RPS Planning, Transport and Environment

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A Report to English Heritage

A30 Project, Cornwall - Archaeological Investigations along the route of the Indian Queens Bypass 1992-1994

Assessment and Updated Project Design

by Jacqueline Nowakowski BA MIFA

Document Dated: July 1998

Volume I

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A30 Project, Cornwall - Archaeological Investigations along the route of the Indian Queens Bypass 1992-1994

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VOLUME I

Volume I represents the first part of a four volume document which describes and assesses the results of work carried out on the A30 Project in Cornwall. This work took place on along the route of the Fraddon to Indian Queens bypass and was carried out between 1992-1994.

Acknowledgements

The success of the A30 Project rests on the interest, support and co-operation of many people.

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The ultimate success is due to the workers - both full-time and volunteers - who kept the project manager on her toes and who daily reminded her that above all, a long campaign of excavation is not only hard work, but can also be great fun.

Jacqueline A Nowakowski,
Cornwall Archaeological Unit,
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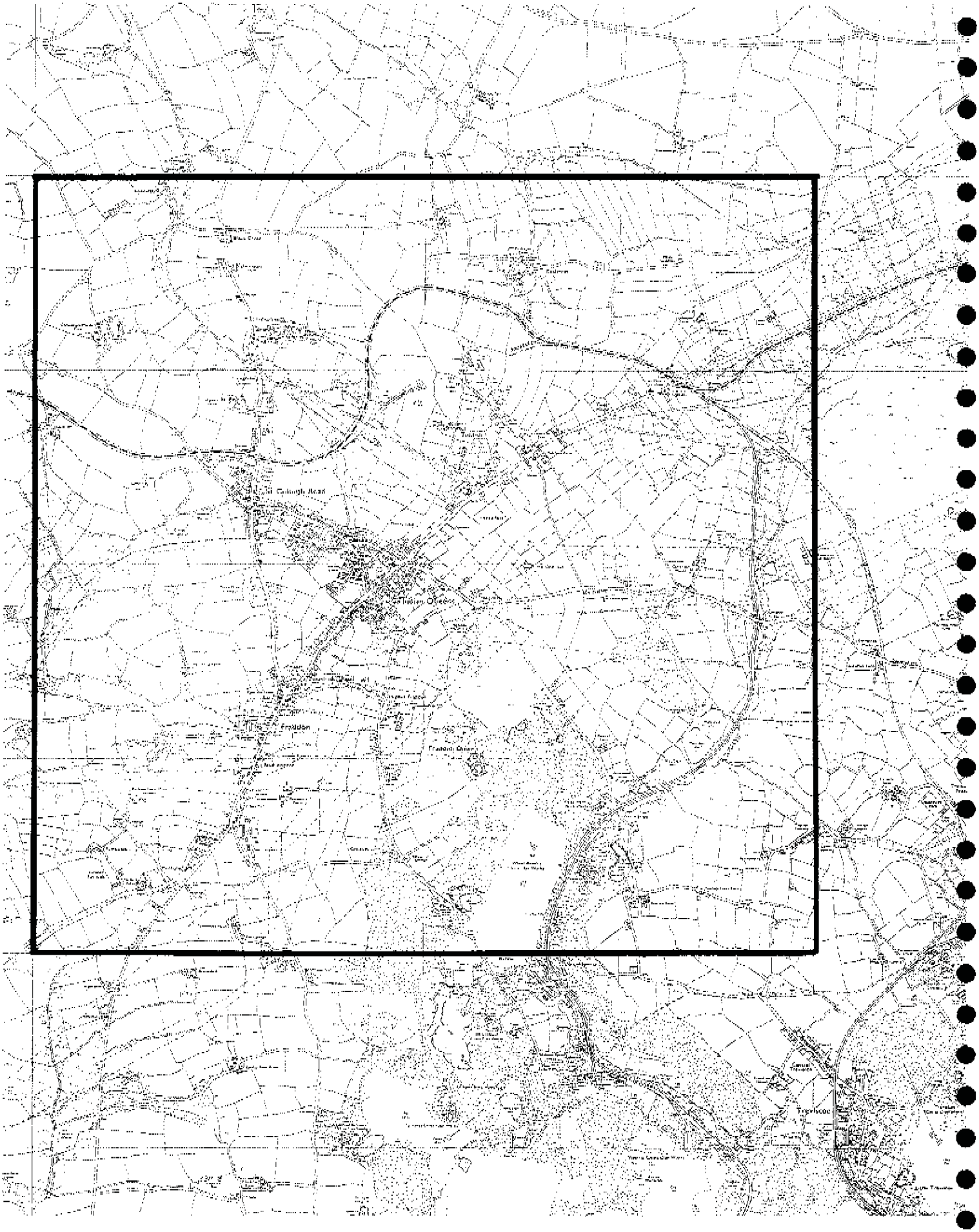

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Cornwall and Scilly
Sites and Monuments Record

CORNWALL COUNTY COUNCIL

Planning Directorate, Cornwall County Council
County Hall, Truro

Fig. 1 Location plan of A30 Project Area

Introduction

This report assesses the results of a major campaign of archaeological fieldwork which was carried out over a period of 19 months at Indian Queens in Cornwall from 1992 to 1994. The project evolved from an archaeological reconnaissance survey carried out along the route of the then proposed Indian Queens - Fraddon road improvement scheme (the present Indian Queens bypass) which was undertaken by the Cornwall Archaeological Unit (CAU) in the winter of 1991. This survey identified sites of archaeological and historical significance which would be affected by the construction of the bypass and was funded by English Heritage and the Dept of Transport. In the spring of 1992 a number of further evaluation exercises took place in order to confirm the archaeological potential of affected sites. A number of methods including geophysical surveys and trial trenching were employed during this phase (Nowakowski and Johns 1992). From this arose a detailed project research design and strategy which recommended appropriate levels of archaeological investigation and recording for sites threatened by the construction of the bypass (Rose, Herring and Nowakowski 1992). This was accepted for funding by English Heritage in the autumn of 1992. Additional funding was given by South Western Electricity during the relaying of a transformer cable at Penhale Round which disturbed land outside the edge of the bypass corridor in May 1993.

At the outset the opportunity to examine a tract of previously unexplored but varied, landscape was recognised and the overall aim of the project was a landscape-based study of the area around Indian Queens where the results of the investigation of specific sites would be assessed in terms of a broader canvas. This was seen as an opportunity to look at the changing character of the human landscape as a whole through time and was viewed as providing a methodological model for looking at areas of lowland Cornwall. Central to this approach was the classification of two main types of historic land-use through which the bypass would cross, namely "historic moorland" and "historic farmland" more recently classified as "Anciently Enclosed Land" (AEL) and "Recently enclosed land" (REL) (see Landscape Assessment 1994). The former are areas which have been open moor and heath but had become enclosed and improved by the 19th century; the latter were historically (in the earlier medieval period) areas of farming settlements and fields. This land use division was considered to be ancient in origin and was likely to have already been apparent in later prehistory (1st Millennium BC). This provided the overall context for the detailed investigation of specific sites, the search for palaeo-environmental data, and for the identification and comparison of archaeological remains of all periods along the route of the bypass.

The Indian Queens bypass which was officially opened in early summer 1995 crossed a landscape which included sites of different archaeological and historical periods. The earliest evidence relates to the Mesolithic period and the most recent comprises local industrial activity of the nineteenth and twentieth centuries. When collectively analysed much will be revealed of the evolving character of a tract of lowland Cornwall which had received little attention from archaeologists and landscape historians. Each site required a different level of archaeological investigation and the project embraced a broad church of archaeological recording techniques from earthwork and field boundary recording,

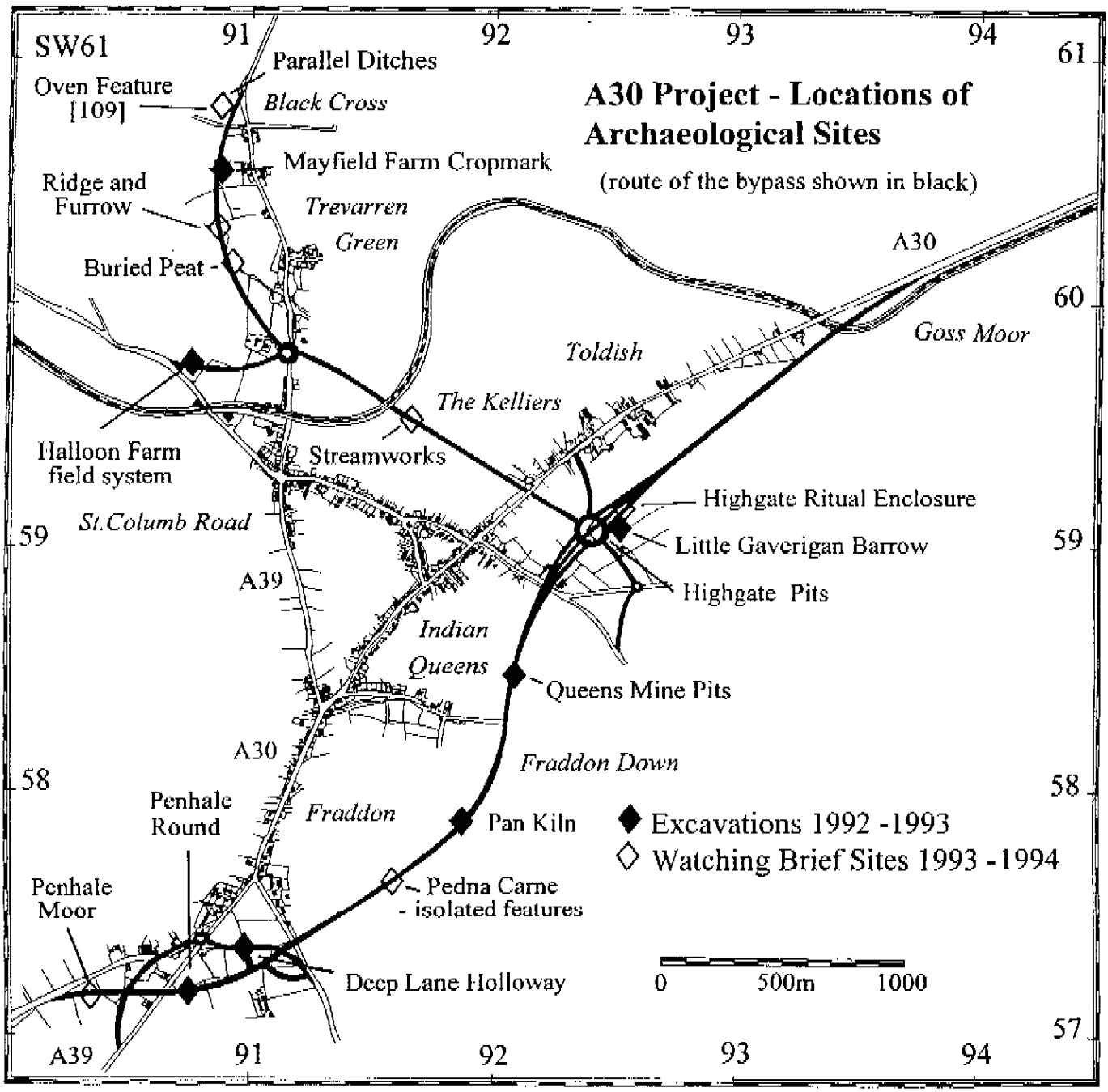


Fig.2 A30 Project, Cornwall - Locations of Archaeological Sites investigated along the route of the Fraddon - Indian Queens Bypass 1992-1994. Based *upon the Ordnance Survey mapping with the permission of the controller of Her Majesty's Stationery Office © Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. Cornwall County Council LA 076538 (1997).*

geophysical techniques, environmental sampling of buried peat deposits, documentary and cartographic research to large and small-scale excavations.

Fieldwork took place in two main phases. During the period from October 1992 to June 1993 a number of major excavations took place prior to the commencement of the bypass construction. This was followed by a comprehensive watching brief programme which monitored the major stages of road construction from July 1993 to May 1994. During the latter phase a number of earthwork surveys, small-scale excavations of targetted sites as well as complete excavations of previously unknown sites took place. Over this long campaign of fieldwork six main prehistoric sites were excavated - five of which were totally exacavated with the sixth being limited to recording and sampling by section. Four small-scalc cxcavations of sites of medieval date were carried out and three post-medieval industrial sites and two more recent sites were surveyed. Despite an extensive search only two areas of buried peat were located and sampled. In addition 134 field boundaries were recorded in section and a number of smaller isolated sites comprising ephemeral features were located, sampled and recorded.

At the end of the fieldwork the results of all investigations were collated and archived. This took place during 1994 and resulted in a number of detailed archive reports (these are listed in the bibliography). During this period a number of interim statements were produced and summary results of work on this project appeared in the county archaeological society journal, *Cornish Archaeology*, and its newsletters, as well as in the CBA *British Archaeological News* (Nowakowski 1993; Nowakowski 1994a; Nowakowski 1994b; Nowakowski, Jones and Jones 1994). The results of the project have also been presented in the form of public lectures and talks to archaeological societies, groups and extra-mural classes both in and outside the county. The opportunity to present the work to a more wider audience became feasible during the excavation at Penhale Round in 1993 where a very successful educational programme attracted schools (over 1000 young students) from all over the county. Assessment of the enormous quantity of data collected during this project was completed in the autumn of 1997.

Outline of this report

The results of each individual investigation on the A30 Project are presented in this report closely following the guidelines set out in MAP 2 (English Heritage 1991). The order in which these assessments appear is not tied to the order in which they were investigated in the field but are presented so that specific investigations may be collectively considered. The major summary section (18) integrates all the results within a broader interpretative framework and relates their overall significance to the research strategy of the whole project. The assessment team comprised a number of core specialists who were involved with the project at its conception and who were closely involved during data collection. An additional number of specialists were invited to join the project at the assessment stage. Individual assessment contributions are presented in full or are summarised in the main body of the text.

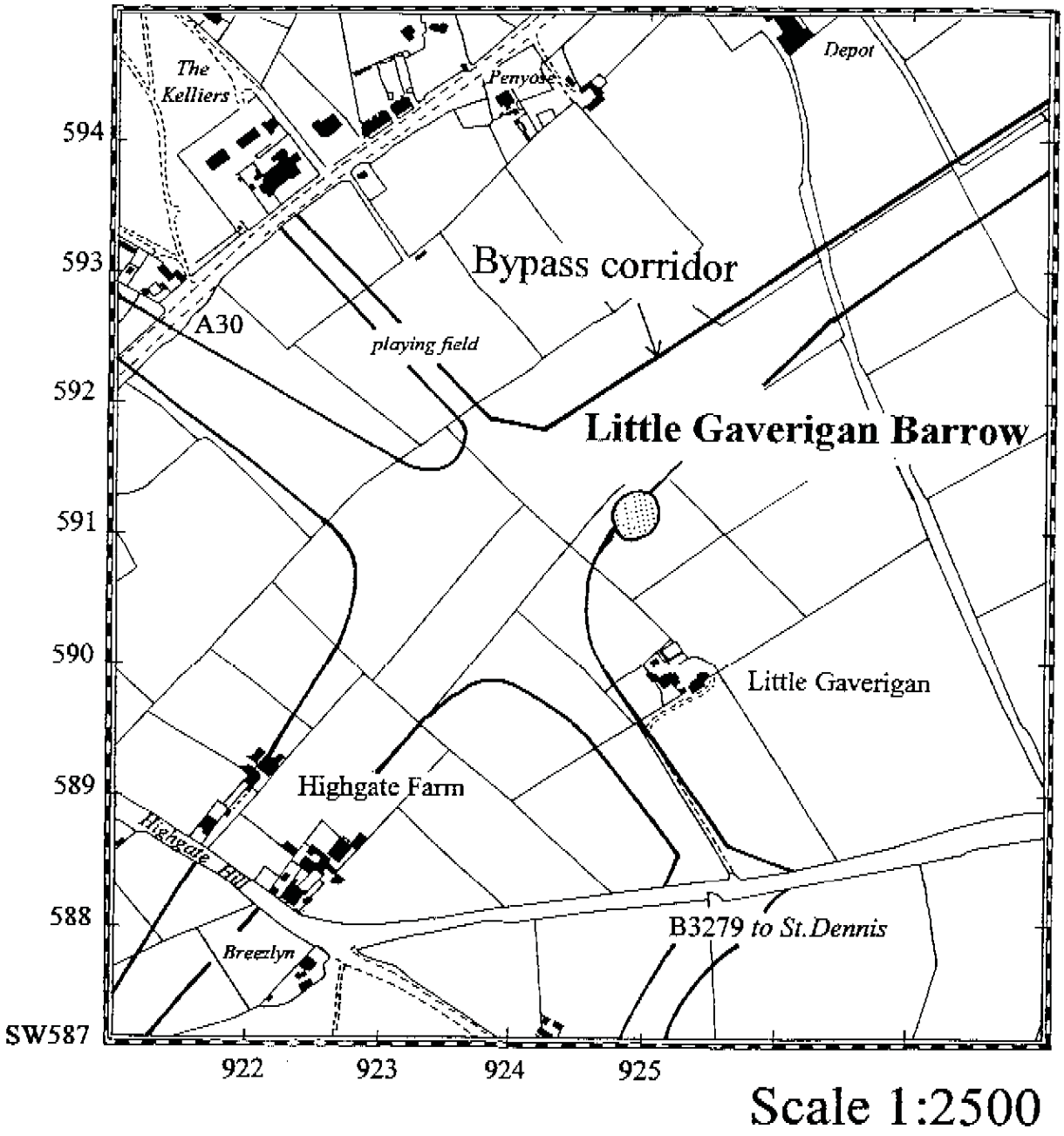


Fig. 3 Location of Little Gaverigan Barrow SW 9248 5911 - A30 Project, Cornwall

A30 Project, Cornwall - Archaeological Investigations along the route of the Indian Queens Bypass 1992-1994

Assessment and Updated Project Design
VOLUME I

1.0 FACTUAL DATA -The excavation of Little Gaverigan Barrow - GV92

Background

Little Gaverigan Barrow (PRN:33974 at SW9248 5911) was discovered during the reconnaissance survey in 1991. The site took the form of an oval grassed mound which measured 23 by 27 metres in size and which stood at least 1 metre high. An evaluation trench dug into one side of the mound in June 1992 confirmed its interpretation as a barrow and given its obvious archaeological significance, total excavation was recommended (Rose, Herring and Nowakowski 1992; Nowakowski and Johns 1992). The excavation ran for 13 weeks from October 1992 to January 1993 and was carried out in far from ideal working conditions, as Cornwall experienced one of its wettest winters for some years. Excavation was intended to provide a comprehensive site history together with the recovery of diagnostic finds, buried soils and scientific dating evidence. Permission to bring a mechanical excavator on site to remove ploughsoil layers was not given by the landowner and so the excavation was undertaken by hand. The barrow was excavated in octants in phase.

1.1 STRUCTURAL, STRATIGRAPHIC DATA AND PHASING by Jacky Nowakowski

Almost total excavation of Little Gaverigan Barrow revealed that the site comprised three major structural elements: a turf mound [4/104/205/305], a ditch [176/1805/375] and the remnant traces of an annular stony bank [5/105/207/307]. These elements had been created during an episodic history which transformed the physical character of the site. Excavation revealed that the barrow was almost intact apart from three later pits which had been dug at random into the surface of the turf mound. These later disturbances did not penetrate into lower deposits. Some post-medieval and modern rubbish - ceramics and ironwork - was recovered from the overlying ploughsoil and clearance layers and, on the western side of the barrow in particular where ploughsoil was found to be generally thin, broken modern china was recovered from the uppermost disturbed ditch fills. Overall preservation of the site was found to be good and the stratigraphic integrity of lower layers had not been compromised.

Five phases of activity were identified. The physical features of each of these phases are summarised below.

1.1.1. Phase 1 (Fig.4)

Prior to the construction of any physical landmark at this site, it is possible that this location was marked out in some way which has left only faint remains and which took the form of a post arrangement [1804] set in pits in a circular arrangement. This evidence

was however only found on the northern side of the site as features [43], [41], [47], [97], [81], [62], [39] and [49]. Six of these features were cut by the later recutting of the ditch (see below). Although their stratigraphic relationship with the ditch implies that they were early features, it is not clear whether they were contemporary with the primary ditch (see below) and had therefore been cut away by the recut ditch (see below), or whether they were genuinely the earliest features on the site. Their spatial arrangement on the northern side of the site may suggest one of two things - either they formed part of an earlier landscape feature or they were in use at the same time as the early ditch. Whatever the case, it is feasible that the actual construction and laying out of a ditch at this site may well have been influenced by the existence of an earlier structure. If so the ditch did not mark out a new site but may well have been dug in order to redefine or transform a previously recognised place of ritual.

A scientific date from any of these small circular features would be useful to clarify this relationship and for this an accelerator date is proposed (see section 1.5.1) which may help clarify this early chronological phase.

Other posthole and pit features [49], [51], [122] found outside the area of the ditch (and, in the case of pit [82], on the inner edge of the ditch on the eastern side of the site) may belong to this phase - although they remain stratigraphically unfixed.

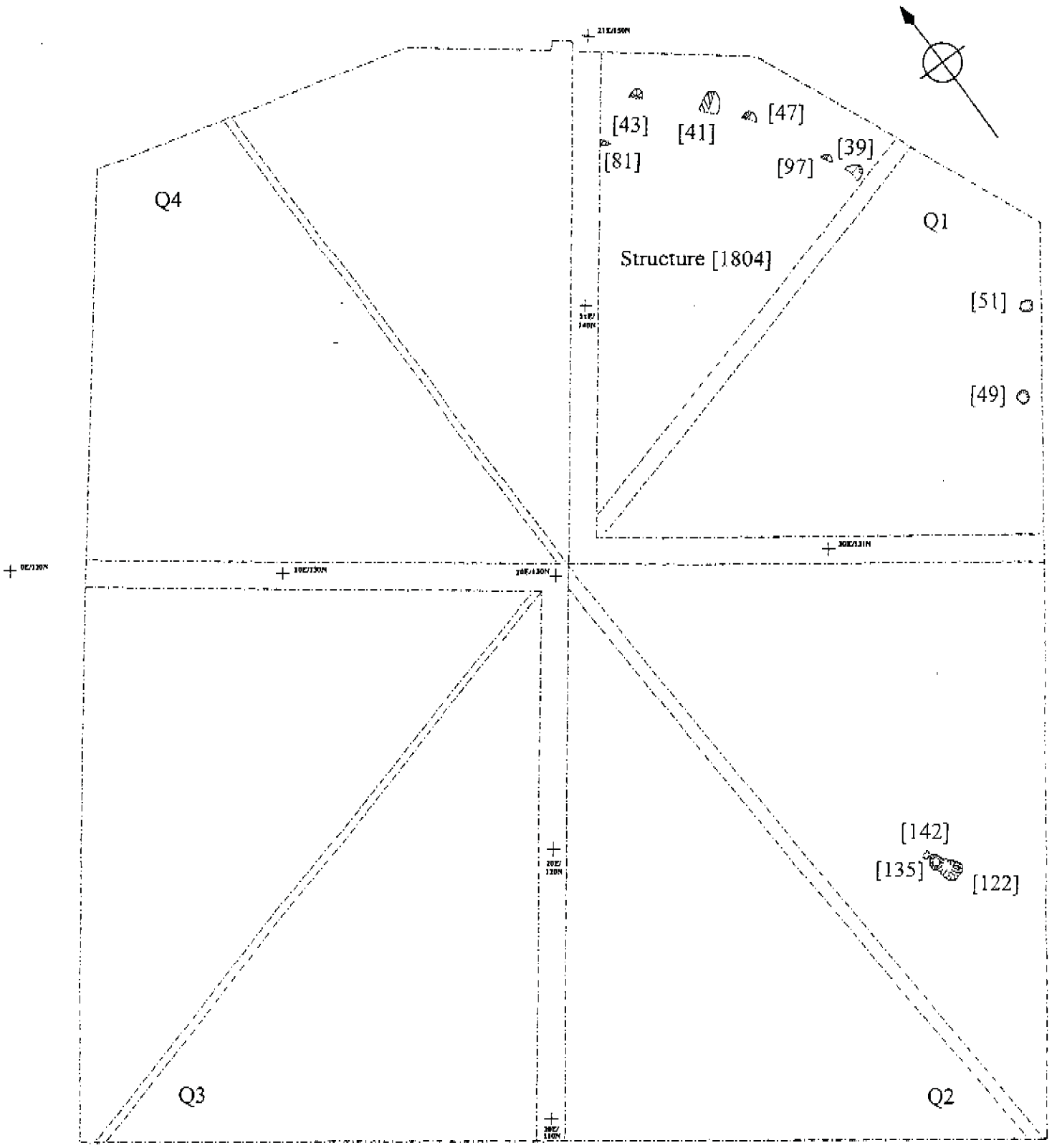
1.1.2 **Phase 2** (Fig.5)

The next clear feature to be created was a deep ditch [176/1805/375]. This defined a circular space forming an arena for rituals. The ditch appeared to have been a continuous feature and although only 65% of its volume was emptied, no breach in its circuit was detected.

