"]

Area: 0.75m<sup>2</sup>

Tangential to Mound 5; no stratigraphic relations.

BODY:

Posture: Flexed on right side, head to S.

Identified

bone: none

Anatomy: adult

#### *Excavation*

The grave was recognised 'at an early stage in the excavation as a feature cut from immediately below the modern turf level'. It was "cut entirely in mound material". "The grave fill consisted of re-deposited mound material, including some flint pebbles. There was some evidence to suggest that a slight amount of silt had accumulated at the base before the insertion of the body, but in an essentially unstable soil this might have occurred very quickly."

On section a piece of material is marked 'bone', some 300mm above the floor of the grave. This is otherwise not referred to in L&K, and should therefore refer to the body itself.

#### *Interpretation*

The grave and the body within it occupy an anomalous stratigraphic position. The body is apparently much higher than the grave floor, but this may not have been intended by the authors of the report.

The grave was cut from just below the turf. This should mean that the area suffered some erosion after ploughing or that the 'modern turf line' is equivalent to the fossil ploughsoil of the 19th century.

It is said that this grave was cut entirely in mound material. In this it differs from all other graves encountered. The grave is certainly cut into the buried soil platform of mound 5, and does not appear to have reached the subsoil. The depth of the grave is said to have been 20" or 0.51 , although the section has 17" or 0.44m. Either would be an exceptional depths for the buried soil at Sutton Hoo under any of the mounds.

Burial 50 is the grave closest to the ancient perimeter of mound 5 [VOL 4, 7.2]. There is therefore a likelihood that the excavators of grave 1 had encountered a rare survival of make-up for Mound 5. Th stratigraphic position of grave implies that other secondary burials would have been found. The old ground surface itself was nowhere more than 400mm above the subsoil. It is thus very unlikely that other graves escaped detection.

7.4.11

#### **BURIAL 51**

INT 12[INT 41]

1970

I Longworth

Grid:

GRAVE: 'Grave 2" in Area C 5/7

Orientation: W-E

High point:

Length: 1.92 ['75"]

Low point:

Width: 0.46m ['18"]

Depth: 0.20m ['8"]

Area: 0.88m<sup>2</sup>

Pit: F 10, a circular hollow with a light-coloured sandy fill. A feature cut across the grave or a result of some displacement of the body in the grave leading the sagging of the layers above.

BODY:

Posture: Extended on back, with head to the W

Identified bone:

At least one from L leg, chemically analysed by M J Hughes, BM Lab.

Anatomy: Not known

#### *Excavation*

The grave was defined at the level of the natural sand [= horizon 7]. The surviving depth was said to be "8" at 24" [0.62m] below modern turf-level. This could mean the top of the grave was 24" below the turf or that the bottom of the grave was 24" below the modern turf. Both represent an exceptional depth of buried soil and the grave should therefore have been cut through some mound make-up.

#### *Interpretation*

The grave was probably cut through some mound make-up. The hole, F 10, is not easily explained by dishing, since there was nothing in the grave to collapse. On later experience, it could have been an animal burrow; but it could also have been an attempt to revisit the grave, as suggested for Burial 41.

#### 7.5.1 *Group 2 - Non-Burials in Int. 41*

F8 [N164/4]

Grid: 110 193

Rectangular feature defined at Horizon 1, which vanished on further attempts at definition. No features

F27 (1049)

Int 41

1987  
A J Copp

Grid: 116 202; Height: 34.53-34.35m AOD.

Oval dump on Mound 2 [N196/13]. Identified as *blocking for a rabbit hole*.

F54 (1096)

Int 41

1987

A C Evans

Grid: 117 180; Height: 32.74-31.82m AOD

Rectangular (1.82 x 0.65 average x 0.92m) grave-like feature cut into Mound 2 quarry ditch. Loose, mixed fill (1096, 1382) with patches of iron pan, penetrated by decayed roots. Fully recorded and sampled as a grave in nine levels.

#### *Excavation*

The features showed on the surface as a rectangle which had remained in a baulk across the Mound 2 quarry ditch, between quadrants Q and R.

The feature had cut the final fill of the quarry ditch F42, [\*\*, context No. ] [N233/7].

A number of large damaged flint nodules were found at the centre of the fill.

At Level 7/8 [N242/11] some anomalies of dark sand were noted, but there had also been much disturbance and tunnelling by rabbits, with a possible large living chambers at the centre of the fill.

At Level 9, a less disturbed context (1367) of brown silt sand was intensely sampled to detect the traces of any invisible body.

A "curious chocolate brown damp patch was encountered in the western spit [at the north end]. Does not look very body-ish" [N242/30]. This was designated F146 (1367). It was oval in shape, and seemed to be a lump of iron pan.

Beneath F146, 1367 was the floor of the feature, covered by a thin layer of dirty yellow sand (1382).

The empty feature [N247/1] was straight sided, narrowing towards the uneven base. The base was also sampled for body detection by the Leverhulme project. It largely consisted of small gravel subsoil, and was wet at that level.

The excavators had suggested that, if F54 was a grave, the body may have completely vanished due to the wet conditions.

#### *Interpretation*

This is unlikely to have been a grave. There was no trace whatsoever of any organic decay products in general, nor of body material in particular. The fill was very loose and this had no doubt encouraged the rabbits which had burrowed in it. No grave was cut through a quarry ditch or pit final fill. The shape of the empty feature and its dimensions (equivalent to 6 x 2 x 3ft 6 inches to the turf) suggest that its identification as a *military slit trench*.