Within the interior space, the remains of a central pavement of quartz rubble [349/244] was found. Extremely wet working conditions throughout the course of the excavation did not, unfortunately, permit the use of techniques such as magnetic susceptibility or phosphate analysis. The absence, therefore, of any finds securely belonging to this phase means that the dating of this phase has to rely on radiocarbon dating.

Marvellously-preserved bands of fine silt discovered at the bottom of the ditch suggest that it may have remained open for some time, allowing leaf mould, twigs and bark to accumulate on its floor. In ditch sections on the north-western and north-eastern sides of the site the remains of very graded wooden stakes with pointed tips were found. Although carefully lifted and examined in the laboratory, these were found to be too poorly-preserved for wood identification or be suitable for radiocarbon dating (Straker, *pers. comm*). Chemical analysis of this material initially suggested the possibility coating of pitch or tar (Canti and Evershed, *pers. comm*) although this analysis remains unresolved (Canti, letter dated: 9.5.97).

The remnant traces of an annular stony bank [5/105] were recorded, especially on the eastern side of the site. It was adjacent to the inside edge of the ditch and was poorly preserved but was likely to have been an early structural feature of the site. The origins of its stony make-up are likely to have partly been ditch upcast although the quartz it



PRN:33974
GV92 Little Gaverigan Barrow - Phase 1

0 5
metres

Fig. 4 Little Gaverigan Barrow - Phase 1 Features (CAU Archive GRH:177/3)

contained suggests that material had been collected from around the site, perhaps from some distance away. A notable quantity of quartz rubble was recovered from the upper layers within the recut ditch (see below) on the north-west and south-eastern areas of the barrow. This material had probably been displaced from the stony annular ring - having slipped downslope. The poor survival of the stony ring around the site suggests a degree of neglect in antiquity. Neglect and abandonment of this feature at some point in antiquity occurred before the site became mounded.

Remnant traces of a buried turfline [136] were detected in quadrant 2 and this were sampled for environmental information and dating material. Burnt heathland vegetation was found within these samples which may have suggested that the area had either been "prepared" prior to the use of the site or perhaps that fire played an important role in activities centred here.

1.1.3 **Phase 3** (Fig.6)

The next phase was marked by a significant structural modification. On the northern side of the barrow two very large pits [83] and [318] were dug into and across the ditch. There was no direct evidence for the function and purpose of these features. They may have once held large stone or wooden markers although no direct evidence survived. Some evidence for gradual silting at their bases suggested that on the removal of whatever these pits once may have held (posts or menhirs?), the pits may have been left open.

The physical association between these large features and the primary ditch (which must be assumed to have been at least partially infilled by this time) indicates an intention on the part of the barrow builders to modify the site. If these large socketed holes once held standing stones or posts, they would have made the site visible from some distance away. The reasons for the decision to place these type of markers here are unknown but their location on the site closely corresponds to the earlier posthole arrangement [1804] (see above), and their general north-eastern orientation is similar to that of the posthole "screen" found at nearby Highgate Ritual Enclosure (see section 2.1) - these apparent trends seem more than just a coincidence.

It is feasible that the central space within the ditch was possibly far more actively used than the residual evidence suggests. Pits [224] (quadrant 3) and [340] (quadrant 4) found on the western side of the site and pit [175] on the east (quadrant 2) may either belong to this phase or even (perhaps) the earliest phases - it is not clear. They all lay beneath the mound and were therefore "hidden" (see below). All were fairly indistinct features except perhaps for pit [340] which was sub-circular with sloping sides, contained a bowl-shaped floor and was at least 0.50 m deep (Fig. 11). A smaller pit [351] or more likely, a posthole, was later cut into earlier infilled deposits of black and grey silts within the eastern zone of the pit. This contained some arable weeds (see Table 3). A small pygmy vessel SF<438> was found lying on its side within the upper surface of this pit apparently having been squashed *in situ*, or perhaps kicked into position, but certainly left to be covered by the turf mound. Pit [224] lying some metres to the south-east, was really an amalgam of shallow depressions shadowed on the north by a posthole [234]. This pit was filled by a mix of peat and clay spreads. A small collection of prehistoric pot fragments SF <440> was found heaped together in the northern part of the feature. Pit [175] on the eastern side of the site

was a very shallow depression which did not produce any finds. Deposit [306] was found in the centre of the site beneath the mound and was sampled for environmental data and material for radiocarbon dating but none was found (see Table 3).

A flint flake <452> recovered from a spread of redeposited natural in quadrant 4 (on the northern side of the barrow), was the only piece of flintwork found in a primary deposit on the site. The rest of the (small) flint assemblage was found in residual contexts and their occurrence on site was probably incidental and clearly not contemporary with the ritual phase of this site. A Mesolithic component in the lithic collection indicated a degree of activity in the locality several thousand years prior to the construction and use of the barrow. This phase of activity appears to be relatively extended throughout the Mesolithic period (see section 1.2.4.2). It must be assumed that this material was accidentally incorporated into the site within the turf mound.

Pits [340] and [224] are both likely to be ritual pits - the discovery of postholes associated with both of these features suggests that activities focused here were physically marked-out. They produced both well-sealed finds and environmental data. Burnt heathland vegetation including some blackberry seeds were recovered from pit [224] and arable weeds were found in pit [340] (see Table 3). These features suggest that the site during this and perhaps earlier phases, was primarily in use as a ritual enclosure or a "ritual barrow". The ceramic finds are diagnostic of the Early Bronze Age and the deposition behaviour and arrangement of these features is similar to other documented sites in the county (see section 1.6.1). Radiocarbon dates from either or both of these features would be desirable. Pit [175] may have been a natural feature or may have been a socket hole for a wooden post or standing stone. Such features have been recorded on other "ritual barrow" sites in the south-west such as Caerloggas III or Trenance Downs in the St. Austell area (Miles 1975, 45 and 52).

1.1.4 Phase 4 (Fig.7)

The original ditch [176/1908/375] had partly silted up and been backfilled (see above). However the outlines of this landscape feature clearly remained visible so that when this was recut during this later phase, the secondary ditch [308/178/1806] - which was a much shallower feature - closely followed the course of the earlier one. It is likely that the secondary (recut) ditch was also continuous. The base of this recut was hard, clean clay. This recutting episode seems to have occurred across the whole of the site. A third possible ditch recut found only in the area of quadrant 1 (in the north-east) (coded as [55/177]) was not observed elsewhere on site.

Although there was little direct stratigraphic evidence, it seems likely that with the appearance of this new ditch, the central area became mounded. Evidence suggests that the ditch was deliberately backfilled, perhaps just after the mound was completed. One of the upper infilled layers in the north-east was a remarkably clean spread (7.0 metres in length) of yellow brown clay [8]. This was not found elsewhere on the site and since yellow clay did seem to have some special symbolic qualities in the local barrow building tradition (see section 1.6.1), it is possible to interpret this event as an act which perhaps represented a "closing down" of the site. Of interest is the location of this distinctive material to the north-east. Given the presence of earlier features and pit arrangements in this area of the

site, it may be tempting to suggest that the memory of these earlier features influenced later behaviour (see above). Spread [8] and other associated localised spreads ([53] and [57]) contained arable weed seeds and it will be useful to compare the results of further analysis of the environmental evidence from these features with the information from the phase 3 "ritual" pits (see above).

By the end of the excavation approximately 85% of the mound had been removed and was found to have been made of cut turves - many of which had been placed upside down. There were no obvious breaks in the construction of this impressive feature and it is therefore likely that it was built in one major episode. It effectively sealed most of the interior space within the ditch although the berm/stony ring [5/105] remained as a boundary between the foot of the mound and the inner edge of the new ditch.

A small pit [215] was found in the space between the mound and the inner ditch. This contained the inverted upper half of a collared urn SF < 432>. The rather unusual position of this feature - lying as it did unprotected by the mound, although within the area encompassed by the ditch - together with the fact that excavation showed that the base of the vessel was missing and that it was found to contain nothing, adds to the general impression that it was a votive or token deposit. It is feasible that this was one of the final acts which took place at this site during the Early Bronze Age and was part of the "closing down" of the monument. A radiocarbon date from this deposit would be useful although no charcoal was recovered but cereal pollen (corn spurry) identified in this context may perhaps be considered useful for dating (see section 1.3.4.3).

1.1.5 **Phase 5** (Fig. 7)

Three pits were cut into Little Gaverigan mound at unknown dates in more recent times. - [315], [20] and [138]. They were all slightly different in character but apart from [315] which was the deepest, none interfered with prehistoric layers lying beneath the mound and disturbance was therefore minimal. Two of these features ([315] and [20]) are likely to have been prospecting pits (perhaps for china clay) whilst the third, pit [138], (which was clay-lined) was found to contain the burial of a recently dead sheep or goat although the landowner professed no knowledge of it. A fair quantity of late post-medieval and modern ceramics together with rusty bits or iron, nuts, bolts and even a penknife, were recovered from the upper layers within the secondary ditch across the site although the greatest density was found on the west (see section 1.2.3). Although the mound and everything beneath it had survived, the general area became a dumping ground for farm rubbish during the past 100 years or so.

1.2 ARTEFACTS

1.2.1 **Collection policy** by Jacky Nowakowski

All finds recovered from well-sealed contexts were recorded three-dimensionally. These included all the flints, prehistoric ceramics and ironwork. Post medieval and modern pottery was recorded by context. This was implemented so that behavioural insights into the use of space within the barrow could be achieved and so that site formation processes could be observed and reviewed during post excavation analysis. No material was discarded during excavation though only a sample of quartz pieces was retained.

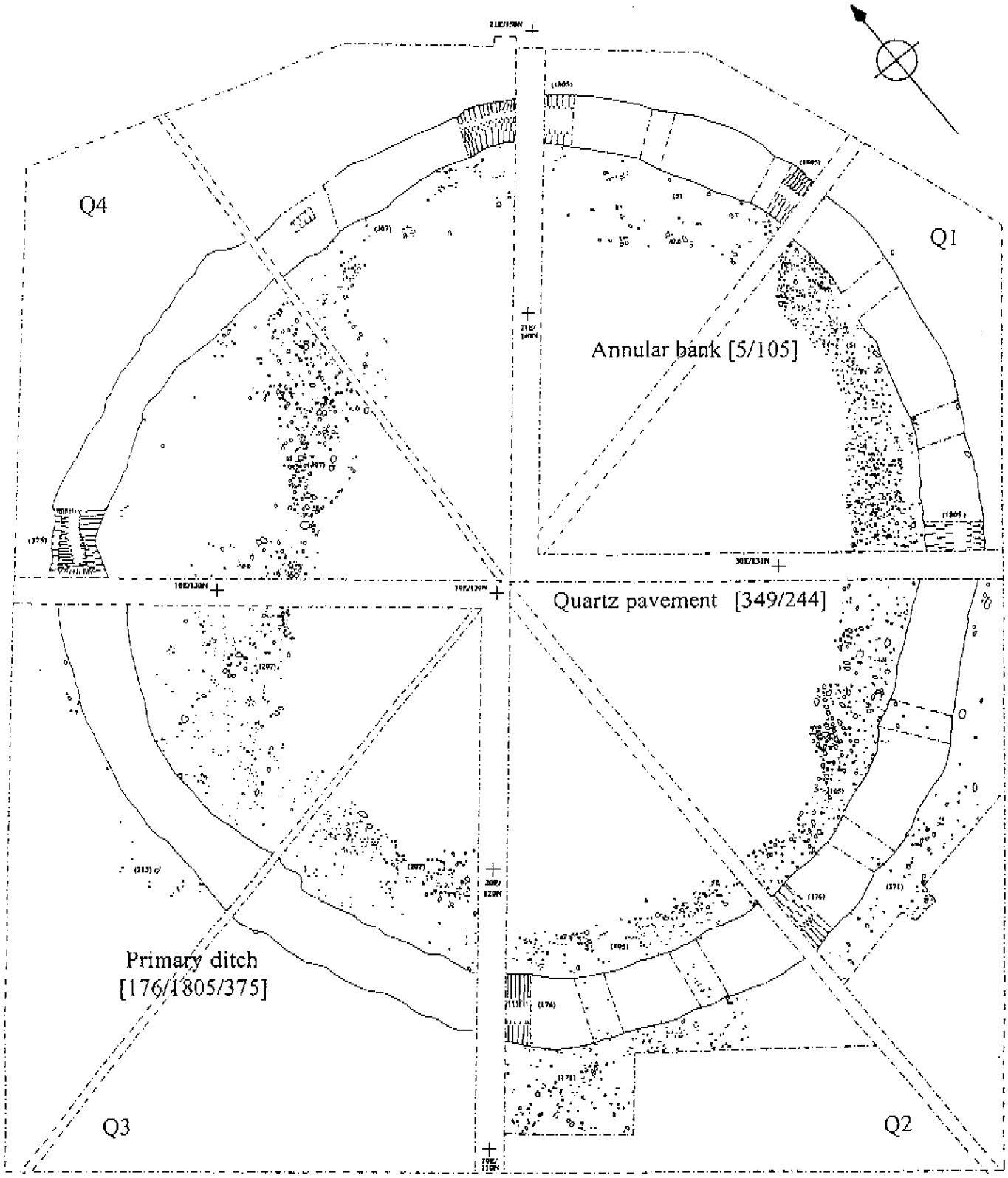


Fig. 5 Little Gaverigan Barrow - Phase 2 Features (CAU Archive GRH:177/2)

1.2.2 **Ceramics - prehistoric** by Henrietta Quinnell & Jacky Nowakowski
Report dated: August 1995

The fragments of at least three prehistoric vessels were recovered. One SF <432> was the upper part of a biconical urn, the second was an unusual perforated small accessory or pygmy vessel (SF <438>). The third comprised a small collection of poorly degraded sherds from more than one vessel SF <440>. The urn and the pygmy vessel are diagnostic of the Early Bronze Age period.

SF <432> Upper part of a collared urn (Fig. 13) deposited upside down in pit [215/432]. The rim, about 215 mm in diameter, is complete and fairly well preserved; the form of the vessel below this was tripartite. The lower parts of the vessel, being closer to the surface, were not well preserved, and no part of the base or of base angle sherds were present. It is unclear whether the vessel was deposited whole and subsequently truncated through post- depositional activities, or whether it was incomplete when buried. It was not (apparently) decorated. No associated cremation or other material such as charcoal was found. The vessel has been cleaned and reconstructed by Margaret Brooks (see section 1.2.9.1). A sample sherd was examined for petrology by thin-sectioning by David Williams (see section 1.2.8), which indicated a local origin for the clay (somewhere within the general locality). The relationship between the deposition of this vessel to both the mound and to preceding features is difficult to establish because of its location between the mound and the ditch. It has been suggested that this deposit was part of later activities at the site (see section 1.1.4).

SF <440> Sherds of pottery found as an arc apparently enclosing a distinct light brown sticky clay [231] within pit [224] which had complex fills. Cleaning and study of the sherds by Margaret Brooks (section 1.2.9.1) shows that pieces of several vessels are represented and that a base angle can be reconstructed. There appears to be no decoration. There was no cremated bone in the pit and no apparent concentrations of charcoal. One sherd has been examined by David Williams (section 1.2.8); it appears to be of local origin but was not of the same fabric as SF <432>.

GV92 SF <438> Pygmy Vessel/Accessory Cup by Jacky Nowakowski
This small, unusual and delicate item was found lying on its side on the edge of pit [340] in quadrant 4 south. This vessel measures about 70 mm in diameter and stands less than 50 mm high. The condition of the vessel was poor, being extremely friable, the sides having collapsed around the central plate. The artefact was excavated in a block of soil and removed for excavation and reconstruction by Margaret Brooks in the laboratory at Salisbury (see section 1.2.9.1 and Fig.14). Two sherds were sent to David Williams who concluded that they were made of different clays (see section 1.2.8) - the central perforated plate (pierced by a series of symmetrically placed 3 mm diameter holes) was made of a different clay from the walls of the vessel. Soil attached to the object has been retained for further study.

1.2.3 **Ceramics - post-prehistoric** by John Allan & Jacky Nowakowski
Report dated: May 1995

A large collection of post-medieval and modern ceramics were recovered during excavation. The collection is mostly 19th and 20th century in date and totals 502 sherds. 89.4% (449) items were modern industrial wares. A small number (52 sherds) of local post-medieval (18th century +) wares formed just 10.35 % of the total assemblage. One piece of a 17th-18th century North Devonshire storage jar was recovered from [309], a redeposited fill within the recut of the barrow ditch. This solitary item provides some indication of the late date after which some material was dumped, in particular, on the northern side of the barrow, and indicates a degree of post-prehistoric disturbance which impacted some lower deposits of the recut ditch on this side of the site. This disturbance is limited in extent and localised on the northern side of the barrow within quadrant 4 (see Davis *et al* 1994, 32). The majority of post-prehistoric ceramics were recovered from overlying plough and topsoil layers.

The notable absence of any earlier material (i.e., medieval) pottery from this site confirms the late date for the establishment of the farmstead at Little Gaverigan, which is post-1840s. This is a useful indicator of past land-use in the area and the absence of such material will be commented on in the historic landscape overview. The odd stray sherds of pre-19th century material from the site are residual and were probably incorporated into ploughsoil during the intake of surrounding moorland during the post-medieval period.

1.2.4 Lithics by Philippa Bradley *Report dated: 27.11.95*. Further comments by Alison Roberts *Report dated: 26th March 1996.*

Raw materials

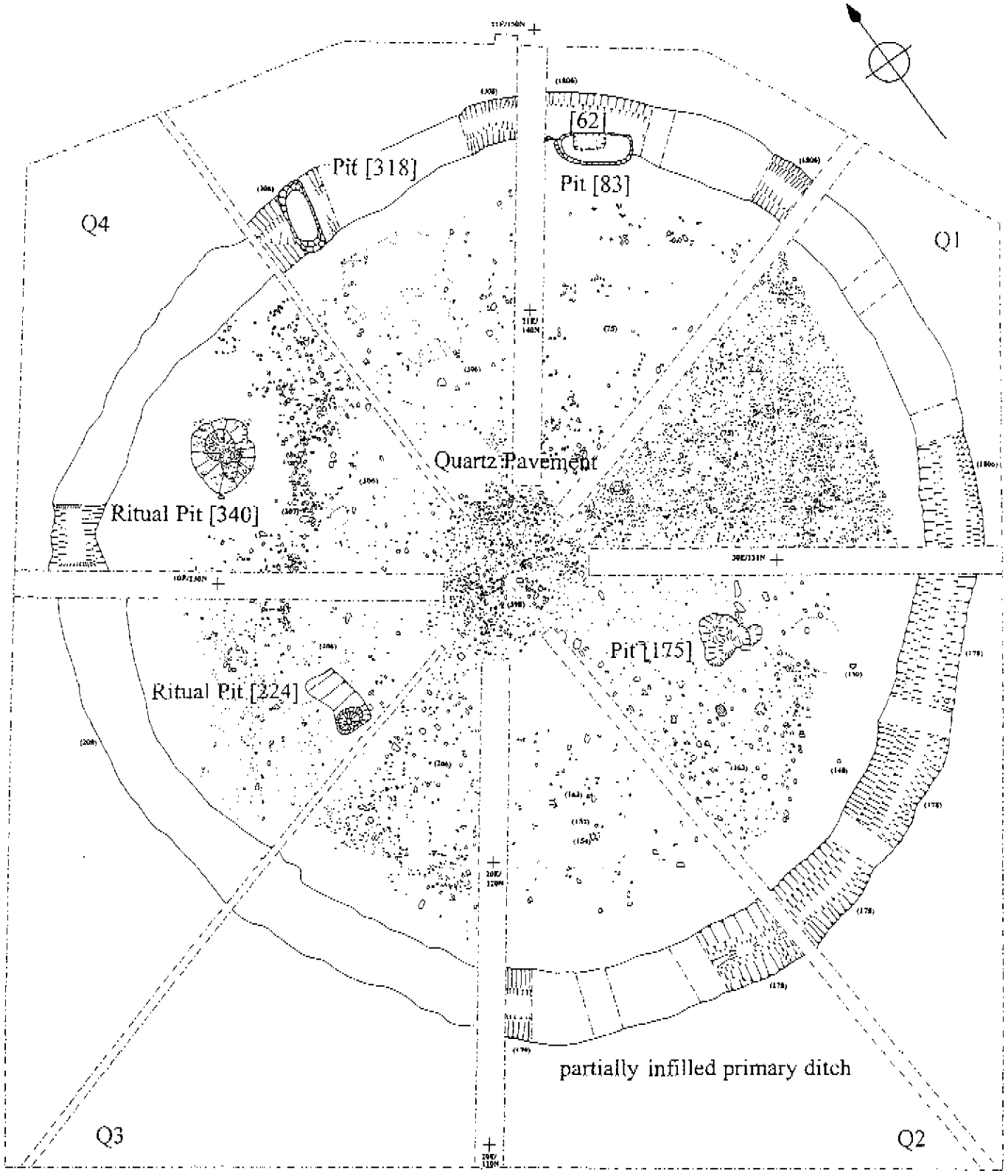
The majority of the raw materials consist of small sub-spherical flint pebbles. Cortex, where present is generally thin and abraded. The flint is quite varied in colour, it is not particularly good quality and thermal fractures were common. This material has all of the characteristics of beach pebble-derived flint. A small quantity of flint was of better quality; it was dark brown to black on colour with a thin buff cortex.

1.2.4.1 *Method*

The flint was briefly scanned and limited recording undertaken to allow the assemblages to be characterised. Dating is provided chiefly by diagnostic artefacts or debitage; much useful information has also been obtained by studying technological traits.

1.2.4.2.*Assemblage*

Thirty-six pieces of worked flint were recovered from the excavation, the assemblage is summarised in table 1. The assemblage is dominated by flakes. A small element is of later



PRN:33974
GV92 Little Gaverigan Barrow - Phase 3

0 5
metres

Fig. 6 Little Gaverigan Barrow - Phase 3 Features (CAU Archive GRH:177/4)

Mesolithic date, being characterised by the geometric microlith and the microburin and probably includes the majority of the blades and blade-like flakes (see below). A piercer on a soft-hammer struck blade from topsoil in quadrant 3 may also be Mesolithic in date as may be some of the less diagnostic debitage. The microburin indicates microlith manufacture. The other retouched pieces include two piercers and a scraper of probable later Neolithic/Early Bronze Age date.

Alison Roberts writes:
Three Mesolithic flint artefacts were recovered during the excavation at Little Gaverigan barrow. These were a microlith SF<400>, an awl SF <406> and a microburin SF<441>. The first two were from topsoil whilst the latter came from the mound in quadrant 4.

The microlith is a small lanceolate form, diagnostic of the first part of the later Mesolithic in south-western Britain (c. 8500-7000 BP). It is unpatinated and made of translucent grey/white flint. The distal microburin is made of the same raw material as the microlith and is also unpatinated. The snap at the distal end appears to be an accident related to the use of the microburin technique. The awl was made on the distal end of a bladelet, and macroscopic wear-traces indicate that it appears to have been used in a rotary manner, perhaps as a hand-held reaming tool. It is also unpatinated and made of grey/white flint, although of a coarser raw material than that of the other two pieces. Although on typological grounds it is possible that the awl could be of a later prehistoric date, the technological features present on the bladelet blank are more consistent with fabrication during the Mesolithic period.

Table 1: Quantification of flint from GV92

Flakes	*Blades, blade-like flakes*	*Chips*	*Irregular waste*	*Retouched forms*	*Total*
20	8	3*	1	4 (2 piercers, 1 scraper, 1 microlith)	36

* including one microburin

1.2.5 **Stonework** by Henrietta Quinnell

Three hundred and sixty five pieces of stonework were retained; none were recorded as small finds. All have been checked by a geologist (Carl Thorpe) to determine whether they were of local origin, or brought to the site. These include one quartz crystal from ditch fill [168] retrieved during the watching brief. Although none were three-dimensionally recorded, finds retrieved by quadrant (numbered 1-4) demonstrated some spatial variation but it has to be borne in mind that field collection was not systematic. Twelve pieces were retained from quadrant 1 (Q1), 33 pieces from quadrant 2 (Q2), 130 from quadrant 3 (Q3) and 186 from quadrant 4 (Q4). Lumps of vein quartz (a principal component of the stony annular ring [207/307]) account for some of the difference in location. 206 lumps were retained as samples: 2 from Q1, 22 from Q2, 92 from Q3 and 90 from Q4. However the other categories also demonstrated a greater concentration in Q3 and Q4. These categories may be divided into local and non-local. Local categories comprised quartz crystals (27),

local slate fragments (42), local schist fragments (8), metamorphic slate (1), haematite (3), iron concretion (5), metamorphic rock (2). Non-local categories comprise water-worn (and sometimes polished) quartz pebbles (21), other water-worn pebbles (6), a piece of granite, fragments of Delabole roofing slate (41) and lime pieces (2). Of these one water-worn pebble, from topsoil in Q4, had been used as a hammerstone and is therefore the only classifiable stone artefact apart from the Delabole roofing slates which relate to recent activity.

Of the 365 pieces of stonework only 20 were from prehistoric contexts; of this material half were Delabole slate fragments or liming pieces from upper fills - e.g. [309] in ditch recut [208] - showing a certain amount of disturbance.

1.2.6 **Metalwork** by Henrietta Quinnell

113 objects including 41 nails, were found in topsoil and in the uppermost levels of the barrow ditch. All material has been X-rayed and studied by Margaret Brooks and Henrietta Quinnell. Some pieces reveal obvious modern features such as screw threads; none have any features suggestive of any antiquity. A full list is filed with the archive.

1.2.7 **Organic residue analysis on ceramics** by Stephanie Dudd and Richard Evershed

Report dated: 18th July 1996

The following is extracted from a report which is filed in the project archive "Organic Residue Analysis of Prehistoric Pottery from the A30 project: Pilot Study" by Stephanie Dudd and Richard Evershed.

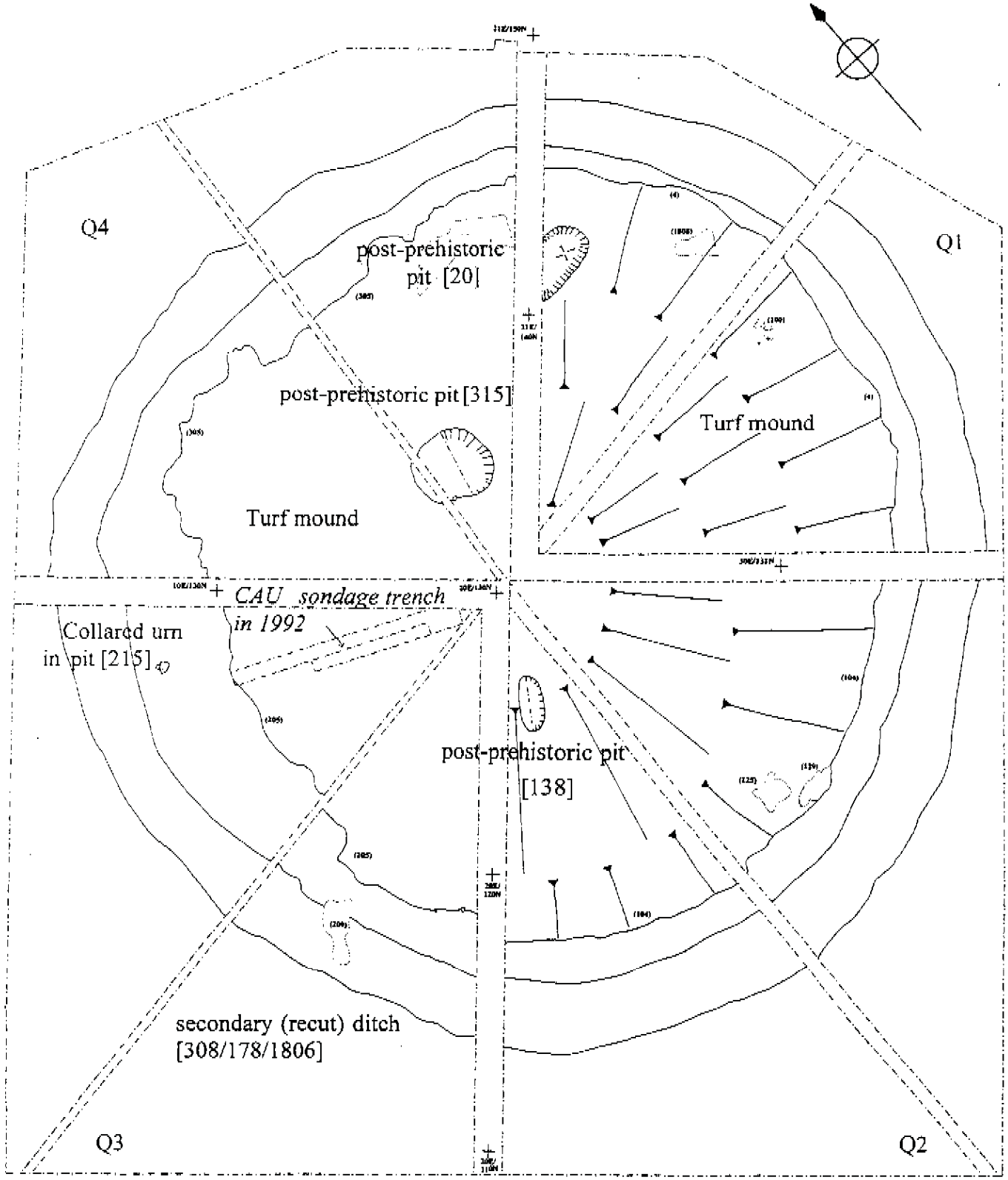
1.2.7.1. *Objectives*

The aim of the pilot study was to screen selected potsherds to establish the presence of lipids and to make preliminary identifications in order to assess the suitability of the assemblage for further study. It is anticipated that organic residue analysis will be able to complement the background information made available by the Cornwall Archaeological Unit through traditional ceramic analysis.

A sherd from the Bronze Age collared urn <432> was selected for this type of analysis. As the vessel did not contain cremated bone the possibility that it represented a votive or token deposit has been considered. It was felt that if traces of residue were found on the vessel walls then this may reveal something of how pots of this type were used outside the sphere of a "ritual" site.

1.2.7.2 *Analytical Procedures*

Lipid analyses have been performed using our established protocol whereby approximately 2g samples were taken and their surfaces cleaned using a modelling drill to remove any contaminants (e.g., soil or finger lipids due to handling). The samples were then ground to a fine powder, accurately weighed and a known amount (20μg) of internal standard (*n*-tetratriacontane) added. The lipids were extracted with a mixture of chloroform and methanol (2:1v/v). Following separation from the ground potsherd and evaporation of the solvent, portions of the lipid extract were derivatised and analysed by gas chromatography



PRN:33974
GV92 Little Gaverigan Barrow - Phases 4-5

0 5
metres

Fig. 7 Little Gaverigan Barrow - Phase 4-5 Features (CAU Archive GRH:177/5)

(GC). GC analyses have been completed for all samples. It is anticipated that at some point certain samples will, in addition, be analysed by gas chromatography-mass spectrometry (GC-MS) for identification of components not recognised by GC alone.

1.2.7.3 *Preliminary Results*

Table 2 summarises the quantitative results of residue analysis

Sample	*Description*	*Period*	Lipid Content ($\mu g\ g^{-1}$ potsherd)
GV92 <432>	Collared urn	EBA	29

The sherd from this Early Bronze Age collared urn contained only 29 $\mu g\ g^{-1}$ of lipid residue. The identity of a number of the lipid components cannot be recognised by GC analysis alone and so require further investigation by GC-MS.

1.2.8 Petrological analysis by David Williams

Report dated: 1993

Small sherds from three vessels recovered from excavations of the Bronze Age barrow at Little Gaverigan Farm were submitted for thin section examination of the fabrics under the petrological microscope. Three of the sherds came from a collared urn and two from the pygmy vessel, while the exact form of the vessel represented by the remaining sherd is unknown (see section 1.2.2). The barrow at Little Gaverigan is situated on a metamorphic aureole surrounding the western edge of the St. Austell granite mass, and lies just outside the small village of Indian Queens (Geological Survey 1" Map of England Sheet no:347: Usher *et al* 1909).

Collared Urn GV92 <432>

The fabric is fairly coarse, containing an ill-sorted range of non-plastic inclusions scattered through the clay matrix. The most prominent inclusions consist of several rounded pieces of a basic igneous greenstone, possibly a spilitic rock type. Also present are grains of quartz, flecks of mica, some discrete grains of plagioclase and potash feldspar, amphibole, sheared phyllite, ?metamorphosed shale and iron oxide.

There are a series of greenstone dykes situated to the north and to the south of the St. Austell granite, as well as others some miles 2 miles to the east of Little Gaverigan Barrow (*op.cit*). The other non-plastic inclusions present in the fabric point to an origin on or near to the metamorphic aureole surrounding the granite. This seems to suggest that this vessel could quite easily have an origin in the general region, although it may not actually have been made at the find-site itself.

Pygmy Vessel GV92 <438>

(a) *From small plain rim sherd*

A similar fabric to that described for the collared urn vessel above.

(b) *From perforated plate insertion into wall of pygmy vessel*

This is a different fabric to that of the pygmy vessel.

The clay matrix contains a ground mass of frequent well-sorted quartz grains generally below 0.30 mm in size, together with flecks of mica, some ?metamorphosed shale, iron oxides and a few small discrete grains of tourmaline, amphibole and pyroxene.

Possibly a fairly local origin?

Bodysherd GV92 <440>

A moderately frequent groundmass of subangular quartz grains mostly 0.50 m in size, with a few larger grains, and sherds of mica, together with some discrete grains of plagiocase and potash feldspar, tourmaline, iron oxides and fragments of ?metamorphosed shale, altered granite and sandstone.

An origin within the metamorphosed aureole would fit in with the range of inclusions found in this sherd, and so a clay source situated at no great distance to the find-site is a distinct possibility.

1.2.9 Conservation and Reconstruction by Margaret Brooks

The following is extracted from a report filed in the archive dated 14 September 1995

Preliminary conservation completed.

In order to assist the excavator with interpreting the sites at an early stage of analysis the following conservation input was provided.

1.2.9.1 Ceramics

From Little Gaverigan Barrow the excavation and consolidation with acrylic of two Bronze Age ceramic vessels; collared urn <432> and pygmy vessel <448>. Samples from GV92 were sent for fabric analysis (see section 1.2.8). Soil from all vessels was bagged for environmental analysis.

1.2.9.2 Metalwork

A radiograph survey of all ironwork was carried out.

Conservation records have been kept together with a photographic record, mainly of vessel GV92 <432>.

All conservation has been carried out on the agreed principle of the minimum necessary treatment. This work has established the further conservation necessary for these and similar artefacts in terms of a) survival in long term storage

b) handling for study

c) relevance to the comprehension of the site

1.3 ENVIRONMENTAL DATA

1.3.1 Sampling methodologies and strategies by Jenni Heathcote *Report dated: 31.05.94*

Bulk and non-bulk samples were recovered during the excavation of Little Gaverigan Barrow.

1.3.1.1 ***Bulk Sampling***

The level of sampling was decided by estimating the volume of material present in the two major components of the site, namely the mound and the ditch, from the hand-cleaned pre-excavation surface. This was then compared to the amount of material which could be realistically processed in the time available. From these factors the percentage of excavated material retained as bulk samples for processing by flotation was calculated.

The strategies adopted were as follows:

- ***Mound*** An evaluation of the total volume of the mound material suggested that it was possible to process between 4 % and 5%. A sampling strategy of 4% by volume of the mound resulted, with bulk samples taken from designated sample areas located within each octant. This enabled close monitoring of any vertical change through the deposit, which visually appeared to be homogenous as well as allowing lateral variation to be recorded.

  Each sample measured 0.5m x 0.3 m and was located against the baulks shown in Fig. 12. The mound was excavated in spits of 0.10 m depth. Three buckets (approximately 30 litres) of the material removed from within each designated sample area were retained as the bulk sample.

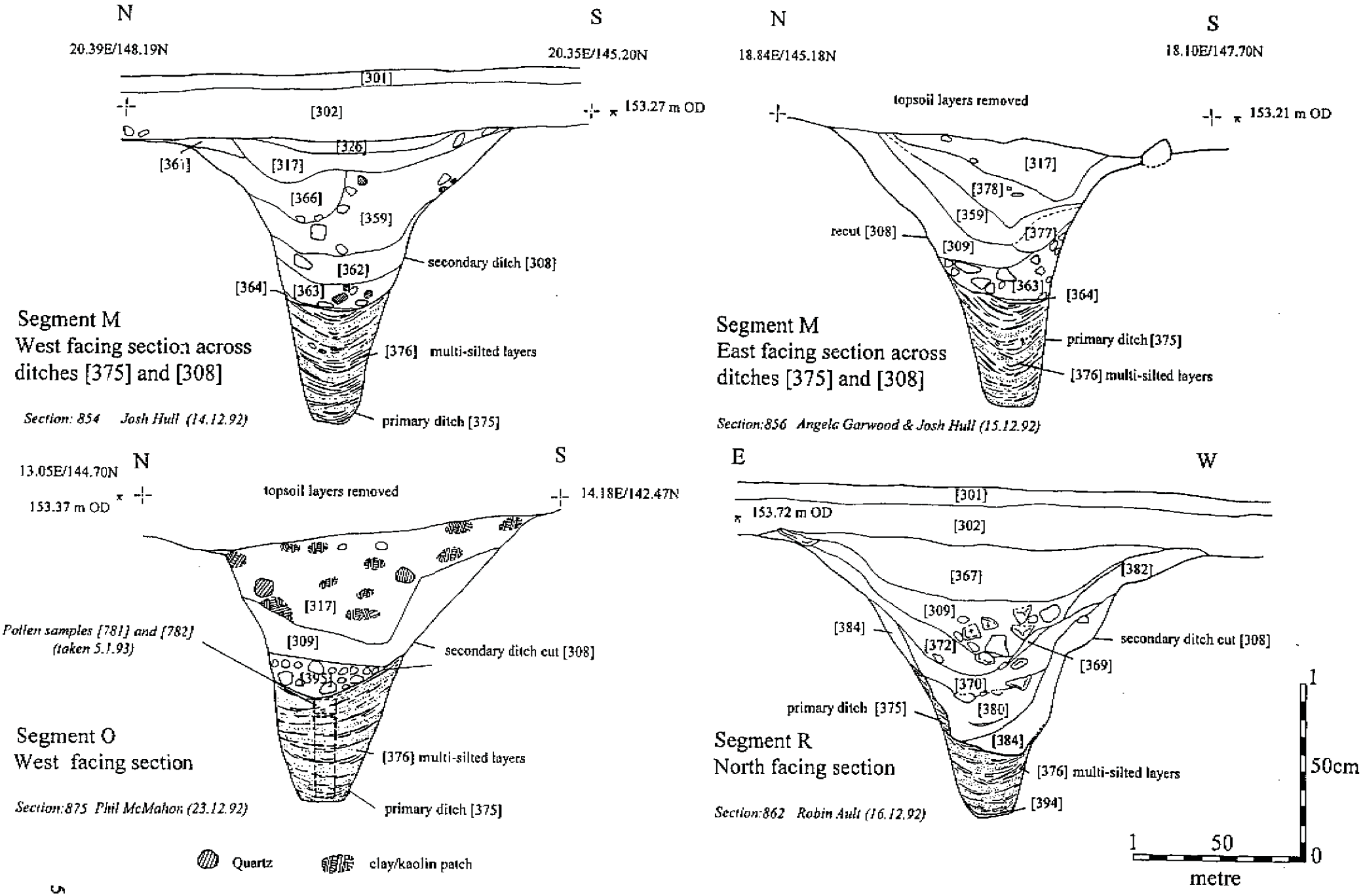


Fig.8 GV92 Ditch Sections - Quadrant 4 Scale 1:10 (CAU Archive GRH:177/9)

- *Ditch* Initial estimates of the ditch volume suggested a 10% by volume sampling strategy was in order and practicable to process. Excavation revealed the ditch to be considerably deeper than expected in some areas (excavation showed a recut episode not apparent at the outset). It was, however, decided not to revise thepolicy and to maintain the initial level of sampling. The ditch was excavated in segments (Fig.12) and contexts within each segment were sampled at 10% by volume. In practice this entailed one bucket (approximately 10 litres) in every ten was retained and the total bulk sample for contexts within each ditch segment consisted of their combined volume.
- *Features* Each feature discovered was bulk sampled. Sampling was proportional and varied between a minimum of 10% by volume to a maximum of 100%. The percentage taken was determined by size of feature, nature of fills and the judgement of the excavator in consultation with the area supervisor.
- *Quality of material from bulk samples* Preliminary observation of flot material during processing suggested that although some contexts produced well preserved charcoal fragments and carbonised material, such material was present in only small quantities.

1.3.1.2 *Non-bulk samples*

- *Waterlogged plant macrofossils* Samples of sediment containing leaf impressions and waterlogged plant material were taken and have been assessed (see section 1.3.3).
- *Wood* Fragments of wood were taken for identification from areas of the lower ditch fills. Although their identification potentially looked promising in the field, this was not possible due to a loss of the internal structure of the material (V. Straker, *pers. comm*).
- *Pollen* Monolith tins (0.50 m long) were taken from the basal deposits of the ditch (interpreted as a waterlain fine minerogenic sediment sequence with organic laminae) for pollen analysis.

1.3.2 Plant macrofossils and charcoal by Vanessa Straker

Report dated: 7th June 1996

One hundred and seventy bulk samples were taken for environmental assessment from a range of features - a gully, ditches, pit and posthole fills, the turf mound and the old ground surface. They range from 2 to 160 litres in volume, both sample size and the percentage of the feature sampled depending on the context. The details of each sample are listed in Table 3. The samples were processed in a flotation tank, the float being collected on a 250 micron sieve and the residue on a 1mm nylon mesh.

This report presents the results of the assessment of the floats, 78% of which were scanned, rather than sorted, under a binocular microscope. The abundance of grain, chaff, weed seeds, charcoal and other macrofossils is listed in table 3. Nomenclature is according to Stace (1991). An attempt was made to quantify the charcoal. This could not be weighed as

it had not been separated from other components of the float, but rough estimates, were made of the numbers of fragments greater and smaller than 2mm in all dimensions. This size was chosen as if charcoal is to be of use for radiocarbon dating, it should be identified, and this is only really practical on fragments of greater than 2mm. This information was used in conjunction with lists of contexts from which radiocarbon dates may be required compiled by J. Nowakowski (section 1.5). Those with potential are marked on table 3.

Table 3 Assessment of bulk sample from GV92

Sample	Context	Phase	Location	Volume (l)	% sampled	Volume of float (approx. ml)	Type	Grain	Chaff	Weeds	Comments C14 dating P: potential; HP: high potential
685	40	1	Q1-J	13	50	30	fill posthole 39	-	-	-	O<2mm
682	42	1	Q1-W	5	50	50	fill of posthole 41	-	-	-	F<2mm, O>2mm P
720	44	1	Q1-L	6	50	20	fill of posthole 43	-	-	-	-
681	44	1	Q1-W	4	50	20	fill of posthole 43	-	-	-	O<2mm
684	45	1	Q1-L	10	50	40	backfill of posthole 41	-	-	-	
697	48	1	Q1-W	2	100	10	backfill of posthole 47	-	-	-	O>2mm, O>2mm; O modern *Carex* P
696	50	1	Q1-E	5	50	20	fill of posthole 49	-	-	-	
764	60	1	Q1-L	12	10	20	buildup in ditch 6	-	-	-	M<2mm
732	70	1	Q1-G	31	10	60	build up in ditch 1805	-	-	-	F<2mm, M>2mm (mature) P
775	82	1	Q1-W	10	100	10	fill of posthole /pit 81	-	-	-	O<2mm, O>2mm P
796	98	1	Q1-J/K	nws	10		buildup of ditch 1805				
795	99	1	Q1-J/K	nws	10		buildup of ditch 1805				
693	123	1	Q2-D/E	13	25	30	backfill of postpit 122	-	-	O	F<2mm, O tubers, modern *Carex* P
694	124	1	Q2-E	15	25	30	backfill of postpit 122	-	-	-	F<2mm, O>2mm (twigs), modern *Carex* P
701	124	1	Q2-E	8	50	NA	backfill of postpit 122				

Little Gaverigan (GV92): assessment of bulk samples

703	127	1	Q2-E	2	50	NA	backfill of posthole 135				
704	128	1	Q2-E	2	100	10	backfill of posthole/pit 142	-	-	-	O<2mm
744	353	1	Q4-W	nws	50		fill of pit 387 ? natural				
714	356	1	Q4-W	6	50	NA	fill of posthole 358				
745	386	1	Q4-W	5	50	5	fill in pit 387 ? natural	-	-	-	O<2mm
783	397	1	Q4-E	15	50	20	fill of gully 396	-	-	-	O<2mm
789	398	1	Q3-W	10	?	30	spread - natural ?OLS	-	-	-	F<2mm, mostly mature oak
763	136	1-3	Q2-E	160	4	200	buried turfline	-	-	O	F<2mm, O *Erica* fruits & seeds P
702	136	1-3	Q2-W	2	4	NA	buried turfline				
780	136	1-3	Q2-W	nws	10		buried turfline				
784	349	1-3	Q4	34	4	75	buried soil	-	-	-	F<2mm
776	376	2	Q4-O	nws	100		silted layers in ditch 375				
769	376	2	Q4-R	25	10	30	silted layers in ditch 375	-	-	-	M<2mm, modern *Chenopodium*
773	394	2	Q4-R	24	10	NA	fill in ditch 375				
715	56	3	Q1-L	13	10	NA	fill of ditch 6				
765	63	3	Q1-L	15	50	60	fill of pit 62	-	-	O	F<2mm, O>2mm; O *Ulex* seeds P
659	225	3	Q3-E	22	25	60	fill of pit 224	-	-	-	F<2mm

Little Gaverigan (GV92): assessment of bulk samples

670	225	3	Q3-W	30	100	100	fill of pit 224	-	-	O	F<2mm, M>2mm (some mature); 1 cf Fabaceae, 1 *Rubus fruticosus*, 2 *Ulex* sp. HP
661	227	3	Q3-W	12	100	75	fill of pit 224	-	-	O	M<2mm, O *Chenopodium* sp.
680	228	3	Q3-E	8	100	NA	fill of pit 224				
665	233	3	Q3-W	11	100	30	fill of pit 232	-	-	-	O<2mm, O>2mm
608	319	3	Q4-O	10	100	NA	fill of pit 318				
630	336/337	3	Q4-O	16	10	40	fill of pit 318	-	-	O	M<2mm, M>2mm HP
631	338	3	Q4-O	c.20	10	NA	fill of pit 318				
760	338	3	Q4-O	nws			fill of pit 318				
634	339	3	Q4-O	8	?10	20	fill of pit 318	-	-	-	F<2mm, M>2mm (includes twigs) HP
761	339	3	Q4-O	nws			fill of pit 318				
717	341	3	Q4-W	22	25	40	deposit in pit 340	-	-	-	F<2mm
662	342	3	Q4-W	10	25	40	in pit (340)	-	-	O	*Ulex* seeds
664	343	3	Q4-W	15	25	40	deposit in pit 340	-	-	-	F<2mm, O>2mm, twiggy P
669	346	3	Q4-W	5	25	NA	fill of pit 340				
718	346	3	Q4-W	10	25	20	fill of pit 340	-	-	O	M<2mm
675	347	3	Q4-W	35	25	40	fill of pit 340	-	-	-	F<2mm, O>2mm P
728	347	3	Q4-W	22	25	NA	fill of pit 340				
690	348	3	Q4-W	10	25	5	fill of pit 340	-	-	-	O<2mm
729	348	3	Q4-W	18	25	10	fill of pit 340	-	-	-	F<2mm
706	352	3	Q4-W	9	?30	15	fill of posthole 351	-	-	O	1Tuber?, *Stellaria media*, modern *Chenopodium*
707	357	3	Q4-W	2	100	20	fill of posthole 351	-	-	-	F<2mm

Little Gaverigan (GV92): assessment of bulk samples

731	371	3	Q4-O	2	?	NA	pit (318)				
742	371	3	Q4-O	7	?	10	pit (318)	-	?	-	O *Calluna* fruits
734	373	3	Q4-O	10	?	NA	fill of pit 318				
754	373	3	Q4-O	8	?	5	fill of pit 318	-	-	O	F<2mm, O>2mm; O *Calluna* leaves and fruits P
762	373	3	Q4-O	nws			fill of pit 318				
755	379	3	Q4-O	15	?	10	fill of pit 318	-	-	-	F<2mm
766	379	3	Q4-O	nws			fill of pit 318				
767	385	3	Q4-O	4	?	10	fill of pit 318	-	-	-	F<2mm
749	389	3	Q4-O	5	10	5	fill of pit 318	-	-	-	O<2mm; O gorse spines P
752	390	3	Q4-O	0.5	grab	20	fill of pit 318	-	-	O	F<2mm, M>2mm; 1 *Calluna* fruit HP
772	8	4	Q1-K/J	30	10	300 (33% assessed)	backfill of ditch 6 or recut 55	-	-	O	F<2mm,*Ulex* seeds and spines. Many modern roots etc. P
705	9	4	Q1-G	15	10	60	backfill ditch 6	-	-	-	F<2mm, O>2mm P
785	10	4	Q1-J/K	22	10	150	backfill of ditch 6 or recut 55	-	-	-	F<2mm, O>2mm. Modern hawthorn P
790	11	4	Q1-J/K	10	10	5	backfill ditch 6	-	-	-	M<2mm
786	13	4	Q1-J/K	21	10	60	backfill ditch 6	-	-	-	F<2mm, 1 grass culm node
787	13	4	Q1-J/K	15	10	30	backfill ditch 6	-	-	-	F<2mm, 1 unident item
617	15	4	Q1-J,K	22	10	150	backfill ditch 6	-	-	O	F<2mm
791	15	4	Q1-J/K	15	10	NA	backfill ditch 6				
619	16	4	Q1-J,K	22	10	150	backfill ditch 6	-	-	-	F<2mm
629	17	4	Q1-W	20	4	400	make-up of mound, 131	-	-	O	O<2mm, O>2mm; O *Brassica, Spergula arvensis* P
632	18	4	Q1-W	18	4	50	make-up of mound, 132	-	-	-	F<2mm, O modern *Chenopodium*