F123 (1239)

Int 41

1987

M Johnson

Grid: 112 159 Height: 32.92-32.52m AOD

A rectangular feature 1.65 x 0.50m x 0.35m deep, cutting the Mound 5 buried soil platform (F224), orientated NW-SE.

The feature showed as a quick drying patch, oblong with rounded corners, adjacent, parallel and similar to grave F124 [N241/10; see under Burial 44].

Fill 1239 was a dark reddish brown silt sand much disturbed by bracken and burrows. It was removed in 10cm spits [N261/7]. After the removal of 40cm, beginning at the north-west end, the excavator encountered undisturbed subsoil [although this was not described; N \*\*\* shows the empty grave].

No traces of a body, coffin or other anomaly was encountered.

#### *Interpretation*



A rectangular near feature cut into the surface of the buried soil beneath Mound 2 (F158/1466) [N291/23]. Identified as an *animal burrow*.

F194 (1516)

Int 41	1987	A J Copp
Grid: 131 194;	Height: 33.23-32.72m AOD;	Orientation: E-W

A rectangular pit 1.7 x 0.6 x 0.51m, part of the burrow complex (with F193) cut into the buried soil beneath Mound 2. Fully recorded, sieved and sampled as a grave in 7 spits, including a sample array for the Leverhulme project for the detection of "invisible" bodies.

Fill 1516 was a heterogeneous mixture of sand, gravel and silt sand, interlaced with animal burrows. The rectangularity of the initial definition was continued vertically downwards [N291/33; but the edges were largely making allowances by bridging burrows]. At spit 5, clear signs of recent burrowing were visible: recently rotted grass fragments. At spit 6, anomalies were encountered which did not retain consistent shapes. A dark circle was a rabbit hole [N291/33]. Beneath the level of buried soil, natural bedded sand subsoil was encountered. At the general base of the disturbance (spit 7) a burrow could be seen crossing north to south across the base, and "burrows could be seen going through most of the walls around" [N291/36].

The excavator commented "I am exceptionally sure that this feature is a burrow and a nest". All the records support the identification of this feature as an *animal burrow*.

F245 [N391/01]

Int 41	1988	K H Spandl
Grid: 131 207	Height: 33.19-32.92m AOD	

A rectangular feature shown the be an *animal burrow*.

F267 \*\* [N331/10]

F399 (1786)

Int 41	1988	S Calvert
Grid: 170 172;	Height: 32.83-32.75m AOD;	Orientation: NE-SW

A lozenge-shaped pit 2.05 x 0.60 x 0.26m AOD cut into the edge of a quarry pit for Mound 5, F58.

The fill (1786) was mixed mottled dark reddish brown silt sand which retained moisture better than F58. The natural subsoil was reached in a depth of less of 30cm; the base sloped from east down to the west [N350/0].

Since this is the same general profile as that seen in the quarry pit F58, it is probable that F399 was *part of quarry pit F58*.

F426 (2008, 1844)

Int 41		1989	A J Copp
Grid:	112 166	Height: 32.92-32.30m AOD;	Orientation: E-W

An oval pit, long axis east to west, 3.0 x 1.9 x 0.62m deep. Cut into the buried soil platform of Mound 5 (F391), where it was first defined at Horizon 5, and excavated at Horizon 7.

The shape and size of F426 were reported to be similar to the robber pit for Mound 5, F390.

The latest fill, 1844, was a compact silty dark brown fill, "very homogenous and very similar to the Horizon 4 layer of buried soil". The excavator considered it very likely that the feature had been cut from Horizon 4, although the edges had not been seen there. Context 2008, beneath 1844, was more mixed, with dumps of clean sand and lumps of bedded subsoil. Both contexts appear to have been thrown back into the hole before they had had a chance to weather.

The excavator thought it might be an earlier attempt at either a burial chamber or the robbing of the burial chamber, but "I do not think it is of recent (post-medieval) origin, because of the distinct nature of the back fills".

The feature was considered as a potential grave only after the removal of 1844, that is at Level 2 [N410/10], when standard grave recording procedures were adopted. At Level 3, 10cm down, the feature began to bottom out [N410/25], and at Level 4 the subsoil was encountered overall. There was no trace of a body or any anomalies which might relate to a burial.

#### *Interpretation*

The shape and axis of pit F426 strongly suggests that it was a trial hole for an attempted robbing of Mound 5.

The fill (subsoil and buried soil returned rapidly to the hole) suggest that it may have been dug from Horizon 4, the old ground surface, rather than through the Mound above it, which should have contained stony Mound make-up. There were no traces of the burial encountered in F390; therefore F426 was dug first. F246 and F390 could therefore be downwards assays (one unsuccessful, the other one on target) from a trench at the level of Horizon 4. It would be standard technique to dig such trench following the old ground surface until the yellow fill of a chamber showed itself. In this case of course, the pit F426 would not need to have been dug through the Mound itself.

It might be that a yellow glimmer was encountered at the point marked by F426, for example a rabbit hole. When it was realised after exploratory digging that no chamber had been found, the hole would have been rapidly back filled and the trench continued to a point nearer the Mound centre.

This need not mean that the centre of the Mound was elusive, or that Mound 5 had largely disappeared.

In spite of AJC's doubts, F426 could easily belong, like F390, to the 19th century excavation campaign.

#### **8. SELECTED STUDIES: Medieval and Later Periods**

[none]

END