Little Gaverigan (GV92): assessment of bulk samples

644	19	4	Q1-E	15	4	NA	make-up of mound, 133				
636	19	4	Q1-W	20	4	100	make-up of mound, 133	-	-	O	F<2mm, O>2mm; O *Ulex*, *Calluna* P
646	21	4	Q1-E	13	4	50	make-up of mound, 134	-	-	-	F<2mm
642	21	4	Q1-W	18	4	75	make-up of mound, 134	-	-	-	F<2mm
698	53	4	Q1-L	20	10	75	backfill of ditch 6 or 55	-	-	O	M<2mm, O>2mm; O *Calluna* fruits P
695	53	4	Q1-L/K	35	10	100	backfill of ditch 6 or 55	-	-	O	F<2mm; O *Polygonum persicaria* and *Carex*, M *Ulex* spines
691	54	4	Q1-W	37	50	50	backfill of ditch 6 or 55	-	-	-	M<2mm
692	57	4	Q1-W	15	50	100	backfill of ditch 6	-	-	O	M<2mm, O *Ulex* spines & seeds and *Danthonia decumbens* fruits P
726	59	4	Q1-L	64	10	150	backfill of ditch 6	O	-	M	F<2mm, M>2mm; M *Ulex* spines and seeds, and *Calluna* leaves. 1 Hulled barley grain. HP
708	66	4	Q1-G	18	10	20	backfill of ditch 6	-	-	-	M<2mm, O>2mm P
709	68	4	Q1-G	34	10	40	backfill of ditch 6	-	-	-	F<2mm
719	69	4	Q1-G	16	10	20	backfill of ditch 6	-	-	O	F<2mm, M>2mm; 1 Lamiaceae P
746	76	4	Q1-L	22	10	20	backfill of ditch 6	-	-	-	F<2mm, O modern *Carex*
753	78	4	Q1-E	5	100	10	fill of cut 77	-	-	-	
620	108	4	Q2-C	11	10	10	build up ditch 106	-	-	-	
621	108	4	Q2-D	c.10	10		build up ditch 106				

Little Gaverigan (GV92): assessment of bulk samples

653	108	4	Q2-E	10	10	5	build up ditch 106	-	-	-	O<2mm
604	109	4	Q2-A	c.45	10	10	build up ditch 106	-	-	-	O<2mm
605	109	4	Q2-B	c.45	10	NA	build up ditch 106				
600	109	4	Q2-C	56	10	NA	build up ditch 106				
601	109	4	Q2-D	c.30	10	NA	build up ditch 106				
603	109	4	Q2-E	c.50	10	NA	build up ditch 106				
602	109	4	Q2-F	70	10	60	build up ditch 106	-	-	-	M<2mm; O modern *Rubus* and *Carex*
606	110	4	Q2-D	12	10	30	build up ditch 106	-	-	-	O<2mm
610	110	4	Q2-E	c.10	10	NA	build up ditch 106				
609	111	4	Q2-C	52	10	30	build up ditch 106	-	-	-	F<2mm
607	111	4	Q2-D	c.30	10	NA	build up ditch 106				
622	112	4	Q2-C	15	10	10	build up ditch 106	-	-	-	F<2mm
623	113	4	Q2-C	13	10	20	build up ditch 106	-	-	-	F<2mm
627	114	4	Q2-C	18	10	20	build up ditch 106	-	-	-	F<2mm
656	114	4	Q2-D	8	10	20	build up ditch 106	-	-	-	M<2mm
651	114	4	Q2-E	c.10	10	NA	build up ditch 106				
628	115	4	Q2-C	14	10	10	build up ditch 106	-	-	-	O<2mm
657	115	4	Q2-D	22	10	10	build up ditch 106	-	-	-	
671	115	4	Q2-E	c.25	10	NA	build up ditch 106				
683	115	4	Q2-E	20	10	5	build up ditch 106	-	-	-	-
658	119	4	Q2-D	9	10	5	build up ditch 106	-	-	-	-
654	119	4	Q2-E	5	10	10	build up ditch 106	-	-	-	
689	131	4	Q2-E	24	4	100	make-up of mound	-	-	O	M<2mm, O>2mm 1 Gramineae, 1 item unident P
739	131	4	Q2-W	40	4	150	make-up of mound	-	-	-	

Little Gaverigan (GV92): assessment of bulk samples

700	132	4	Q2-E	21	4	50	make-up of mound	-	-	O	F<2mm, O>2mm; seeds include *Spergula arvensis* P
743	132	4	Q2-W	23	4	150	make-up of mound	-	-	O	F<2mm, 1 unident seed/tuber
713	133	4	Q2-E	24	4	70	make-up of mound	-	-	-	F<2mm, O>2mm P
798	134	4	Q2-W		?	75	make-up of mound	-	-	-	F<2mm, O>2mm P
615	205	4	Q3-E	58	4	100	mound spit 1	-	-	-	F<2mm, O>2mm P
625	205	4	Q3-E	42	4	100	mound spit 2	-	-	-	F<2mm, M>2mm HP
633	205	4	Q3-E	34	4	100	mound spit 3	-	-	-	F<2mm
638	205	4	Q3-E	24	4	75	mound spit 4	-	-	O	F<2mm, O>2mm 2 *Ulex* sp. seeds P
639	205	4	Q3-E	25	4	100	mound spit 5	-	-	O	F<2mm, O>2mm 1 seed unident P
640	205	4	Q3-E	26	4	150	mound spit 6	-	-	O	F<2mm, M>2mm 1 *Carex* sp. HP
614	205	4	Q3-W	36	4	200	mound spit 1	-	-	-	F<2mm
635	205	4	Q3-W	28	4	150	mound	-	-	-	F<2mm, M>2mm HP
637	205	4	Q3-W	36	4	NA	mound				
686	205	4	Q3-W	33	4	100	mound spit 4	-	-	O	F<2mm, O>2mm 1 *Ulex* seeds, 1 ? tuber/seed P
688	205	4	Q3-W	24	4	100	mound spit 5	-	-	-	M<2mm
691	205	4	Q3-W			NA	mound				
668	235	4	Q3-W	10	25	10	fill of pit 234	-	-	-	-
652	305	4	Q4	<1	1	NA	mound				
655	305	4	Q4	24	4	40	mound	-	-	O	F<2mm, O *Calluna* fls P
641	305	4	Q4-E	23	4	NA	mound				
643	305	4	Q4-E	23	4	150	mound spit 2	-	-	O	M<2mm, 2 *Ulex* seeds P
645	305	4	Q4-E	22	4	NA	mound				

Little Gaverigan (GV92): assessment of bulk samples

647	305	4	Q4-E	12	4	NA	mound				
648	305	4	Q4-E	15	4	NA	mound				
649	305	4	Q4-E	30	4	100	mound spit 5	-	-	-	F<2mm, O>2mm P
650	305	4	Q4-E	20	4	150	mound spit 6	-	-	O	F<2mm, O>2mm *Ulex* seeds P
676	305	4	Q4-E	30	4	NA	mound				
677	305	4	Q4-E	25	4	400	mound spit 6	-	-	O	F<2mm, O>2mm *Ulex* seeds P
679	305	4	Q4-E	25	4	NA	mound				
660	305	4	Q4-W	32	4	250	mound spit 1	-	-	O	F<2mm *Trifolium/Medicago* and *Carex* seeds P
663	305	4	Q4-W	30	4	NA	mound				
666	305	4	Q4-W	32	4	100	mound spit 3	-	-	-	F<2mm but v. fragmentary
667	305	4	Q4-W	24	4	NA	mound				
672	305	4	Q4-W	27	4	75	mound spit 5	-	-	O	F<2mm, 1 *Carex* sp.
674	305	4	Q4-W	29	4	NA	mound				
618	317	4	Q4-N	30	10	60	fill of ditch 308	-	-	-	O<2mm
616	317	4	Q4-O	45	10	80	fill of ditch 308	-	-	-	M<2mm, O>2mm
710	321	4	Q4-E	10	50	NA	fill of cut 320				
724	361	4	Q4-M	7	50	30	backfill of ditch recut 308	-	-	-	M<2mm, O *Ulex* spines, modern *Carex P*
716	362	4	Q4-M	15	10	50	backfill of ditch recut 308	-	-	O	F<2mm, O *Ulex* spines, 1 Poaceae, 1 *Danthonia decumbens* P
721	363	4	Q4-M	28	10	40	backfill of ditch recut 308	-	-	-	O<2mm, modern *Chenopodium*

Little Gaverigan (GV92): assessment of bulk samples

722	364	4	Q4-M	12	10	15	backfill of ditch recut 308	-	-	-	F < 2mm
723	366	4	Q4-M	5	10	40	backfill of ditch recut 308	-	-	-	F < 2mm, modern *Carex*
730	369	4	Q4-R	15	10	50	backfill of ditch recut 308	-	-	-	M < 2mm
735	370	4	Q4-R	13	10	10	backfill of ditch recut 308	-	-	-	M < 2mm, many modern seeds
733	372	4	Q4-R	18	10	20	backfill of ditch recut 308	-	-	O	O < *2mm; Ulex seeds*
736	380	4	Q4-R	10	10	10	fill of ditch 308	-	-	-	F < 2mm
737	382	4	Q4-R	12	10	10	fill of ditch 308	-	-	-	O < 2mm
740	384	4	Q4-R	13	10	10	fill of ditch 308	-	-	-	F < 2mm
613	309	4-5	Q2-F	14	10	100	buildup in ditch recut 308	-	-	-	M < 2mm, O > 2mm P
711	309	4-5	Q4-M	?20	10	90	buildup in ditch recut 308	-	-	O	F < 2mm, F > 2mm. M *Ulex* spines, O *Ulex* seeds and *Calluna* fruits HP
626	309	5	Q4-N	15	10	100	buildup in ditch recut 308	-	-	-	M < 2mm, M > 2mm; modern *Carex* and *Chenopodium* P
727	309	5	Q4-R	22	10	75	buildup in ditch recut 308	-	-	O	O < 2mm, M > 2mm; O *Danthonia*, modern *Chenopodium* P
699	323	5	Q4-E	3	100	NA	fill of modern posthole				

KEY: nws: not wet sieved; NA not assessed. Charcoal: 0: occasional (1-10 fragments); M: moderate (11-50 fragments); F: frequent (>51 fragments). <2mm: very small fragments not readily identifiable; >2mm: identifiable fragments. All radiocarbon dates will have to be accelerator dates.

1.3.2.1 **Results**
The floats contained only charred plant macrofossils, the vast majority of which was charcoal. Soil conditions were too acid for the preservation of molluscs or unburnt bone. No chaff was found, and only a single cereal grain (hulled barley, *Hordeum* sp.) was observed. This was in the backfill of ditch [6] (Phase 4, [59]).

The most abundant evidence was for the charred fruits and seeds of heathland vegetation, predominantly gorse (*Ulex* sp) and heather (*Calluna vulgaris* and possibly also *Erica* sp), but in several contexts these plants were associated with fruits of heath grass (*Danthonia decumbens*) which is typical of heaths and moors, particularly on acid soils and sedges (*Carex* sp(p). Charred blackberry seeds (*Rubus* sect. Glandulosus) were also noted in pit [224]. To summarise: burnt heathland vegetation was found in pits [6], [224], [230], [318]; ditch [6] and recut [308], in the mound make-up, mound spits 2-6 and in the buried turfline ([136]).

As noted above, direct evidence for the growth and consumption of arable crops is almost absent, however in a few contexts (posthole fill [351] ([352]), mound make-up contexts [17], [132], [305] and [663] and ditch [6] ([59]) small numbers of weeds of arable or disturbed ground were noted during the scanning. These included chickweed (*Stellaria media* agg.), mustard, turnip etc., (*Brassica* sp(p)), corn spurry (*Spergula arvensis*), an arable weed of acid soils and medick or clover (*Trifolium/Medicago sp*), plants usually associated with grassland or pasture. These traces, though ephemeral, provide a glimpse of the farming that must have been taking place away from the focus of the ritual activity at Little Gaverigan. It is also likely that prior to the use of the area for ritual practises, it had not been used for arable agriculture.

1.3.3 Sediments from the ditch at Gaverigan Barrow by Vanessa Straker

Report dated: 27th June 1996

Introduction and methods
Bulk samples were taken from two layers at the base of the ditch in quadrant 1. At the time of sampling the deposits were wet and appeared to be rich in organic matter. These were stored in a deep freeze and subsequently wet sieved with a float and washover collected in a 250 micron sieve and residues in sieves with apertures of 500 microns and greater.

Both deposits consisted largely of fine dark grey and light grey silts with bands of light grey clay. Context [99] also contained shale and quartz pebbles of up to 200mm in diameter. The float/washover was scanned and a summary of the results is presented below (Table 4).

1.3.3.1 **Results**
Table 4 shows that despite initial impressions, the silts preserved little waterlogged organic matter, probably due to the fact that at times the base of the ditch may have dried out, though would have been wet in the winter months.

Table 4 Plant macrofossils from ditch sediments - GV92

Context	*Sample*	*Phase*	*Sample size (ml/kg)*	*Float / washover size (ml)*	*Contents*
98	796	2	4/7.5g	c.35ml	All waterlogged. Occasional badly preserved unidentified fragmentary seeds. Occasional gorse spines. Fine (1 mm and <) unidentified plant debris. No insects
99	795	2	6.5/10.75	c.35ml	Charcoal (F<2mm, >2mm) some? *Erica/Calluna*. c. 20 waterlogged grass (*Poaceae*) seeds and 1 cf. *Mentha aquatica* (water mint). Fine (1mm and <) unidentified plant debris. No insects.

1.3.4 Assessment of Pollen from Little Gaverigan Barrow by James Greig and Vanessa Straker

Report dated: 22nd March 1996. Edited April 1997

1.3.4.1 Samples

The pollen sub-samples were taken from monoliths (50x10x10cm) which were held in cold storage at Bristol. They were processed and counted at the writer's (JG) laboratory in Birmingham.

1.3.4.2 Laboratory work

Pollen preparations were made according to a new method which avoids the use of hydrofluoric acid, as follows:

breakdown

1 cm3 sediment was measured out by the displacement of water in a 5 ml measuring cylinder (where the amount differed, this was noted). The accuracy of this measurement is probably about + 10%. The sediment was then broken down in dilute Sodium hydroxide, and a trace of detergent. Added to this were three Lycopodium tablets dissolved in dilute hydrochloric acid, from batch 710961, with a count of 13911 spores per tablet. The sediment and spores were then washed through a 70 mm plastic mesh to remove coarse material.

first swirl separation of organic material

The organic material was swirl separated from the inorganics, on a 15 cm watch glass. This was done by moving the watch glass and slurry on it in a circular motion so that the slurry goes round and round in a "whirlpool", concentrating the heavier inorganic material in the middle. The lighter floating organic fraction could then be carefully poured off. The process was repeated with more water added and another swirl separation done, and again until separation was complete. The inorganic material appeared to be mainly fine sand and silt.

first fine sieving

The suspension of organic material was then washed on a 10 mm mesh, until no more fine material came through. This mesh is so fine that the process needs assistance by agitation or gentle tapping.

acetolysis
The concentrated organic material was dehydrated in glacial acetic acid, and then treated with acetolysis mixture in a hot water bath for a minute. The chemicals were centrifuged off.

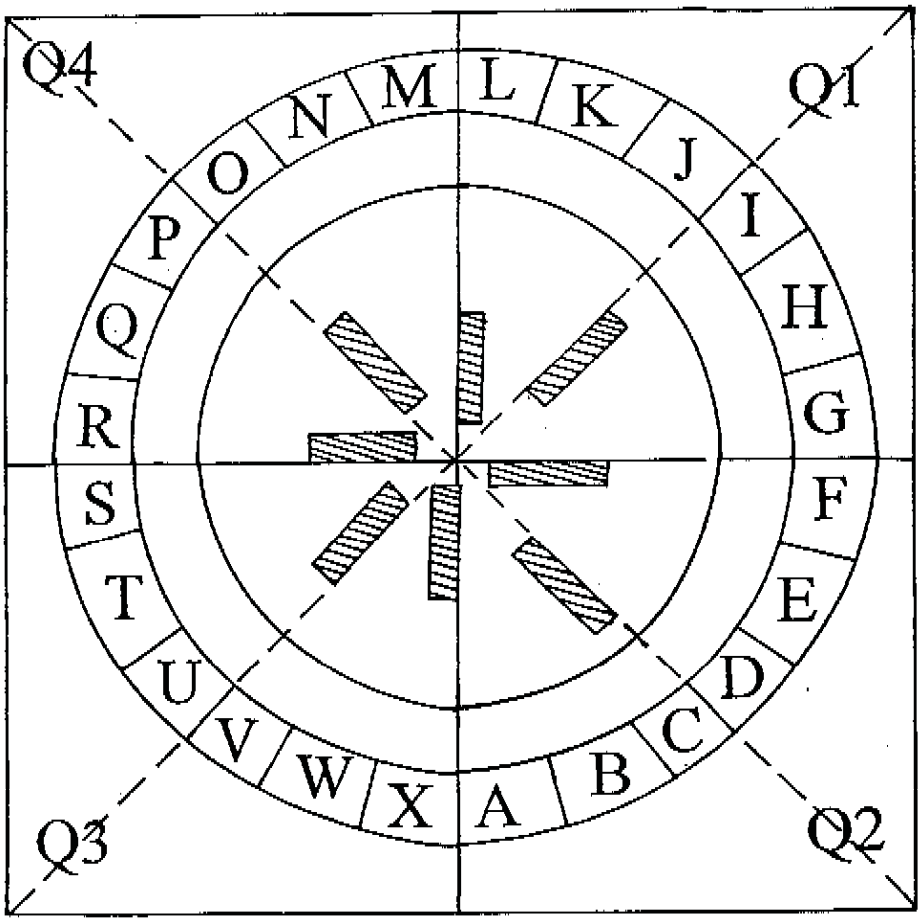


Fig. 9 Little Gaverigan Barrow - Sampling Zones

final washing and mounting
The remaining material was swirl separated again to remove the organic material released by acetolysis (and any not removed with the first separation), and fine sieved once more. It was then stained with safranin, centrifuged down, and mounted on microscope slides with glycerine jelly. The slides, when labelled, were then ready for counting. Pollen counts were done with a Leitz Dailux microscope, mainly using the x40 objective and phrase-contrast lighting. These counts were fairly small, with the idea that further counting could be done, if needed to bring the pollen and spore numbers up to a statistically useful level.

1.3.4.3 **Results**
The results are given as raw counts, numbers of pollen grains. in some cases scanning revealed further taxa whose presence is marked with a "+".

The samples, measured in cm from the top of the monolith tin, are from the fine grey/white silty fill of the early Bronze Age ditch which surrounded the barrow (0-1, 10-11, 20-21, 30-31, 40-41 [0.75 cm^3], 49-50). The spectrum from the **GV92 cremation sample** 9/432 **(CR9)** is also given in table 5. The absolute counts are in numbers of pollen grains or spores; concentration values have not been calculated at this stage.

Table 5 - Pollen assessment of ditch sample and CR9

Taxon				Sample			
	0-1	10-11	20-21	30-31	40-41	49-50	CR9
Quercus	13	3	6	12	4	2	6
Tilia	1	-	-	-	-	-	-
Ulmus	-	1	-	-	2	-	1
Pinus	3	-	+	1	-	-	1
Alnus	1	1	3	10	8	4	4
Coryloid	13	18	8	71	53	9	32
Hedera	?	-	-	-	1	1	-
Salix	-	-	-	-	-	-	1
Poaceae	35	8	10	45	20	10	54
Cerealia	-	-	-	-	-	-	5
Caryophyllaceae	-	-	-	-	-	-	1
Spergula	-	-	-	-	-	-	1
Cichorioidae	-	-	1	1	1	-	6
Asteraceae	1	-	-	-	-	-	-
Aster-tp	-	-	-	-	-	-	1
Cirsium-tp	-	-	-	-	-	-	1
Dipsacaceae	-	-	-	1	-	-	-
Ericales	49	40	21	63	53	23	90
Plantago lanceolata	-	-	-	1	1	-	5
Ranunculus	-	-	-	1	-	-	-
Rumex	-	-	-	-	-	-	1
Cyperaceae	-	-	-	3	3	-	6
Filicales	-	-	-	-	-	-	2
Polypodium	7	3	7	17	12	6	15
Pteridium	7	1	4	1	15	5	22
sum pollen spores	**130**	**75**	**60**	**227**	**171**	**60**	**255**
unidentified	6	4	1	1	1	-	1
Lycopodium	714	778	453	586	328	372	99
Number of traverses	15	10	13	6	6	16	4

Pollen is certainly present in useful though rather low quantities, as shown by the high counts of the *Lycopodium* "spike". The pollen spectra show evidence of a fairly open

landscape with some oak and hazel, but apparently mainly of grassy heathland. The main importance of such "glimpses" is to compare them with results from other dates and thereby piece together the story of the development of the occupied landscape. The cremation sample contained some cereal pollen together with *Spergula,* which is a cornfield weed of light sandy soils. The pollen here may have come partly from materials containing pollen, as well as from the more general surroundings.

GV92 mound Q3: west-facing section

A monolith was taken through the mound, which appeared to have been made of stacked turves. No clear junction could be detected between the base of the mound and the land surface beneath it. Sub-samples every 4cm were removed in the laboratory as follows: 0-1 cm, 5-6 cm, 9-10 cm, 13-14 cm [0.9cm^3], 17-18 cm, 20-21 cm, 24-25 cm, 28-29 cm [0.9cm^3], 32-33 cm, 36-37 cm, 42-43 cm, 46-47 cm, 49-50 cm. Counts are in absolute numbers.

Table 6 - Pollen assessment of mound sample Q3; west-facing section

	Sample												
Taxon	**0-1**	**5-6**	**9-10**	**13-4**	**17-8**	**20-1**	**24-5**	**28-9**	**32-3**	**36-7**	**42-3**	**46-7**	**49-50**
Quercus	9	14	19	9	8	4	8	9	5	10	6	18	10
Tilia	-	-	-	2	1	+	-	-	-	-	-	-	-
Ulmus	-	-	-	1	3	-	3	-	-	-	1	1	1
Pinus	1	-	-	1	3	1	+	-	+	-	-	2	-
Betula	-	-	-	-	1	1	2	1	-	-	-	1	4
Fagus	-	-	-	-	-	-	-	+	-	-	-	-	-
Ilex	-	-	-	-	-	-	-	-	-	-	-	1	-
Alnus	8	5	5	6	13	5	7	4	13	7	8	17	14
Coryloid	54	36	41	59	59	52	34	56	38	42	54	80	93
Hedera	-	-	-	?	-	1	-	-	-	-	-	-	-
Poaceae	110	88	54	31	34	40	58	42	51	25	45	46	34
Cerealia	3	1	+	1	-	-	-	-	1	-	-	-	-
Caryophyllaceae	-	-	-	-	-	-	-	-	-	-	-	-	-
Chenopodiaceae	-	-	-	1	-	-	-	-	-	-	-	-	-
Centaurea nigra	-	-	-	-	-	-	-	-	1	-	-	-	-
Cichorioidae	20	23	14	1	6	2	4	3	2	1	-	4	2
Anthemis-tp	1	-	-	-	-	-	-	-	-	-	-	-	-
Aster-tp	1	-	1	-	-	-	-	-	-	2	-	-	-
Cirsium-tp	-	1	-	1	-	-	-	-	-	+	-	+	1

Dipsacaceae	1	+	1	1	3	2	-	-	2	+	1	-	1
Ericales	113	97	123	117	87	46	38	70	47	56	68	98	89
Galium-t	-	-	-	1	-	-	-	-	-	-	-	-	-
Lamium-tp	1	-	1	-	-	-	-	-	-	-	-	-	-
Plantago lanc	1	1	1	1	-	-	-	4	1	-	1	1	1
Plantago major	-	-	-	1	-	-	-	-	-	-	-	-	-
Potentilla-t	-	-	4	-	-	-	-	2	-	-	-	-	-
Ranunculus	-	-	-	-	-	-	-	-	-	-	-	1	-
Cyperaceae	11	1	7	13	1	1	2	-	-	-	-	-	-
Persicaria mac-t	1	-	-	-	-	-	-	-	-	-	-	-	-
Filicales	2	-	-	-	-	-	-	-	-	-	-	-	1
Polypodium	8	7	2	17	10	9	7	16	13	3	11	18	41
Pteridium	57	32	19	9	11	-	4	8	12	5	3	8	14
sum pollen spores	**401**	**307**	**292**	**273**	**239**	**164**	**167**	**215**	**186**	**151**	**198**	**296**	**306**
unidentified	7	2	4	-	2	2	9	7	4	4	3	3	5
Lycopodium	25	24	13	29	20	12	18	17	6	7	15	22	15
Number of traverses	2	2	3	2	1	(1)	(1)	(1)	1	1	(1)	(1)	(1)

( ) : part of one traverse

There is a good range of pollen which is abundant and well-preserved, so this evidence is of good quality. Once again, some surviving woodland in a landscape with heathland and grassland is indicated. Occasional cereal records hint at some cereal farming or nearby crop processing, at the top (later part) of the sequence. The *Fagus* (beech) pollen may be a fairly early record since it is mostly associated with the Iron Age. *Ilex* (holly) may point to secondary woodland developing as the result of grazing pressure.

There is no clear evidence from this assessment whether the turves were consistently stacked turf side-up or placed up-side down.

1.3.5 **Soil Micromorphology** by Jenni Heathcote and Matthew Canti

Report dated: 16th November 1995

The buried soil and turf construction of the barrow are being analysed for pollen content by Vanessa Straker and James Greig (see section 1.3.4). The buried soil was identified as contexts [38], [163] and [137], the best exposures being seen in quadrants 1 and 2. The integrity of the layers within which pollen is found can usefully be studied by micromorphology. This was not anticipated on site, but sufficient monoliths were available for sub-sampling.

Kubiena tins were retrieved from one of the monoliths taken through the turf stack and buried soil layer. The samples were collected from the west-facing section of quadrant 3 and represents depths within the monolith of 1-9 cm, 10-19 cm, 30-39 cm and 4-49 cm.

1.4 STATEMENT OF POTENTIAL

1.4.1 Potential of structural/stratigraphic data by Jacky Nowakowski

Stratigraphic analysis of the data from Little Gaverigan barrow has to a large extent been completed (Davis *et al* 1994). and structural phasing has also been defined but this requires confirmation and (perhaps refinement) with a series of supporting accelerator dates. The lack of intercepting relationships between major components of this barrow means that association of features - such as pits within the post arrangement [1804], the annular stony ring cairn, the internal ritual pits - is assumed rather than directly proven. The question of whether there was a post arrangement [1804] at this location prior to the construction of a barrow may only be resolved if sufficient and suitable material is available for an accelerator date (see section 1.1.1).

The general sequence of activities from this excavation invites comparison with the sequence obtained from nearby Highgate Ritual Enclosure as well as other barrows excavations in the south-west. This is especially true for those sites which have displayed a similar range of evidence in which structural transformation of the site through time may indicate changing uses. In summary the evidence suggests that Little Gaverigan Barrow may be interpreted as a "ritual barrow" (see section 1.6.1).

The following analysis is recommended:

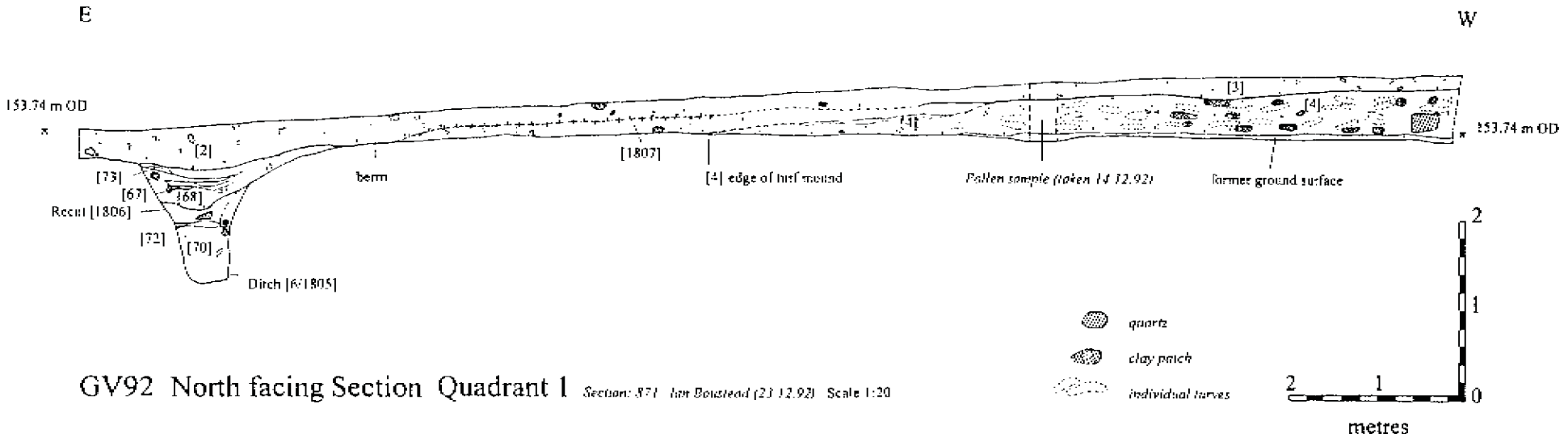
- Series of scientific dates to test and confirm the stratigraphic sequence (tasks 8 & 9).
- Full descriptive and interpretative account of the structural history of the barrow (task 46).

1.4.2 Potential of artefacts

1.4.2.1 **The Prehistoric ceramics** by Henrietta Quinnell & Jacky Nowakowski

SF <432> Collared Urn. The form of the vessel needs detailed consideration against the typological series of Primary/Secondary set out by Longworth (1984) and modified by Burgess (1986); the latter scheme, suggesting a three-fold division of Early, Middle and Late, allows for the suggested positioning of the vessel within a chronological horizon of a few centuries. SF< 432> also should be considered in regard to recent work by Tomalin (1988) which presents a comprehensive chronological scheme on a differing typological basis from those outlined by Longworth and Burgess for most types of Earlier Bronze Age ceramics in southern Britain.

Longworth (1984) lists 13 collared urns from Cornwall, of which five have no decoration; Patchett (1944; 1951) also lists 13 urns on slightly different criteria from those used by Longworth, of which 6 were plain. The only collared urn to be published from Cornwall since Longworth's corpus, (from Davidstow Moor (Christie, 1988, Fig 46a/b)), is also plain. Preliminary study suggests that Cornish collared urns have a higher proportion of plain vessels than other geographical groupings. It also appears that at least four of the



GV92 North facing Section Quadrant 1 *Section: 871 Ian Beastead (23.12.92)* Scale 1:20

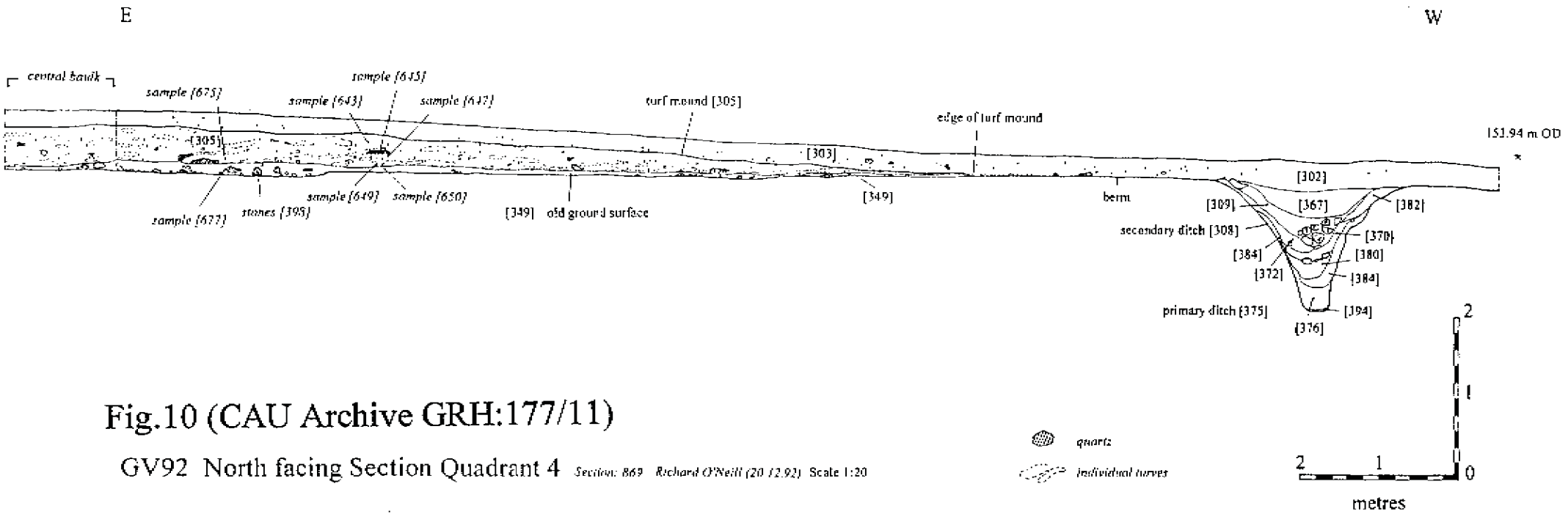


Fig.10 (CAU Archive GRH:177/11)

GV92 North facing Section Quadrant 4 *Section: 869 Richard O'Neill (20.12.92)* Scale 1:20

plain examples have lugs or handles, a feature which also appears to occur in disproportionate numbers on decorated vessels of this type from Cornwall (see section 2.4.2.1). Further study would be relevant to the identification of regional groupings within Earlier Bronze Age ceramics, and to the inter-relationship of Cornish collared urns with Trevisker pottery. This study may provide further information about the contexts for which vessels of different types, whether different classes such as Collared Urns or Trevisker, or of different groupings within these classes, were selected for deposition. Factors defining such contexts would include presence (whole or partial) of cremated bones, or their absence, and/or presence of other material such as charcoal, completeness, inversion, position within or relation to a barrow area and relationships with other ceramics deposited within the same monument.

SF <440> Ceramic fragments

Deposits containing sherds are not unusual in Cornish barrows (e.g. Dudley 1964, 438), and indeed from barrows in most areas. Until recently there was a tendency to regard these as 'domestic debris ' incorporated in funerary monuments, but their place, along with deposits of charcoal and very small deposits of cremated bone, is being re-assessed as part of the ritual involved with barrow use. There has been no recent and critical examination of this topic although useful additional information is now available in the publication by Christie (1985, 1988) of the excavations of C. K. Croft Andrews. It may be argued that the study of deposits such as <440> will do as much to aid our understanding of behavioural patterns associated with barrow use as the study of the human remains with which they are traditionally associated. Such study could be usefully linked to the study of the contexts in which distinctive vessel types are found suggested for SF <432>. The clay associated with the sherds presumably was deposited for a special reason. The types of 'soil' found in around whole vessels or groups of sherds do not appear to have received any special study.

Sherds which can be macroscopically distinguished from those already studied by David Williams should be submitted to him for petrological analysis; this may help in determining the number of vessels in the deposit, extending our understanding of the range of clays used locally for pot making, and determine whether any material brought from a distance was placed in this deposit.

SF<438> Pygmy Vessel/Accessory Cup by Jacky Nowakowski

This highly unusual artefact is almost certainly an indication of ritual activities and is generally considered to be part of the cultural package of the Early Bronze Age. Its discovery at Little Gaverigan may perhaps serve to underline the primary ritual function of the site. Very few such finds have been found in Cornwall and this highly unusual example makes it of particular interest. Of the three vessels of this class recorded for Cornwall, two were found with cremation urns - at Bloodhound Cove Harlyn Bay (Pearce 1983, 418) and at Crig-A-Mennis (Christie 1960). The third example from Colliford barrow CRIC (Ellison in Griffith 1984, 79-81) was found in an inverted position in the barrow mound. The function of this class of vessel is unclear, although it has the design of a strainer. The potential for residue analysis presented by this example will be significant. The scarcity of pygmy/accesory vessels in Cornwall mirrors the situation in Devon with finds only recorded from Broad Down (Fox 1948) and from Upton Pyne (Pollard 1969).

The following analysis is recommended:

- *Petrological analysis* of the sherds in SF <440> not so far examined by David Williams (task 18).
- *Study of the clay* in which sherds SF <440> were found; for this a geologist or soil scientist would need to be consulted at an early stage (task 17).
- *Residue analysis* of the pigmy cup SF <438>. Some fragments for the purpose of this type of further study have been kept aside (task 21).
- *Detailed study*, considering the factors outlined above and any relevant features of the collared urn from the Highgate ritual enclosure, by HQ. This study would be most usefully carried out in conjunction with that of the Highgate vessel (see section 2.4.2.1). Assuming that a lot of detail necessary for the study of the stratigraphic and interpretative aspects of the ritual monuments as a group will be relevant, close collaboration between work on the vessels and the monuments as a whole will be necessary (task 63).
- *Pygmy vessel* <348> is a unique find and should be published together with the collared urn. The vessel fragments <440> comprises lumps of clay which may or may not be parts of one or more vessels. These are poorly fired objects. These items require description but no further work (task 63).
- *Illustration for publication:* drawings by an archaeological illustrator of SF <432> and of SF <438> (it is not considered that any useful purpose would be served by the illustration of the sherds SF < 440>) (task 66).

1.4.2.2 **Post - Prehistoric ceramics** by John Allan & Jacky Nowakowski

The collection is of limited value for further study but should be retained as part of the site archive. Nonetheless a general synthesis of the broad date range and make-up of this material will be produced and be represented on a finds distribution map created during and for the proposed historic landscape data analysis (see task 56).

1.4.2.3 **Potential of Lithics** by Philippa Bradley & Alison Roberts
Report dated: 9.12.95

This small assemblage was mainly recovered from topsoil and other secondary deposits. A single flake was recovered from the recut of the ditch in quadrant 2 and another flake was found underneath the mound in quadrant 4 (Davis *et al*, 1994, 36). The flintwork is therefore probably all redeposited and is clearly of at least two periods. However, some pieces may have been associated with the construction of the barrow or activities carried out at the site subsequently. Activities include microlith manufacture (microburin), hide preparation (scrapers, piercers) and knapping (waste flakes, blades, blade-like flakes, chips and irregular waste). The lack of cores may suggest that they were prepared and removed for reduction working from elsewhere.

The importance and value of this material lies in its potential for comparative studies within the area. Mesolithic material may and will be compared with material from Penhale Round and Penhale Moor.

The following analysis is recommended:

- The flint will be examined: the records generated during the assessment will be used as a basis for all further work and enhanced where necessary. Attribute analysis will be undertaken on selected groups of material. This analysis will consist of recording selected attributes, including butt type, hammer mode, position in the reduction sequence (possibly using some of the categories described by Harding 1990, 218-220), raw material type and condition. Metrical analysis may be undertaken as part of this work. Through this analysis it is hoped to refine the dating further. Use-wear analysis will be undertaken as appropriate and the possible sources of raw materials will be explored further.
- *Detailed study as above* and description for publication and liaison with A. Roberts on the Mesolithic material (task: 42).
- *Illustration for publication* for four pieces of flint (task .65).

1.4.2.4 **Stonework** by Henrietta Quinnell

Although 344 of the 365 pieces of stonework studied came from topsoil or levels of eroded material, the collection should be retained as a unity, because the majority may have eroded out from the upper mound levels or from the denuded ring cairn [207/307] where exposed. Its study, alongside locational variation within the Bronze Age features and variation in the processes post-dating the barrow may aid understanding of the structural development of the barrow. Consideration of the large sample of vein quartz pieces, and occasional other samples such as the non-local granite lump, may help towards a detailed understanding of how the ring cairn was constructed. There may be a connection between a more substantial ring cairn in quadrants 3 and 4 (than in quadrants 1 and 2) and the larger number of "significant stones" deposited in those two quadrants. "Significant stones" may at present be used as a category to include stones such as the quartz pebbles which were brought to the site and deposited but were not worked into artefacts.

Quartz pebbles and quartz crystals have been noted as material with potential significant locational variation on barrow sites, notably in the St. Austell barrows excavated in the 1970s (Miles 1975, esp. 72). This locational variation in deposition could be usefully studied by comparing the situation at Little Gaverigan with Cornish sites recently published by P.M. Christie (Christie 1985; 1988) as well as with the St.Austell barrows. In addition consideration of locational variation in deposition might be usefully extended to all non-modern material.

It is noted that only one granite lump (apart from the pebbles) is the only non-modern and non-local material, and this would have originated within the St.Austell granite a few kilometres away. Study of recent barrow reports from the South West should show whether this concentration on local material was an unusual feature. No further geological

work on the stone assemblage is considered necessary. The pebble hammer, although not from a prehistoric context, should be studied further to see how far abrasion marks on its end match those on other Bronze Age artefacts and so whether a possible Bronze Age date can be assigned to it.

Recommended lines of study are the following:

- *Preparation of a table* showing the location by quadrant of the various categories of stone present (tasks 20 & 25).
- *A comparative study* of items such as the quartz pebbles and quartz crystals with those of other south-western barrows (task 25).
- *A description* of the pebble hammer (task 25).
- *An illustration for publication* of the pebble hammer (task 66).

1.4.2.5 **Ironwork** by Henrietta Quinnell

No further study is appropriate at the present time but this large collection of presumably 20th century material should be preserved in case it is of interest in the future.

1.4.2.6 **Petrological analysis** by Henrietta Quinnell

Some petrological analysis of vessels GV92 <432> and GV92 <448> has already taken place (see section 1.2.8).

The other sherds from SF <440>, which may not be of the same fabric as that petrologically examined, will need this form of analysis. Reasons are given under the discussion of SF <440> in section 1.4.2.1.

1.4.2.7 **Conservation and Reconstruction** by Margaret Brooks

The following is extracted from a report dated 14 September 1995 and notes taken during a project meeting between Margaret Brooks, Henrietta Quinnell and Jacky Nowakowski at the offices of CAU, Truro on 22nd August 1995.

Pygmy vessel SF <341> Reconstruction and consolidation with HGV glue of this tiny vessel has already taken place. Small unconsolidated sherds have been left unhandled in a paper envelope, so that analysis of any residue can be undertaken to show what the strainer-like vessel was used for.

Collared Urn <432> Reconstruction and consolidation of this vessel has already taken place, some wall fragments join but no further work is recommended. The vessel is quite fragile and minimum handling is recommended. A sketch plan showing how sherds join is available to aid the archaeological illustrator.

1.4.2.8 **Potential for organic residue analysis** by Stephanie Dudd & Richard Evershed

- The results of the pilot study on the sherd of EBA collared urn were promising. Further work on this material would be useful and is recommended for comparison with results from the Highgate Ritual enclosure urn (section 2.2.4).

1.4.3 Potential of Environmental data

1.4.3.1 Plant macrofossils and charcoal by Vanessa Straker

Plant macrofossils - Recommendations

There is very little evidence from the plant macrofossils for the use of the site for domestic activities such as the dumping of rubbish associated with crop processing, food preparation or the burning of domestic waste. It is recommended that the contexts listed below should be examined in detail to clarify the exact nature of a) the heathland vegetation and b) the possible arable assemblages. Charcoal from selected contexts should also be identified prior to radiocarbon dating (see below) . All the charcoal (with one or two exceptions) noted in table 7 comes from relatively short-lived plants (probably including heathers and gorse) and so should be suitable for radiocarbon dating. However the quantities are small and accelerator dating will be required.

Table 7- Samples selected for detailed analysis - GV92

Context	*Type*	*Phase*	*Total Float size(ml)*	*No of samples*
[136]	buried turfline	1-3	200	1 [736]
[225]	pit [224]	3	100	1 [670]
[8]	ditch [6]	4	300	1 [772]
[53]	ditch [6]	4	175	2 [695], [698]
[57]	ditch [6]	4	100	[692]
[59]	ditch [6]	4	150	1 [726]
[17]	mound make-up	4	400	1 [629]
[132]	mound make-up	4	200	2 [700], [743]
[305]	mound	4	250	1 [660]
[309]	ditch [308]	4	90	1 [711]

Time required for further work *:5 days maximum.* (tasks 7 and 37).

1.4.3.2 Charcoal -Recommendations

Introduction and methodology

Wood charcoal was recovered from the bulk samples and roughly quantified and commented upon in the Table summarising the Assessment data for the bulk samples as a whole. The charcoal was assessed from the floats, but lists were also made of occasional charcoal fragments that had been retrieved from the residues (mesh size 1mm) and that which was hand-collected during the excavation. The rough quantification (Occasional : 1-10 fragments; Moderate 11-50 fragments; Frequent >50 fragments) was divided into greater than 2mm and less than 2mm fractions. This is because the identification of

fragments of less than 2mm in overall dimensions is extremely time-consuming and not always productive. Thus, the charcoal selected for full analysis is, wherever feasible, greater than 2mm in size. As wide a range of contexts as possible was selected from each phase and these include those selected for radiocarbon dating. The samples recommended for full analysis are listed in table 8 (and form task 7).

Table 8 - Little Gaverigan (GV92): samples for charcoal identification

Sample	Context	Phase	Location	Type	Comments
682	42	1	Q1-W	fillof posthole 41	F < 2mm, O > 2mm
732	70	1	Q1-G	build up in ditch 1805	F < 2mm, M > 2mm (mature)
775	82	1	Q1-W	Fill of pit 81	O < 2mm, O > 2mm
670	225	3	Q3-W	fill of pit 224	F < 2mm, M > 2mm (some mature) *Ulex* sp. spines
630	336/337	3	Q4-O	fill of pit 318	M < 2mm, M > 2mm
634	339	3	Q4-O	fill of pit 318	F < 2mm, M > 2mm (includes twigs)
664	343	3	Q4-W	pit [340]	F < 2mm, O > 2mm, (includes twigs)
675	347	3	Q4-W	pit [340]	F < 2mm, O > 2mm
752	390	3	Q4-O	fill of pit 318	F < 2mm, M > 2mm; 1 *Calluna* fruit
726	59	4	Q1-L	backfill of ditch 6	F < 2mm, M > 2mm; M *Ulex* spines and seeds, and *Calluna* leaves.
719	69	4	Q1-G	backfill of ditch 6	F < 2mm, M > 2mm
625	205	4	Q3-E	mound spit 2	F < 2mm, M > 2mm
640	205	4	Q3-E	mound spit 6	F < 2mm, M > 2mm
635	205	4	Q3-W	mound	F < 2mm, M > 2mm
613	309	4-5	Q2-F	buildup in ditch recut 308	M < 2mm, O > 2mm
711	309	4-5	Q4-M	buildup in ditch recut 308	F < 2mm, F > 2mm. M *Ulex* spines, O *Ulex* seeds and *Calluna* fruits
626	309	5	Q4-N	buildup in ditch recut 308	M < 2mm, M > 2mm;
727	309	5	Q4-R	buildup in ditch recut 308	O < 2mm, M > 2mm

Charcoal: 0: occasional (1-10 fragments); M: moderate (11-50 fragments); F: frequent (>51 fragments). <2mm: very small fragments not readily identifiable; >2mm: identifiable fragments.

1.4.3.3 **Ditch sediments** by Vanessa Straker

Recommendations
No further work is recommended on context [98] (sample 796) as preservation of recognisable macrofossils is inadequate.

Fine charcoal is present in context [98] and it may be possible to extract enough for a radiocarbon accelerator date. There are very few (if any) fragments however that will be large enough for identification. Despite the poor preservation of the waterlogged plant macrofossils, the single seed of probable water mint observed suggested that it would be worth sorting the flot carefully to recover seeds that might give some information on the nature of the ditch.

- Time required to sort for charcoal and waterlogged macrofossils and report on the waterlogged macrofossils: *3 days* (tasks 7 and 37).
- Time required for charcoal identification: *1 day* (task 7).

1.4.3.4 **Pollen** by James Greig & Vanessa Straker
Report dated: February 1997

- Together with Highgate Ritual enclosure, the pollen results from Little Gaverigan Barrow show real potential for providing good results from further work. Full analysis should provide firm evidence for the varied prehistoric landscape, with areas of heathland, grassland and arable. More counts should be done of the preparations already made, to 250 land pollen grains, excluding Ericales (heathers), as these dominate many of the assemblages. Further preparations of intermediate samples also need to be done, so that properly detailed pollen diagrams can be drawn up. These results should considerably advance knowledge of prehistoric landscape in central Cornwall (task 35).

1.4.3.5 **Soil micromorphology** by Matthew Canti & Jenni Heathcote

- The samples have been impregnated but no scanning has yet been carried out. When ready, the slides will be examined to try and determine the extent of disturbance and/or erosion of the buried soil and the precise level of the old ground surface. The results will be communicated to James Greig and Vanessa Straker as soon as they are available so that pollen analysis can take account of any stratigraphic abnormalities (tasks 35 & 38).

- To date the samples have all been impregnated (V. Straker, *pers. comm.* 26th April 1997) but at the time of writing it was considered not appropriate to look at the thin sections during this phase of work *although it is recommended that further analysis of this data takes place during the next stage of work*(tasks 35 & 38).

Vanessa Straker adds: *It is important that the sections are examined as they provide useful information on soils and would contribute to interpretation of the pollen from the mound. Very fine sampling for pollen, combined with feedback from micromophological analysis might permit detail about the stacking and cutting of the turves. Since the pollen assessment did not detect a buried soil layer as distinct from the mound, this sort of more detailed line of analysis may permit this level of information to be gained* (correspondence 26.4.97).

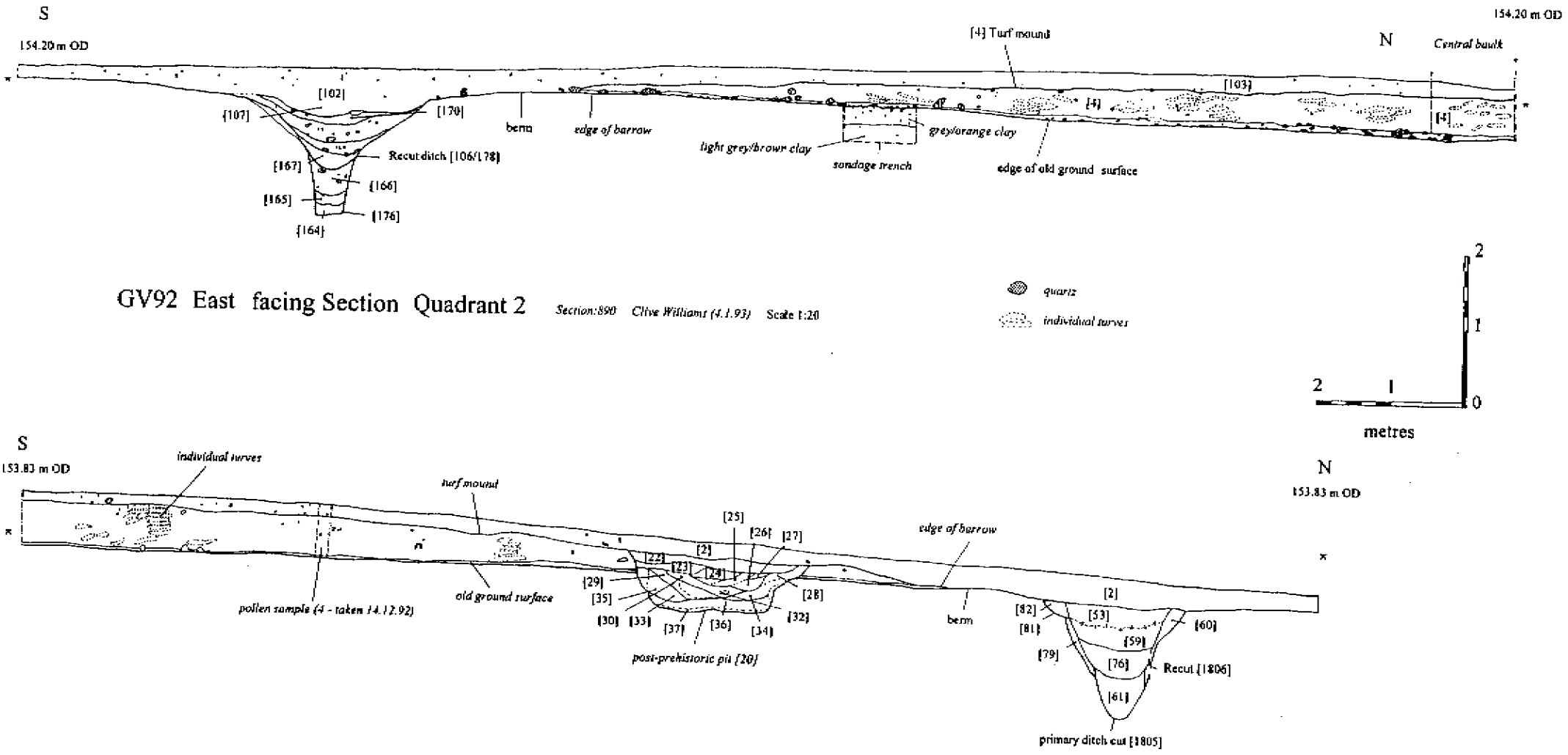


Fig. 11 GV92 East-facing section Quadrant 2 and East -facing section Quadrant 1 (CAU Archive GRH:177/10).

1.5 RADIOCARBON DATING by Jacky Nowakowski

A series of scientific dates are required from the excavation of Little Gaverigan Barrow in order to clarify the overall structural phasing outlined in section 1.1. as well as to securely place the activities at this site within the Early Bronze Age period. Some well-sealed contexts have provided material suitable for scientific dating. Most of the wood charcoal available for this purpose is however small and only suitable for accelerator dates (V. Straker, *pers. comm* and section 1.4.3.1).

1.5.1 Phase 1

In order to confirm the presence of pre-barrow activities at this site it would be useful to obtain **one** scientific date **from any two** of the following features:

Pit/Phole	[39]	fill [40]	sample no:[685] contains occ.charcoal
Pit/Phole	[41]	fill [42]	sample no:[682]contains occ. charcoal
Pit/Phole	[47]	fills [42] and [48]	sample nos: [682] contains occ.charcoal
Pit/Phole	[81]	fill [82]	sample no: [775] contains occ.charcoal
Pit	[122]	fill [124]	sample no: [694] contains twigs

Samples [682] and [775] may have some limited potential for accelerator dating (see Table 3). Stratigraphically these would represent the earliest dates from this site and would usefully compare with dates obtained from Highgate Ritual Enclosure and Highgate Pits.

1.5.2 Phase 2

A date obtained from any of the ditch silts which collected at the base of the primary ditch at Gaverigan would give some indication of when the ditch was open. Material suitable material for an accelerator date has been identified from sample [796] which was collected from quadrant 1 J/K (see section 1.4.3.2).

1.5.3 Phase 3

Material suitable for accelerator dating is available from samples from each of the following features which belong to this phase. It is hoped that **three** accurate dates could be obtained for this phase.

- **Quadrant 3 Pit [224]** fill [225] sample no: [670] moderate mature charcoal

This feature produced a scatter of ceramic sherds SF <440> (see section 1.2.2)

- **Quadrant 4 Pit [340]** fill [343] sample no: [664] occ. twiggy
  fill [347] sample no: [675] moderate charcoal

The small pygmy vessel SF <438> was recovered from pit [340].

A further accelerator date is required from a context associated with pit [318] and material for an accelerator date is available from the following:

- **Quadrant 4 Pit [318]** fill [339] sample no: [634] mod includes twigs
  fill [390] sample no: [752] has **high potential** for a date.

1.5.4 **Phase 4**

Pollen was recovered from the fill of the pit [215] which contained the collared urn SF<432> (Quadrant 3) and this could perhaps be considered for dating although advice on this is required. It would be useful to obtain an accelerator date from a grain of hulled barley recovered from infill [59] in ditch [6] (section 1.3.2.1) as this would give some indication of the date of the final "closing down" of the barrow.

1.5.5 **Summary**

The selection of contexts for independent dating outlined above has been made on the basis of their ability to help to clarify the structural phasing and the chronological narrative recorded at Little Gaverigan Barrow. The assessment of bulk samples has indicated the range of material suitable for dating which to a large degree is restricted to heather fruits and moorland vegetation and some twiggy charcoal. Accelerator dating is therefore recommended. On that basis at least seven samples have been selected for accelerator dating: 2 samples from phase 1 features, 1 sample from phase 2, 3 samples from features belonging to phase 3 and at least 1 from phase 4. A series of dates have been chosen with the view to trying to independently chart the development of the site - from its earliest pre-"barrow " state, through to its "active" use as an arena for ritual and ceremony and its final "closing down" state.

Dates obtained from this site could be usefully compared with those obtained from nearby Highgate Ritual Enclosure and Highgate "Ritual" pits - sites which are considered to be part of the early prehistoric landscape in this section of the study area. Collectively these dates will contribute to the documented sequence of Early Bronze Age ceremonial sites in the south-west for which there are at present only a handful of dates available (see Christie 1988).

1.6 Summary for Potential for analysis of the data from Little Gaverigan Barrow by Jacky Nowakowski and Henrietta Quinnell

1.6.1 Contribution of the results of the excavation of Little Gaverigan Barrow to research into South-western Bronze Age funerary practices.

The excavation of Little Gaverigan barrow has produced a wide range of well-preserved archaeological information which can be classified as follows: structural data, artefactual data, environmental data and contextual information. Brought together these various strands may provide us with a dynamic reconstruction of the history and changing nature of the site. This history should be well-supported by a good series of accelerator determinations. In addition this information will collectively contribute to a body of data which has already highlighted the considerable complexity of ceremonial and funerary sites of Early Bronze Age date in the south-west. The results at Little Gaverigan reflect a general recognition that activities at such sites could be physically manifested in a variety of ways (*cf.* Miles 1975). The relatively well-preserved character of the site has permitted

us to document a sequence of episodes with some degree of clarity and the narrative here can be compared to other excavated barrow sites in Cornwall.

The geographically-closest group of excavated barrows to Little Gaverigan are the six sites located within the St. Austell (china clay) area excavated by Henrietta Miles during the 1970s (Miles *ibid.*). Almost all the features at Little Gaverigan Barrow occur at one or more of those six sites but never in the same combination. The variety in the sequence and appearance of physical and contextual features culminating in a "complete" site history presents us with a potentially de-codable pattern of ritual events which is increasing recognised as a characteristic of Early Bronze Age monuments. The proposed post-ring phase (that is "structure" 1804 during phase 1 at Little Gaverigan), does not have close parallels with the St. Austell barrows; there, post-rings (found at Cocksbarrow and Caerloggas I) were demonstrated to have had a close relationship with cairn rings. The ditch and stony annular ring at Little Gaverigan reflect the more definitive versions of these features at Watch Hill (the only other site within the St. Austell group with a ditch); the refilling of the ditch at both sites at the same time as the construction of the turf mound is an unusual feature. Close scrutiny of excavation reports of other south-western "ditched" barrows may reveal other occurrences. In past studies the close, Wessex-derived, linkage of the "ditch-as-a-quarry-for-the-barrow-mound" has tended to obscure consideration of ditches as distinct ritual features.

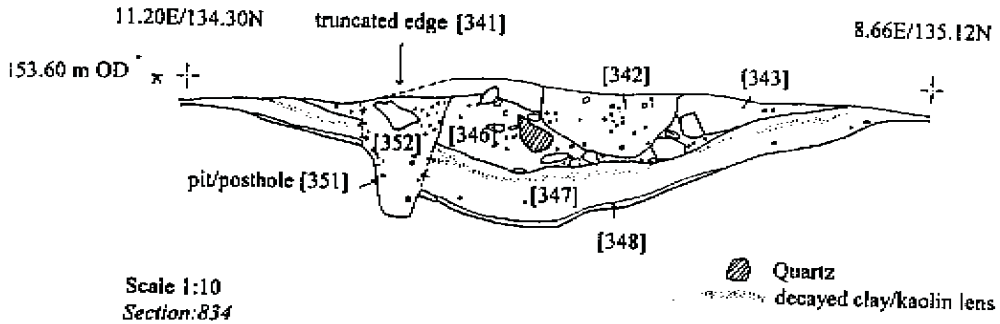
Watch Hill lacked any evidence for human burial in its ditched and ring cairn phase and was therefore interpreted as a "ritual barrow" or "enclosure" in its earliest phases of use. Unlike Little Gaverigan, the later phases at Watch Hill incorporated the formal disposal of the dead. The turf mound at Caerloggas III and the ring cairn monument at Trenance Downs did not. At Little Gaverigan no obvious change in function occurred to transform use from the ceremonial to the funerary. The data from Little Gaverigan emphasises the frequency with which (at least in certain areas of the south-west), barrow/cairn-type monuments could be "completed" without any funerary activity and thus making Little Gaverigan very much a "ritual barrow".

Parallels to the yellow brown clay "capping" spread which appears during phase 4 at Little Gaverigan occur at almost all of the St. Austell barrows. Closer study of the occurrence of features at Little Gaverigan with those recorded on the St.Austell group will reveal both similarities and differences. These may be compared, especially to other barrow groupings, to demonstrate which are purely "local" features and which have regional significance. In any regional study an awareness of monuments which remain at the "cairn ring" stage (for example the slight "ring cairn" at Shaugh Moor (Wainwright *et al*, 1979)), needs to be considered in relation to multi-phase monuments such as Little Gaverigan. Such monuments need not be considered as different classes but as stages in a continuum of construction which was halted, for whatever reason, at different stages. Fuller analysis of the contextual data from Little Gaverigan will elucidate much about the sequential structural development of Early Bronze Age ceremonial sites in the south-west. A series of secure radiocarbon dates should place the site within the regional Early Bronze Age ceremonial sequence.

GV92 Pre-Turf Mound Features

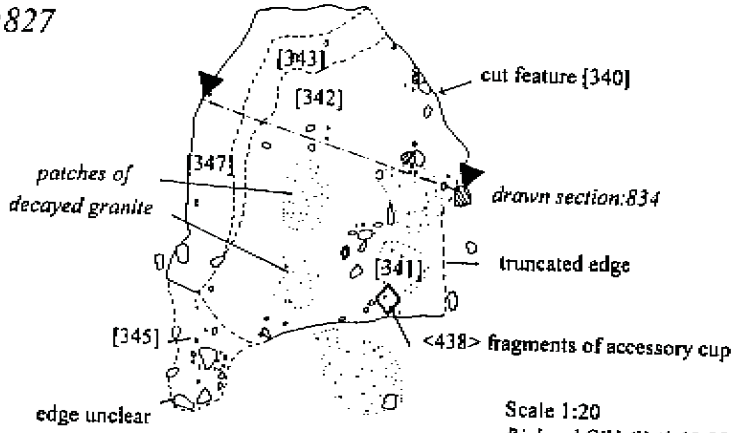
Quadrant 4

North facing section across pit [340]



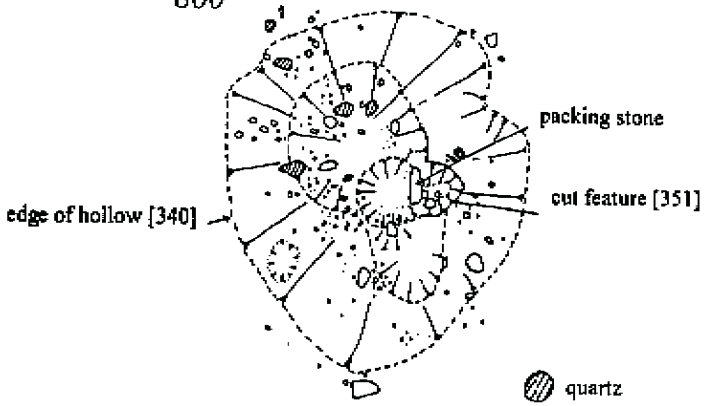
Scale 1:10
Section:834
Richard O'Neill (8.12.92)

[340] Pre-excavation plan:827



Scale 1:20
Richard O'Neill (1.12.92)

[340] Post Excavation plan: 860



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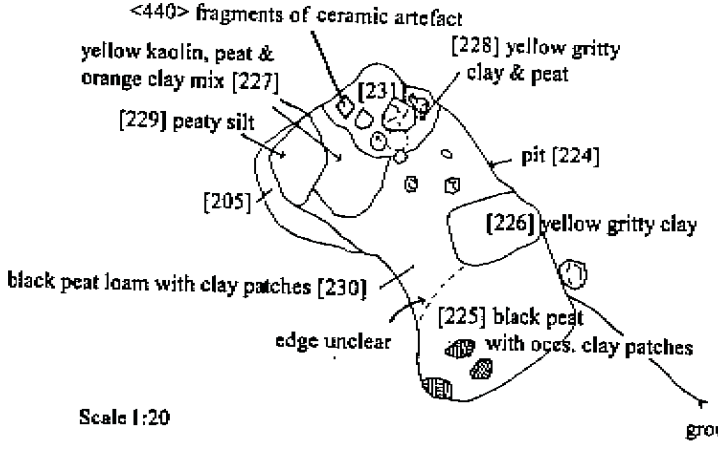
Richard O'Neill (16.1.92)

Quadrant 3



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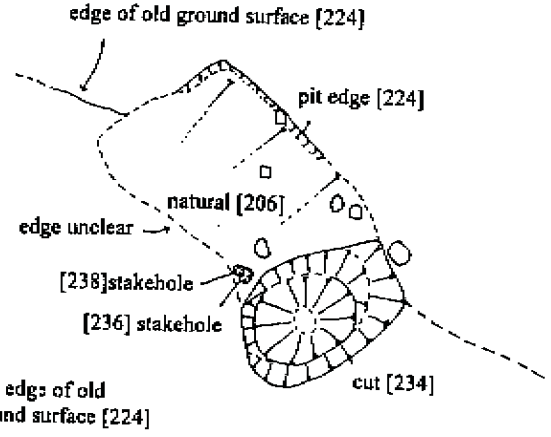
Pit [224] Pre-excavation plan:823
Phil McMahon (27.11.92)



Post Excavation plan:832
Phil McMahon (4.12.92) Scale 1:20

87

Fig.12 (CAU Archive GRH:177/8)

The essentially "ritual" aspect of activities centred at Little Gaverigan Barrow will be significant in developing our understanding of the roles of such sites within prehistoric landscapes. Out of a sample of 41 excavated barrows in the south-west, 17 (including Little Gaverigan) at a minimum, displayed no evidence for formal burial although their final physical forms took on the outward appearance of "classic" barrows. Of this small group, only 4 have produced radiocarbon dates which fall into the time range of 1936 - 1820 cal BC (mean calibrated dates taken from Christie 1988, appendix 3) and so additional dates provided by Little Gaverigan will be significant. It is becoming apparent that in the south-west we have to begin to distinguish between places for ritual acts and places for formal burial for the Early Bronze Age period. Analysis of the Gaverigan data should initiate a broader review of this cultural phenomenon.

The quality of evidence for ceremonial display and "ritual" behaviour discovered at Little Gaverigan will bear useful comparison with other sites. The baseless collared urn <432> found in quadrant 4 might usefully be interpreted as a votive or dedicatory deposit and may be considered the outcome of "structured deposition" (*cf.* Richards and Thomas 1984). This may also be the case for the scatter of ceramic fragments (SF <440>) also from quadrant 4. Such dedicatory or symbolic activities can be seen on other sites in the south-west such as Chysauster Cairn in West Cornwall, where a baseless urn was placed into a pit on the peripherary of the site (Smith 1996), the scattering of pot fragments and "loose gabbro chippings" into a pit at Higher Polcoverack on the Lizard (Harris and Smyth 1983, 96), or the "token" or partial burial of a fragmented vessel in the cist at Trebartha, in Northill (King and Miles 1976, 28). Sherds of an Enlarged Food Vessel from a pit in the ditch of the pre-funerary phase at Watch Hill provide the best example of the deposition of ceramic material from the nearby St. Austell barrows (Miles *ibid.).* The central pit of the complex ring cairn at Caerloggas I had a range of artefacts deposited within it, although none were ceramic or perceived as being "prestige" or "status" items. Barrow excavations in Devon this century have been extremely limited compared to those examined in Cornwall. It is, however, of some note that most of those have produced contexts with deposits which were not apparently funerary - as for example, the charcoal spreads at Upton Pyne (Pollard 1969), charcoal and faience beads at Shaugh Moor (Wainwright *et al*, 1979) and broken sherds in ring ditches and related pits at Digby Hospital, Exeter (Quinnell and Weddell, forthcoming). If close analysis of depositional features in south-western barrows is considered beyond the scope of further work on Little Gaverigan, then this aspect should be flagged up for future research. These pieces of evidence, together with the notable absence of a formal burial at Little Gaverigan emphasise the predominantly " ritual" aspect of barrow sites and is further evidence of the varied complexity which has been revealed during barrow excavations in Cornwall since the war.

One of the most unusual artefacts found during the excavation was the tiny fragile accessory vessel or pygmy cup (section 1.2.2). This class of pottery is generally taken to be an indication of ritual activities - part of the cultural package of the Early Bronze Age. Its discovery at Little Gaverigan highlights the primarily ritual character of the site and is a unique addition to a very small collection of such finds from the south-west (see section 1.4.2.1). The context for this example was well-sealed and it is hoped that an accurate scientific date will be obtained. In addition, the close physical association between pit [340]

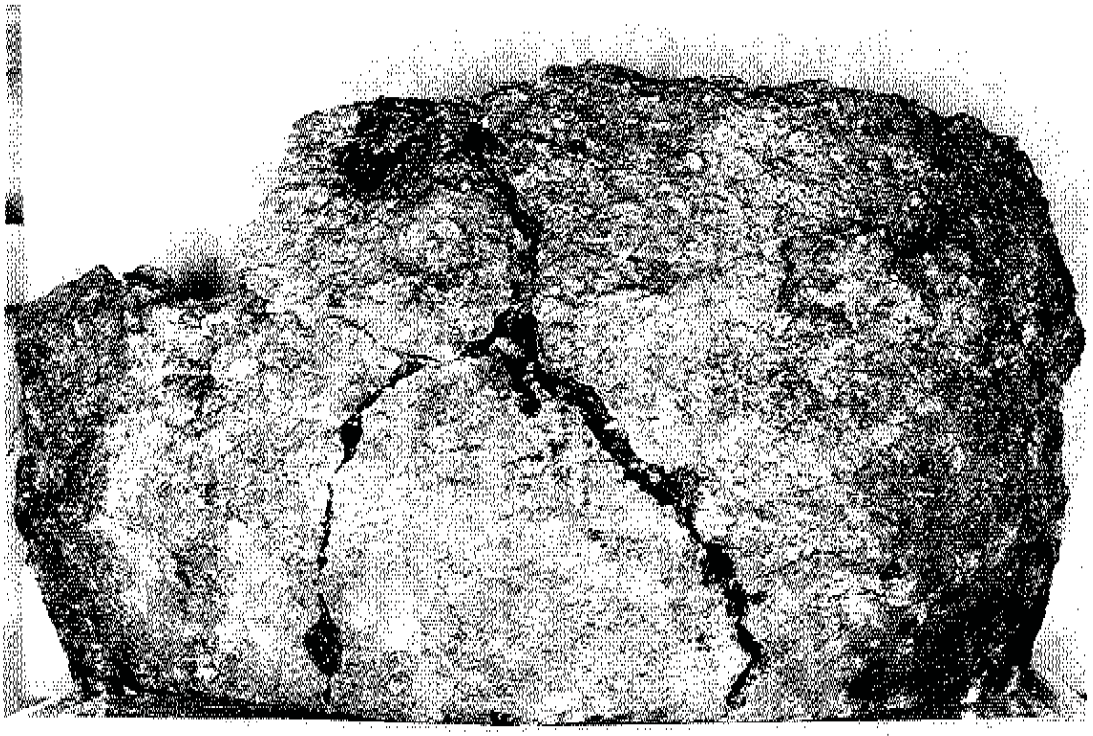


Fig. 13 GV92 Collared Urn <432> (Source: M. Brooks)

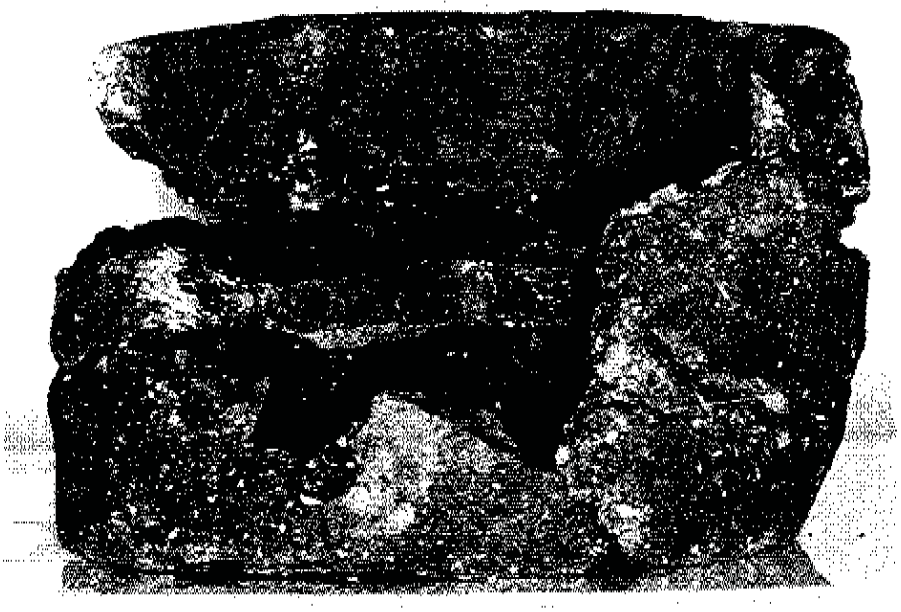


Fig. 14 GV92 Pygmy Vessel <438> (Source: M. Brooks)

(quadrant 4) and this vessel, perhaps having been discarded after use, provides extremely useful contextual information on the significance of such items. The importance of carrying out detailed residue analysis may shed some light on its use, although this may have to form part of some future research on such vessels. The results of petrological analysis which shows the differential use of different clays for all the vessels found on the site (1.2.8) are of considerable interest and may be indications of selective cultural choices being made which underlay certain rites and rituals. The local origins for the clay as suggested by David Williams would generally agree with current knowledge of Early Bronze Age ceramic production (Parker Pearson 1995) but the potential of well-supported radiocarbon dates for this pottery will be useful. The use of two different types of clay in the manufacture of one object (that is the pygmy vessel) may be unusual for this period and this may have been of some symbolic significance. Further consideration of this would be useful during analysis.

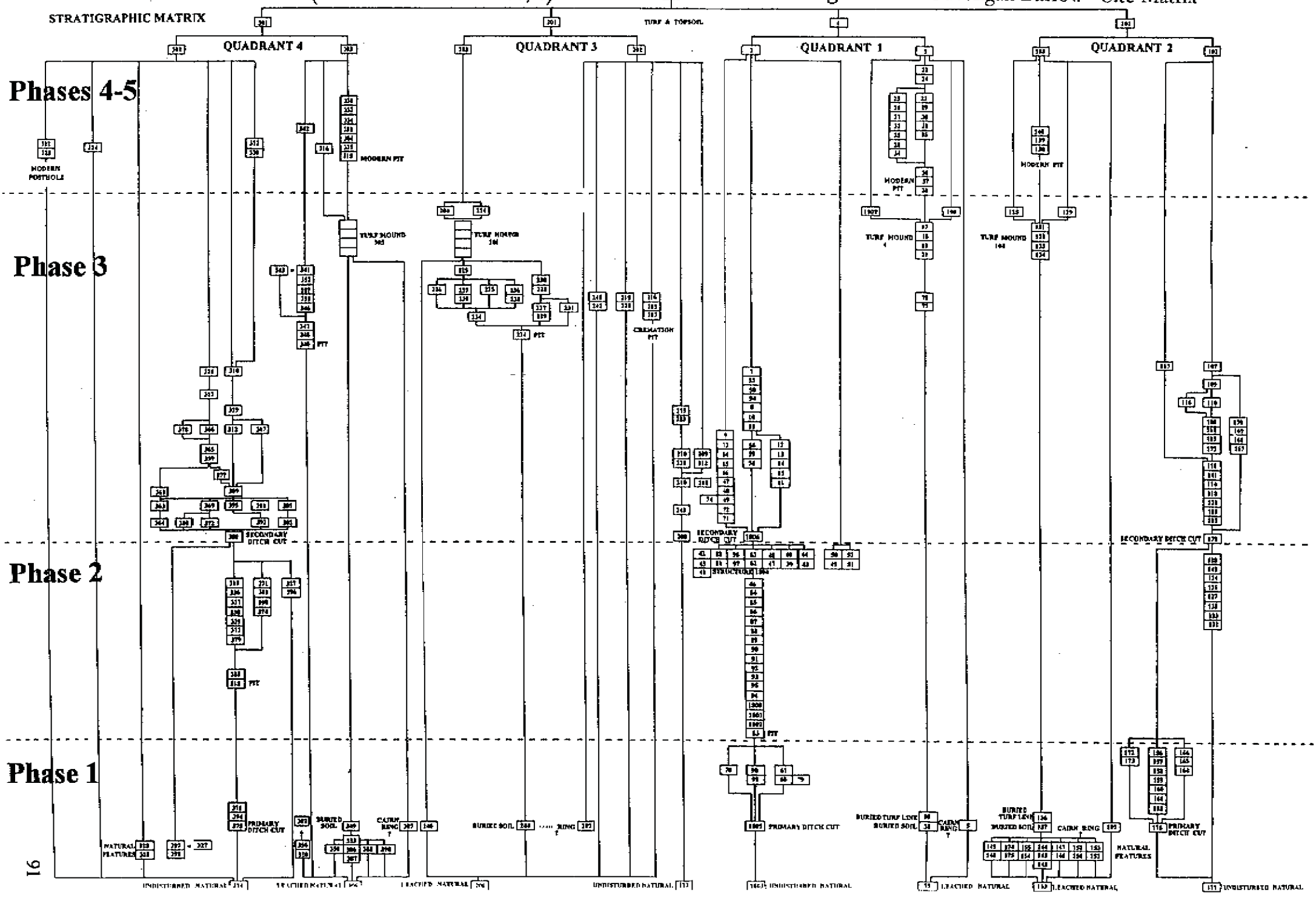
Significant information will come from detailed analysis of the environmental data. Pollen preservation at Gaverigan appears to be good and it is anticipated that analysis of the samples will yield useful information about the general vegetational environment when the barrow was in use. Profiles examined from the St. Austell sites and more recently at Littlejohns Barrow (Miles 1975; Johns and Herring 1994) indicated a moorland landscape in the area during the Early Bronze Age. A similar scenario is anticipated for the landscape around Gaverigan. It will also be important to compare the material collected from Gaverigan to that sampled from Highgate Ritual Enclosure (Grove and Nowakowski 1994 and below).

The assessment of bulk samples for plant macrofossils has provided an additional complementary source of data on the economic practices on and around the site during the Early Bronze Age. The discovery of cereal pollen and arable weeds at this site is of interest and may reflect something of the nature of ritual practice when the barrow was in use. Further analysis of this material will be of significance as qualitative and quantitative data of this type has largely been absent from past excavations of barrows in the county.

A further important result of the work at Gaverigan has been the opportunity to examine the landscape setting of the site. The discovery of a second funerary site at Highgate Ritual Enclosure less than 30 metres from Little Gaverigan Barrow is significant in this respect. Unlike Gaverigan, Highgate Ritual Enclosure did not appear to have been mounded although wooden posts formed part of its architecture. The north-east orientation of wooden post markers is a feature common to both sites and perhaps suggests that together they represented variants forming part of a contemporary tradition (see below). It is likely that Gaverigan Barrow and Highgate Ritual Enclosure represent two different behavioural but linked aspects of the complex tradition of Early Bronze Age funerary and ritual practices. A further element in this analysis will be a consideration of the significance of the series of large pits known as Highgate Pits (see section 3) which could also have formed another structural and symbolic dimension in this early prehistoric ritual landscape (see Fig. 18).

At Little Gaverigan, the sequence of events suggests that the site was not formed in an arbitrary or haphazard fashion but evolved following a pattern of behaviour centred on

Fig. 15 Little Gaverigan Barrow - Site Matrix



"ritual action" or "drama" (*cf.* Barrett 1994). That the site eventually became a monument and thereby a landmark - a fixed locus and defined space for particular behaviour - may demonstrate its broader local significance and the importance of the context of its landscape setting. This has particular importance and relevance when we view the site in relation to its closest neighbour Highgate Ritual Enclosure (Grove and Nowakowski 1994 and below).

2.0 FACTUAL DATA - The Excavation of Highgate Ritual Enclosure - HG93

Background
Highgate Ritual Enclosure (PRN: 37266) was discovered during the routine inspection of topsoil removal during the construction of the Indian Queens bypass in late August 1993 (Grove and Nowakowski 1994). There were no above ground remains and its discovery was largely accidental, although the area had been targeted for close monitoring during the A30 watching brief programme (Nowakowski, Jones and Jones 1994). Highgate Ritual Enclosure was discovered just 30 metres to the north of the barrow at Little Gaverigan (at SW 9244 5915) and its unique character provides evidence of the broader ceremonial landscape setting of that Early Bronze Age site (Figs 16 & 18).

Investigation here was necessarily rapid as the site lay within a transit zone for construction traffic and only limited time (4 days) was permitted for the A30 project team to excavate and record the site. Topsoil was removed by machine and this was followed by hand excavation. The site comprised a sub-circular arrangement of segmented ditches, pits and postholes. As these features were not as deep as those investigated at Little Gaverigan and given that the stratigraphy proved to be relatively straightforward, it was possible to complete the investigation within the short time allowed. The successful completion of the work at Highgate was in large part due to the voluntary help of a rescue team who gave up their bank holiday weekend. The work was supervised by Janice Grove and Charles Johns.

2.1. STRUCTURAL, STRATIGRAPHIC DATA AND SITE PHASING by Jacky Nowakowski

Highgate Ritual Enclosure was a sub-circular arrangement of segmented ditches, pits and postholes covering an area approximately 20 metres in diameter (Fig. 17). Shallow segmented ditches defined two-thirds of a flattened circuit on the western side of the site whilst smaller pits and postholes completed the rest of the circuit to the east. An outer line of pits and postholes echoed the north-eastern curve of the sub-circular space defined by these features. Positioned within the inner complete circuit (but slightly off-centre to the west) was a deep pit containing a cremated deposit. Two major segmented ditches made-up the southern and western arcs of the main circuit which, to the north in contrast, was defined by five shorter segmented ditches. The remaining section of the main circuit on the east was made up of nine shallow pits and postholes and two other shorter lengths of segmented ditches. Nine pits and postholes formed an additional curvilinear arc outside the main circuit on the east - this was positioned 4 metres out from the main circuit. Six smaller pits and/or postholes forming an additional but shorter curvilinear arc positioned 6 metres out from the edge of the main outer circuit - were again on the north-eastern side. In form therefore, Highgate Ritual Enclosure was an unusual arrangement, comprising both complete and incomplete circuits of ditches and pits/potsholes (Fig. 17).

None of the defining features physically intercepted one another and the overall plan of the site suggested one distinctive phase (but see below). The remains of two cobbled

surfaces which aligned E-W and N-S to the south and west of the site were not however contemporary features.

All the features were highly distinctive with fills which appeared to be completely homogenous throughout except for the sealing material and the infill of the central pit [61] (see section 2.2.2). The remainder were filled by a fine-grained black to dark grey silt loam with a greasy peaty texture and a firm to friable consistency. Superficially this material appeared similar in appearance and texture to the mound make-up of Little Gaverigan barrow. Unlike Little Gaverigan barrow, however, there were no traces of an overlying mound. There was, in addition, no evidence for silting or layering of deposits which left the strong impression that all dug features had been deliberately backfilled in one major phase of activity.

The main internal feature was a cremated deposit contained in a collared urn SF <324> which had been placed upright in a well-dug pit [61]. This deposit was well sealed under a deposit of white clay. Large charcoal lumps had been placed into the upper fill surrounding the pot (see section 2.2.2). This deposit appears to represent a formal burial event. No other finds or traces of burial activities were found.

The possibility that the overall layout and plan of Highgate Ritual Enclosure evolved over a period of time must not be overlooked and a series of accurate scientific dates may (perhaps) help test whether the overall form of the site represented more than one phase of activity. It is feasible that the combination of two "different" structural features a). segmented gullies and b). postholes represent different episodes of activity. Each type of feature formed arcs or arrangements which embraced and defined space and presumably guided or restricted points of access. Of interest are the double "row" of postholes which shadowed the north-eastern side of the site. The second "row" may have been set in position after the deposition of the central burial and perhaps some time after the construction of the first "inner" row of posts. It is also perhaps more than just a coincidence that the orientation of these features which lay on the north-east side of the site, is similar to the earlier post features found at nearby Little Gaverigan Barrow (see section 1.1.3). The positions of these posts may therefore have been influenced by factors relating to the landscape setting, and perhaps cosmological alignments.

2.2 ARTEFACTS

2.2.1 **Collection Policy** by Jacky Nowakowski

In view of Highgate Ritual Enclosure's close proximity to Little Gaverigan Barrow and the likelihood that it is prehistoric and probably contemporary with the barrow, it was decided that all finds would be recorded three-dimensionally. In the event no other artefacts other than the collared urn SF <324> which had been placed within a sealed pit, were recovered. The urn and all the contents of the pit were removed in their entirety. This was achieved by securing the entire deposit in a bandage support, and the deposit was immediately taken to the conservation laboratory in Salisbury where it was excavated by Margaret Brooks (section 2.2.5).

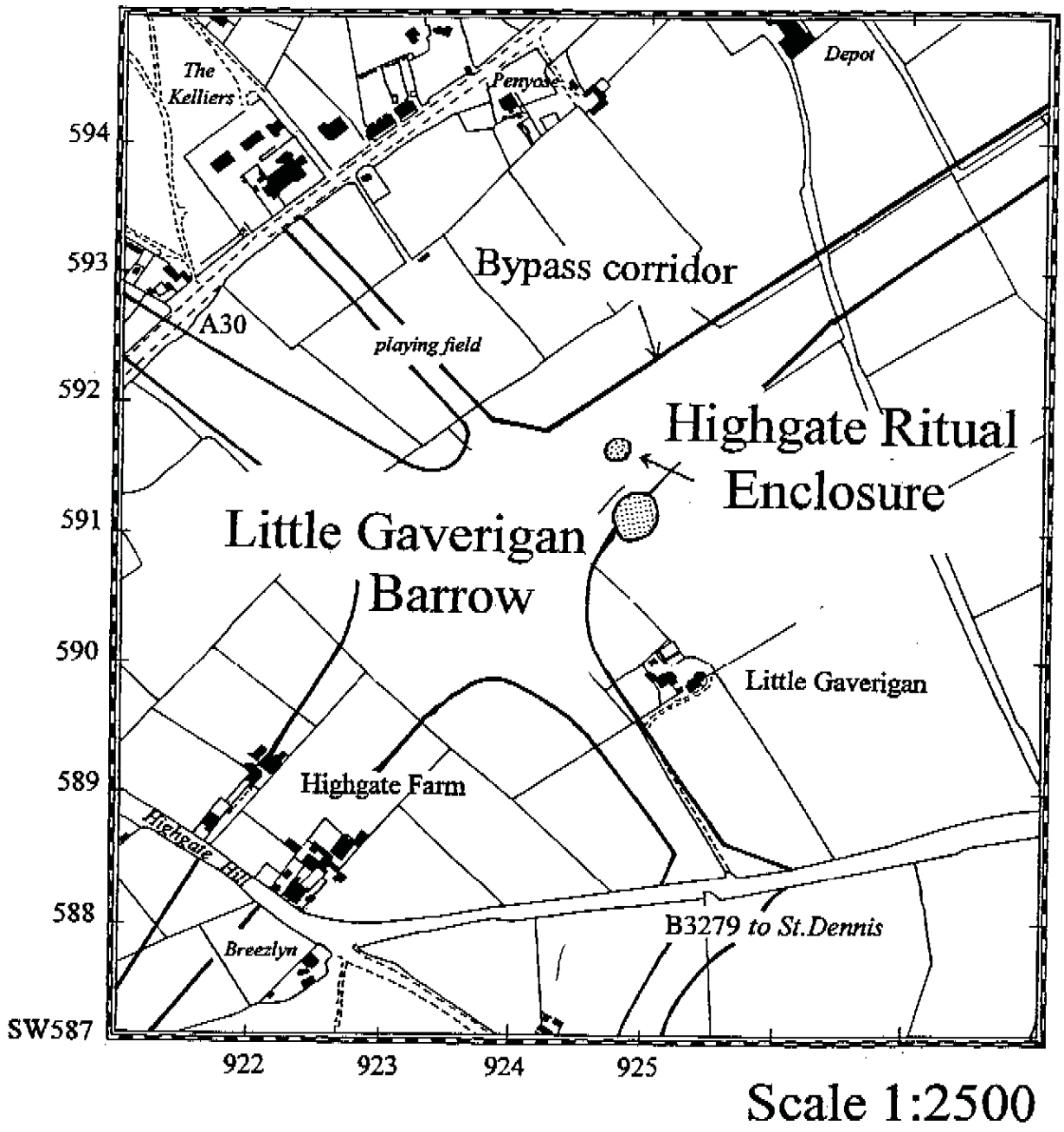


Fig. 16 Location of Highgate Ritual Enclosure SW 9244 5915 - A30 Project, Cornwall (at 1:2500) The site lies less than 30 metres to the north of Little Gaverigan Barrow. *Based upon the Ordnance Survey mapping with the permission of the controller of Her Majesty's Stationery Office © Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. Cornwall County Council LA 076538 (1997).*

2.2.2 **Ceramics** by Henrietta Quinnell

SF <324> Collared urn found upright in pit [61]. Only parts of the vessel survived for reasons given below. About half the rim/collar is represented, with a diameter of c. 215 mm. The outside of the collar is decorated with a simple chevron pattern, the inside with a zig-zag line which gives the appearance of vertical Vs. Below the collar little of the body survives. A few sherds give hints of a possible neck and therefore of tripartite form. There is no decoration below the collar. The base of a strap or arched handle at least 70 mm wide across survives, probably springing from just below the girth; sufficient of the vessel is present to suggest that there were originally two handles, rather than four. The base is complete and is thick (c. 25 mm); this compares with the wall sherds which are 10/15 mm thick. The fabric is gritty and remained extremely friable even after consolidation by Margaret Brooks (section 2.2.5). The friability of the fabric may be due to low temperature firing or subsequent burning or both.

SF <324> was found in pit [61] which was 0.38 m deep and 0.50 m in diameter. The base of the vessel rested on approximately 200 mm of soil which covered the floor of the pit. A space of approximately 100 mm between the sides of the pit and the vessel, was filled with deposit [60] which contained a large quantity of charcoal, some in fairly sizeable lumps (at least 400 mm). A little cremated bone was found mixed with a red fibrous material (part of [87]) on the base of the vessel. This material gave the appearance of having been restrained by some form of wrapping; a leaded bronze awl was found on its surface (see section 2.2.3). Above the red fibrous material the vessel was filled with a whitish clay (part of [87]). The vessel was very much broken. On the side which was best preserved wall sherds were found upright but overlapping inside one another, the surviving rim lying almost horizontally across clay fill [87]. Above the compacted urn and the surrounding charcoal fill [60] was a whitish clay capping [59] which filled the top 800 mm of the pit. [59] was flat-topped and had not slumped into the pit.

The most likely explanation for the fragmented condition of the vessel was that it was pushed down into the pit, after infill [87] and the surrounding fill [60] were in position. In the process of being buried it therefore became broken. (If the breakage and compacting had been subsequent, capping [59] might be expected to have slumped downwards to fill the void which would have been left). The poor survival of the vessel in its broken condition is probably due to the softening effects of water trickling into the pit. Conservator Margaret Brooks comments that in places it was impossible to distinguish surviving sherd edges from the black gritty soil which now surrounded them and which may be presumed to be the detritus of the remainder of the vessel. (It cannot of course be demonstrated beyond doubt that the vessel was complete when deposited, but if it had not been then the distinction between [87] and [60] is hard to explain).

2.2.3 **Metalwork** by Jacky Nowakowski with comments from Margaret Brooks and Stuart Needham

A small leaded Bronze awl had been deposited together with the cremated deposit within the collared urn SF <324> from Highgate Ritual Enclosure. The item was found during laboratory excavation of the urn by Margaret Brooks at Salisbury in 1993, who noted that it was originally broken in three pieces and that it lay on top and to one side of the

cremated material (see Brooks in Grove and Nowakowski 1994, 22). It is likely that it became fractured within the deposit, probably as a result of corrosion stress, and was therefore probably intact when it was placed in the urn. Its position within the urn, placed on top of the cremated material and perhaps associated with the red fibrous material (?part of an organic wrap) is of interest. Was the awl used to pin together an organic wrap which contained the cremated deposit?

On discovery by Margaret Brooks the awl was mechanically cleaned and photographed. X-ray fluorescence analysis by Dr David Starley of the Ancient Monuments Laboratory in London in 1994, showed weak signals for copper, tin and lead which confirms that the awl was made of leaded bronze (Margaret Brooks, *pers. comm.*). The awl retained fine surface detail (see below) but was noted to be in an unusual mineralised state with a tin-rich surface and only a residual proportion of the original copper and lead (as defined by the XRF analysis). This may have resulted from "tin-sweat" or possibly subjection to heat (Margaret Brooks, 1995).
The awl has been consolidated and conserved. It is approximately 49 mm long and is flattened at one end and pointed at the other. Towards the centre there is a distinct change of shape where the rounded (pointed end) becomes a rectangular-section tang. This is more noticeable in one plane than the other. In one plane this angle change shoulder is 3 mm across, in the other it is 2 mm. The tang tapers to 1 mm, the working end to a point (see Brooks in Grove and Nowakowski 1994, 22).

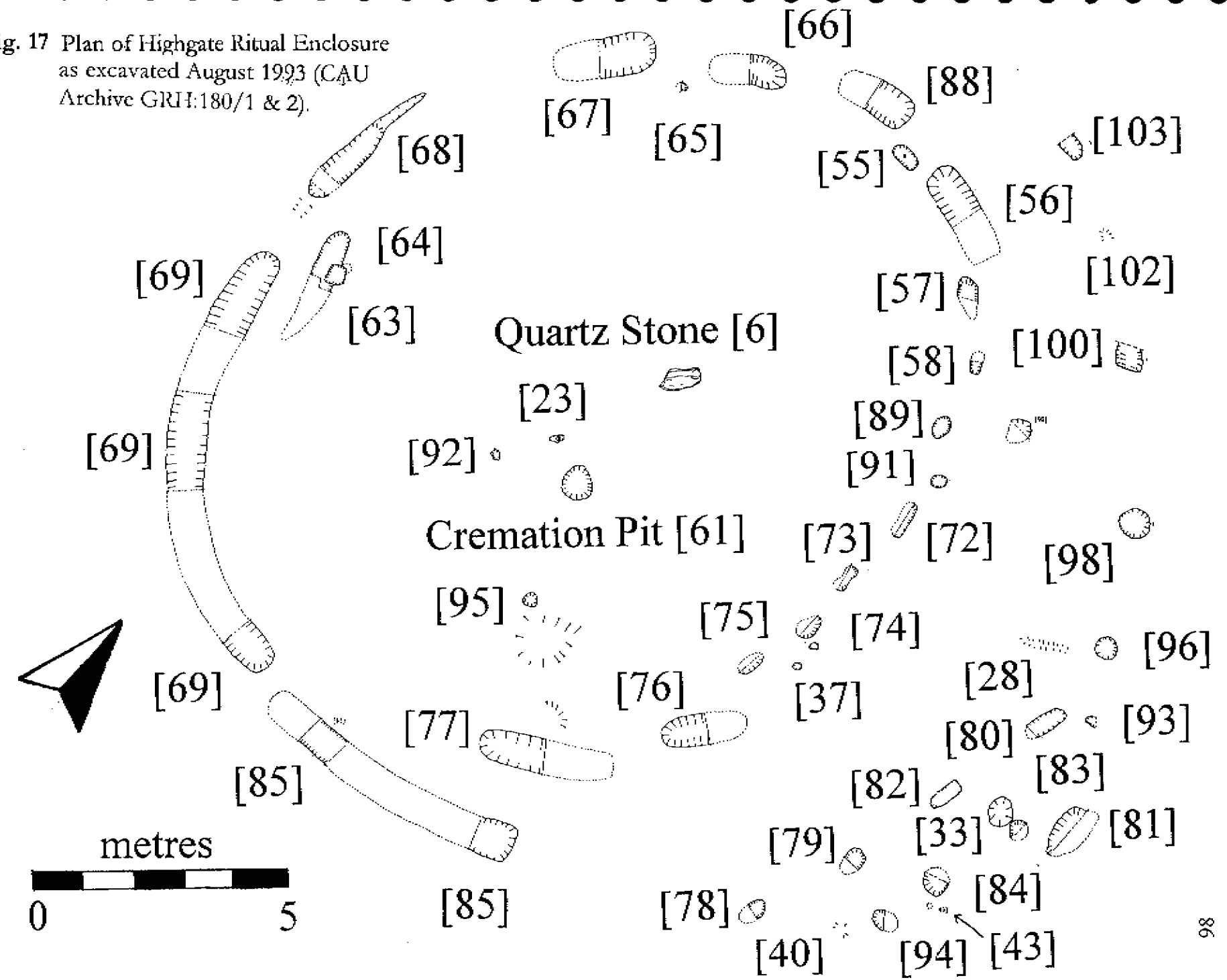


Fig. 17 Plan of Highgate Ritual Enclosure as excavated August 1993 (CAU Archive GRH:180/1 & 2).

Following remedial conservation the awl was examined by Stuart Needham of the Dept of Prehistoric and Romano-British Antiquities at the British Museum in March 1995. The awl was noted as being in good condition and it was suggested that its flattened end had originally been held in a small wooden handle and that manufacturing markings were evident (under a hand-held magnifier) on the surface of the flattened end. Rotary striations and signs of pressure markings had previously been noted and photographed by Margaret Brooks in 1994 after examination of the item under a high-powered microscope.

2.2.4 **Organic Residue analysis** by Stephanie Dudd and Richard Evershed

Report dated: 8th July 1996

The following is extracted from a report which is filed in the project archive "Organic Residue Analysis of Prehistoric Pottery from the A30 project: Pilot Study" by Stephanie Dudd and Richard Evershed.

2.2.4.1 *Objectives*

The overall objectives of this pilot study are set out in section 1.2.7.1 as are the analytical procedures used in this study.

A sherd from the Bronze Age cremation urn HG93 <324> was selected for residue assessment. Although the final use of the vessel appeared to be related to burial (it contained human cremated bone) it was felt that organic residue analysis may be able to reveal an earlier use of the pot. Comparison of the results between this vessel and those from the collared urn recovered from Little Gaverigan Barrow were also considered useful (see section 1.2.7).

2.2.4.2 *Preliminary Results*

Table 9 summarises the quantitative results

Sample	*Description*	*Period*	*Lipid content ($\mu g\ g^{-1}$ potsherd)*
HG93 <324>	Collared urn	EBA	469

HG93 <324> This sample contains approximately 469 $\mu g\ g^{-1}$ of absorbed lipid. The residue comprises a very complex mixture of components which cannot be identified by GC alone. GC-MS analysis will be required to confirm the identity of the compounds present in order to provide a basis for establishing the origin of the residue. Since the sherd was very friable the possibility that components of this profile arose through contaminating soil or plant detritus must be borne in mind.

2.2.5 **Conservation and Reconstruction** by Margaret Brooks

Reports dated: February 1994 and September 1995.

Following excavation the **collared urn SF <324>** from Highgate Ritual Enclosure was despatched to the Conservation Laboratory at Salisbury for excavation and remedial

conservation work. This work was carried out in the autumn of 1993. The urn was excavated in 2 cm + spits. Soil from around and within the vessel and each sample taken at different levels were bagged separately. Samples of a red fibrous material found within the vessel were also kept separate and untouched by other organic material. All soil contained and surrounding the vessel was kept.

The vessel was consolidated after excavation. The fabric was very dark, open and crumbly and sherds could not be handled without collapse. As the sherds were removed from the soil block they were consolidated by painting with 10% PVA (polyvinyl acetate) in methylated spirits until they stopped absorbing liquid. It was difficult to distinguish between decayed pottery and the dark soil around the vessel.

Reconstruction and full assembly is not possible because many pieces were missing - due to decay and disintegration into the soil and many do not join because the original edges had weathered away. However because the rim and the base are well-represented this urn could be reconstructed for future display - although its exact height will be hard to determine. A sherd has been retained for petrological analysis (see section 2.4.2.1).

The top of the vessel was empty of everything except soil. The bottom 12 cm contained a mass of reddish fibrous material, a small piece of well-cremated (white) long bone and a few other similar tiny fragments, plus some small less burnt or unburnt fine bone fragments. This material was all mixed up together but has formed settling layers, i.e., was not deliberately layered. An awl was found on top and to one side of the cremated mass (see section 2.2.3).

The awl was found originally in three separate pieces on top and to one side of the cremation mass. Mechanical cleaning of the awl took place in 1994 and qualitative X-ray fluorescence analysis of the item was arranged at the Ancient Monuments Laboratory (see section 2.2.3).

All conservation work has been carried out on the agreed principal of the minimum necessary treatment. This work has established the further conservation necessary for these and similar artefacts in terms of a) survival in long term storage
b) handling for study
c) relevance to the comprehension of the site

Conservation records have been kept together with a photographic record.

2.3 ENVIRONMENTAL DATA

2.3.1 **Environmental Sampling Strategy** by Vanessa Straker

The excavation at Highgate Ritual Enclosure was very much a rescue operation (see section 2.0) and the overall aim during the work was to retrieve a representative number of samples for archaeobotanical analysis from as many sealed and secure archaeological deposits as possible. Recovery of organic material suitable for radiocarbon dating was also a priority.

Bulk samples from 23 contexts (pits, postholes, ditch segments and the cremation) were taken for environmental analyses. The samples which varied in size from 0.25 to 7 litres were processed in a floatation tank, the float being collected on a 250 micron sieve and the residue on a 1 mm nylon mesh. Although the samples are smaller than those normally collected for environmental analyses, they were, with the exception of the cremation pit, a 50% subsample of each feature. The details of each sample are listed in table 10.

All the samples were wet-sieved apart from the contents of pit [61]. It is recommended that this material is processed during further analysis.

2.3.2 **Plant macrofossils** by Vanessa Straker

Report dated: 6th March 1996

This report presents the results of the assessment of the floats. These were all scanned, rather than sorted, under a binocular microscope and the abundance of grain, chaff, weed seeds, charcoal and other macrofossils is listed in table 10.

Nomenclature is according to Stace (1991). An attempt was made to quantify the charcoal. This could not be weighed as it had not been separated from the other components of the float, but rough estimates were made of the numbers of fragments greater and smaller than 2 mm in all dimensions. This size was chosen because, if charcoal is to be of use for radiocarbon dating, it should be identified, and this is only really practical on fragments greater than 2 mm. This information was used in conjunction with this list of contexts from which radiocarbon dates may be required complied in section 2.4.3.4, and those with potential are marked on table 10.

Sample	Context	Vol (l)	Weigh t (kg)	% sampled	Volume of float (approx. ml)	Type	Grain	Chaff	Weeds	Comments C14 dating P: potential: HP: high potential
411	8	6	6.5	50	20	fill of slot/pit [64]	-	-	-	charcoal: c.100 frags <2mm, c.10>2mm
409	11	5.5	5	50	60	fill of ditch segment/pit [66]	-	-	-	charcoal: c.50 frags <2mm, c.20>2mm. Mature and twiggy, not all oak
405	12	6.5	5	50	30	fill of ditch segment/pit [88]	-	-	-	charcoal: c.30 frags <2mm.
400	13	7	6.5	50	35	fill of posthole [55]	-	-	-	charcoal: c.25frags <2mm, 5 >2mm.
406	14	5	6.5	50	20	fill of ditch segment/pit [56]	-	-	-	charcoal: many tiny frags, c.20>2mm. Not all oak.
417	15	0.25	0.25	50	10	fill of posthole [57]	-	-	-	-
418	16	0.2	0.2	50	10	fill of scoop/pit [58]	-	-	-	charcoal: c.20frags <2mm, 2 >2mm (oak).
419	17	0.5	0.5	50	10	fill of posthole [89]	-	-	-	charcoal: c.30<2mm, 8>2mm, some twigs, mostly oak
416	18	0.25	0.25	50	10	fill of [90]	-	-	-	-
415	19	6.25	6.25	50	10	fill of posthole [91]	-	-	2	charcoal: c.20 frags <2mm.
420	19	0.75	0.75	50	40	fill of posthole [91]	-	-	-	charcoal: 10 frags>2mm, many <2mm, includes oak
414	20	7	6.5	50	10	fill of ditch segment [69]	-	-	-	charcoal: 50-100 frags<2mm.

Table 10 Assessment of bulk samples from Highgate Ritual Enclosure

408	22	7	6.5	?	30	spread assoc cremation	-	-	-	charcoal: c. 100 frags < 2mm, 20 > 2mm.
403	24	5.5	2	50	10	fill of posthole [92]	-	-	-	-
402	27	1.5	6	50	10	fill of pit [72]	-	-	-	charcoal: c. 20 frags mostly 2mm
410	31	5.5	7	50	20	fill of pit [81]	-	-	1	charcoal: many inc. v. small twigs <2mm, 10 >2mm. 1 *Danthonia decumbens* (heaths grass), 1 frag cf. *Arrhenatherum* (onion couch) tuber
407	32	4	6	50	10	fill of posthole [83]	-	-	-	charcoal: c. 20 frags <2mm, 2 unident charred plant frags
401	44	4.5	5	50	20	fill of ditch segment/pit [76]	-	-	-	charcoal: c. 20 frags<2mm, 5>2mm.
413	46	4.5	5	50	10	fill of ditch segment/pit [77]	-	-	-	-
412	52	7	7.5	50	10	fill of ditch segment/pit [85]	-	-	-	charcoal: hundreds frags<2mm, 3 frags> 2mm. Modern seeds (inc. *Montia* sp. and *Chenopodium* sp.)
404	53	5	6	50	10	fill of ditch segment [69]	-	-	2	charcoal: hundreds frags <2 mm, c 10 > 2mm. seeds unident.
422	60	-	-	35	-	fill of cremation pit [61]	-	-	-	for C14 dating (wet seived, 300ml/150gm). All charcoal, mostly oak, c. 50 pieces>2mm, hunbdreds <2mm.
421	62	0.25	0.25	50	1	fill of posthole [63]	-	-	-	-

2.3.2.1 Results

The floats contained only charred plant macrofossils, the vast majority of which was charcoal as the soils were too acidic for the preservation of molluscs or unburnt bone. No grain or chaff was observed. The only seeds present were from posthole [19] and pit [31] and included heath grass (*Danthonia decumbens*) which is typical of heaths and moors, particularly on acid soils, and a possible fragment of a swollen basal culm internode of *Arrhenatherum elatius* (onion couch) which is common throughout Britain in a variety of habitats.

2.3.3 Pollen by James Greig and Vanessa Straker

Report dated: 22nd March 1996, Edited April 1997

The method used to assess pollen from Highgate Ritual Enclosure is that described for samples from Little Gaverigan Barrow (see section 1.3.4.2).

The following samples were analysed from this early Bronze Age site:

Sample	Context	
400	13	posthole fill
404	53	ditch fill
410	31	pit fill
407	32	posthole fill
414	20	ditch fill
417	15	posthole fill
420	19	posthole fill

Table 11 Assessment of Pollen from Highgate Ritual Enclosure

			Contexts				
Taxon	13	53	31	32	20	15	19
Quercus	8	14	7	1	12	5	11
Tilia	-	-	-	-	-	1	-
Ulmus	-	-	-	-	-	-	1
Pinus	-	-	-	-	-	1	1
Betula	1	-	-	-	-	-	-
Carpinus	-	-	-	-	1	-	-
Fagus	-	-	-	-	-	-	1
Fraxinus	1	-	-	-	-	-	-
Alnus	6	1	4	2	4	2	5
Coryloid	33	23	25	14	27	28	56
Poaceae	47	43	17	30	42	42	77
Cerealia	-	-	-	-	-	-	1
Secale	-	-	1	-	-	-	-
Caryophyllaceae	1	2	-	-	-	-	-
Centaurea nigra	-	-	1	-	-	-	-
Cichorioidae	4	2	-	3	1	6	3

Aster-tp	-	-	-	-	1	-	-
Cirsium-tp	-	1	-	-	-	1	-
Dipsacaceae	-	1	1	+	-	-	-
Ericales	127	89	139	102	244	164	194
Plantago lanceolata	3	-	-	2	1	2	2
Potentilla-tp	1	-	-	-	-	-	-
Cyperaceae	2	-	-	-	-	1	2
Polypodium	4	7	6	10	6	9	10
Pteridium	7	4	12	6	6	4	4
Total pollen & spores	**245**	**187**	**213**	**170**	**345**	**266**	**368**
unidentified	-	7	10	6	4	8	6
Lycopodium	29	9	24	28	14	20	35
Traverses	1	1	1	2	1	1	(1)

( ) : part of 1 traverse

Pollen is abundant and well-preserved. There is a certain amount of evidence of oak woodland and hazel scrub. A grain of *Fagus* (beech) was present. The main feature is grassy heathland. One grain of Cerealia pollen was found, and one of *Secale*-type (rye). Rye appears in the Bronze Age, although only perhaps as a weed. This is an early record for rye in the extreme south west of England and, when radiocarbon measurements for the site have been received, could prove to be the earliest record.

2.3.3.1 Correlation with other sites

Most of the evidence for past landscapes in the south-west of England comes from natural deposits in the uplands such as Dartmoor, Exmoor and Bodmin Moor, where the transition from woodland to heather moorland seems to have started early. The evidence from Bodmin Moor suggests that this took place, at least in some areas, during the Bronze Age. There is, however, very little palynological evidence for the development of more lowland landscapes (Berglund et al 1996, 23-25) which would have been more productive agriculturally than the uplands. The scarcity of evidence increases the values of these results still further.

2.3.4 **Cremation** by Simon Mays

Report dated: 10.10.1995

Note: The bulk of this cremated material was lost in Bristol during the assessment process and only a small sample was analysed. The remainder of the deposit was found in November 1997 and it is recommended that this be analysed during post excavation work.

Context HG <324> Approximately 30 fragments of burnt bone. Maximum fragment size 15 mm. Bone is white in colour, which, according to Shipman (*et al* 1994), suggests exposure to a temperature in excess of about 940C. The weight of fragments plus adhering material is 4.1g.

The general texture of the bone indicates that it is very probably human, although no fragments can be identified to skeletal element.

2.4 STATEMENT OF POTENTIAL

2.4.1 Potential of structural/stratigraphic data by Jacky Nowakowski

The structural and stratigraphic phasing of Highgate Ritual Enclosure appears straightforward. Superficially there appears to be one phase of prehistoric activity at this site, although a case for sub-phasing can be proposed and should be considered when radiocarbon dates are available. *Pro term* we should interpret Highgate as a multi-phased monument which may share some of the emerging characteristics of Early Bronze Age ritual and funerary practices (see section 1.6.1 for a fuller discussion). The double line of pit and posthole arrangements on the north-eastern side of the site could represent a later episode, perhaps of "closure" after the central burial had been deposited. It is possible perhaps that such a sequence of structural transformation could be corroborated by a comparison of radiocarbon and/or accelerator dates taken from selected pits in the various circuits defining the site. As it is likely that Highgate Ritual Enclosure and Little Gaverigan Barrow are broadly contemporary, radiocarbon dates obtained from each site should clarify this. Given the well-sealed nature of associated deposits here the risk of contamination of organic material is low.Highgate Ritual Enclosure clearly forms part of the Early Bronze Age landscape in this part of the project area and a consideration of its structural development will form part of further analysis in conjunction with the study of its neighbour Little Gaverigan Barrow.

The following analysis is recommended:

- Series of scientific dates to test and confirm the antiquity of the monument (tasks 8 & 9).
- Full descriptive and interpretative account of the structural history of the site (task 46).
- Considered alongside Little Gaverigan Barrow and contribution of its interpretation towards understanding land-use at this location in early prehistory (task 47).

2.4.2 POTENTIAL OF ARTEFACTS

2.4.2.1 Ceramics by Henrietta Quinnell

Collared urn SF <324> represents the only ceramic material retrieved from Highgate Ritual Enclosure. The form of the vessel should be reconstructed on paper; it is too incomplete and friable for actual reconstruction (Margaret Brooks, pers. comm.). This form needs consideration against the typological series of Primary and Secondary vessels set out by Longworth (1984) and modified by Burgess (1986). David Tomalin's recent work (1988) should also be reviewed, in particular as he places emphasis on the arch handle (see section 1.4.2.1 for typological considerations of the urn from Little Gaverigan). Closer study is needed to establish if possible the method used for decoration. The urn will be compared to that from Little Gaverigan, for which the lack of decoration is suggested as a specifically Cornish feature. Of the fourteen collared urns available for study from Cornwall, five appear to have arched handles and a further four have lugs. This appears an exceptionally high proportion. While the presence of both arched handles and lugs may

relate to contemporary Trevisker material, the proportions need checking against those from other areas to clarify how far this can be considered a Cornish feature. It may be noted that the Highgate urn is the only known example to date to have both handles and decoration on the inside of the collar. Radiocarbon dating of the charcoal surrounding the vessel should closely inter-relate with the act of its deposition. There are few available radiocarbon determinations at present from contexts in Cornwall with collared urns (see list in Christie 1988). Dates are particularly relevant since Tomalin (1988) has proposed that developed forms of collared urn, especially those with arched handles, and indeed the whole Trevisker sequence, post-dated a period of Armorican influence which he would place at the junction of Early Bronze Ages 1 and 2 (perhaps 1700 BC CAL).

The urn needs petrological examination, for comparison with that from Little Gaverigan and others analysed. From data presented by Parker Pearson (1990; 1995) about half the Cornish collared urns are of gabbroic clays, but most of the remainder were made close to their place of deposition. The pattern emerging from sparse evidence (*cf* Miles 1975, 17) is that Bronze Age non-Trevisker material in the St. Austell granite area was generally locally made.

The detail in which the collared urn pit was recorded, together with the small size of the cremated material, raises a whole series of questions regarding deposits in south-western barrows. Some of these considerations inter-relate with those connected with sherd deposit SF <440> from Little Gaverigan barrow (see section 1.4.2.1). Was the vessel poorly fired because it was intended for immediate reburial and if so how usual was this? If this vessel was burnt, what was the relationship of this to the charcoal in the pit? (Charcoal deposits appear to be a special feature of south-west barrow-type sites, *cf* Quinnell 1988). Why was the vessel broken on deposition and how common was this practice? Will it prove on reconstruction to have been too tall for the pit into which it was placed? What in general is the relationship of pot size to pit? What is the nature and significance of the material placed within the urn and, again, was this a common practice? Consideration of these various points, which will involve collaboration between the study of the vessel and the consideration of practices at Highgate Ritual Enclosure and other sites will be important both for our understanding of regional elements in such deposits and for a re-assessment of the importance of human burial in barrows and related sites.

Further analysis will consist of:

- *Petrological Analysis* by David Williams (task 18).
- *Organic Residue Analysis* - a consideration of any residues present by Stephanie Dudd and Dr Richard Evershed (see section 2.4.2.3) (task 21).
- *Full Study* of the vessel by Henrietta Quinnell *to be included in the seven days allowed for the Little Gaverigan ceramics* (see section 1.4.2.1). (Task 63).
- *Illustration for publication* by an archaeological illustrator, which should allow reconstruction of the form of the vessel. Consultation between the illustrator, Henrietta Quinnell and Margaret Brooks will be required for this task.(Task 66)

- *Scientific analysis* of the red fibrous material and the clay ([87]) inside the vessel. (This assumes that the study of the awl, the charcoal, and the potential for radiocarbon dating will be considered elsewhere) (Task 17 & 19).

2.4.2.2 **Metalwork** by Jacky Nowakowski with comments from Margaret Brooks & Stuart Needham

The leaded bronze awl found within the cremated deposit at Highgate Ritual Enclosure was in a secure archaeological context. A radiocarbon date from this deposit will help date the awl. Its relatively pristine condition has allowed for a degree of analysis which has provided some qualitative information, summarised in section 2.2.3.

Although awls have been found commonly associated with Early Bronze Age cremation and funerary practices only a small number have been recorded in Cornwall. Of this small collection (six examples) from the county only three were found with cremated deposits - these were from the sites at Harlyn Bay (Pearce 1983, 418 and pl.112, no: 100), Obadiah's barrow on Gugh, the Isles of Scilly (Ashbee 1974, 240 and 112) and Treligga Barrow I (Christie 1985, 73-74 and Fig. 43). The discovery of this relatively well-preserved awl from Highgate Ritual Enclosure is therefore significant in the range of detail its study has to offer. The comparative rarity of such finds from the county may have more to do with the generally poor condition of prehistoric metalwork on the whole, than a reflection of Early Bronze Age cultural behaviour.
Further recommendations for analysis are:

- *Further semi-quantatitve analysis* is recommended so that the actual percentage of lead in the artefact can be determined as leaded bronze artefacts are fairly rare. *Note: The awl is too brittle and may not be capable of withstanding being drilled. Advice from the Ancient Monuments Laboratory will be sought on this matter* (task 17).
- *Full publication* is recommended. A detailed description of the awl to be written up which includes details of discovery, context, metallurgical composition, manufacturing and microwear analysis etc. (Task 28).
- *Illustration for publication* by an archaeological illustrator is recommended. *A photograph of the item may appear in the published report.* (Tasks 63 & 66).

2.4.2.3 **Organic Residue analysis** by Stephanie Dudd and Richard Evershed.

- The results look promising and support the potential for further detailed analysis (see section 2.2.4.2). (Task 21).

2.4.2.4 **Petrological analysis** by Henrietta Quinnell

- Petrological study/thin sectioning of collared urn SF <324> by David Williams should take place for reasons outlined in section 2.4.2.1. (Task 18).

2.4.3 POTENTIAL OF ENVIRONMENTAL DATA

2.4.3.1 **Plant macrofossils** by Vanessa Straker

- There is no evidence from the plant macrofossils for the use of the site for domestic activities such as crop processing, food preparation or the burning of domestic waste. As the floats were relatively small it was possible to scan them in detail and it is considered that no further analysis would be appropriate, apart from the identification of charcoal from selected contexts prior to radiocarbon dating.

2.4.3.2 **Pollen** by James Greig and Vanessa Straker

- Together with Little Gaverigan Barrow, the pollen results from Highgate Ritual Enclosure show real potential for providing good results form further work. Full analysis should provide firm evidence for a varied prehistoric landscape, with areas of heathland, grassland and arable. More counts should be done of the preparation already made, to 250 land pollen grains, excluding Ericales (heathers), as these dominate many of the assemblages. Further preparation of intermediate samples also need to be done, so that properly detailed pollen diagrams can be drawn up. These results should considerably advance our knowledge of prehistoric landscape in central Cornwall. (Task 35).

2.4.3.3 **Cremation** by Simon Mays

- The remainder of the material should be analysed and a report prepared for publication. Task 15.

2.4.3.4 **Charcoal identifications** by Vanessa Straker

Report dated 14.10.97

Introduction and methodology: as for Little Gaverigan (see section 1.4.3.1)

Table 12 Highgate Ritual Enclosure (HG93): samples for characoal identification. Task 7.

Sample	Cont	Type	Comments C14 dating P: potential; HP: high potential
411	8	fill of slot/pit	charcoal: c.100 frags <2mm, c. 10 >2mm.
409	11	fill of ditch segment /pit	charcoal: c.50 frags < 2mm, c. 20 >2mm. Mature and twiggy, not all oak.
400	13	fill of posthole	charcoal: c.25 frags < 2mm, 5 > .2mm
406	14	fill of ditch segment /pit	charcoal: many tiny frags, c.20 >2mm. Not all oak.
418	16	fill of scoop/pit	charcoal: c. 20 frags < 2mm, 2 > 2mm (oak)

419	17	fill of posthole	charcoal: c. 30 < 2mm, 8 > 2mm, some twigs, mostly oak.
420	19	fill of posthole	charcoal: many < 2mm, 10 frags > 2mm, includes oak.
408	22	spread assoc. cremation	charcoal; c. 100 frags < 2mm, 20 > 2mm
402	27	fill of pit	charcoal: c. 20 frags most > 2mm
410	31	fill of pit 81	charcoal: many inc. v. small twigs < 2mm, 10 > 2mm.
401	44	fill of ditch segment/ pit	charcoal: c. 20 frags < 2mm, 5 > 2mm
412	52	fill of ditch segment	charcoal: hundreds frags < 2mm, 3 frags > 2mm.
404	53	fill of ditch segment	charcoal: hundreds frags < 2mm, c. 10 > 2mm.
422	60	fill of cremation pit	Mostly oak, hundreds < 2mm c. 50 pieces > 2mm

2.5 Radiocarbon dating by Jacky Nowakowski

It would be most useful to obtain a number of accurate dates from Highgate Ritual Enclosure and three such dates are proposed. The collared urn is diagnostic of the Early Bronze Age and it is anticipated that independent scientific dating will confirm the site to date to this period. Accurate dates are required from deposits in three sealed pits - one from the centre, one from the "inner" ring and one from the "outer" ring. These may shed some light on the structural development of the monument and if statistically comparable, could test the hypothesis that after the burial of the urn, the site was "closed down" in stages.

The following strategy is therefore recommended:

Tasks 7, 8 and 9 dating. Samples from the following features may therefore be useful:

- Material from central pit [61] should be submitted for a date (see sample [422]).
- Any material from posthole [91] which is located in the "inner ring" (sample [420]) is available for a date.
- Pit [81] (context [31]) which is located in the "outer ring" (sample [410]) has material suitable for dating.

Accurate dates from this site will usefully compare with dates obtained from Little Gaverigan Barrow and the Highgate "Ritual" pits - sites which are at present considered to be broadly contemporary. In particular it would be useful to compare the dates from Highgate with those available for the early pre-mound phases at Little Gaverigan barrow (that is phases 1-3). This could test the possibility that the two monuments were both physically and spatially related and even may have formed part of the same landscape "monument". The predominantly "ritual" characteristics of Little Gaverigan Barrow contrasts with the evidence for funerary practice at Highgate.

In addition, a radiocarbon determination from the central burial pit would help to date the leaded-bronze awl found within the urn. This opportunity will be of some significance as it will be one of the very few items of this class to be independently dated in the region. This

will also be of national significance as leaded-bronze objects are relatively rare (see Hunter and Davis 1994). Furthermore an accurate date for a Cornish collared urn would also be extremely valuable (see section 2.4.2.1).

2.6 Summary for potential for analysis of the data from Highgate Ritual Enclosure by Jacky Nowakowski with comments from Henrietta Quinnell

2.6.1. Contribution of the results of the excavation of Highgate Ritual Enclosure to research into South-Western Bronze Age funerary practices.

In terms of its layout and form, Highgate Ritual Enclosure appears to be an unusual site for the south-west and is discovery is therefore of some importance - especially as information about its landscape setting is available.

Architecturally this is an unusual site because although features such as wooden post rings and shallow gullies have been noted on other barrow sites in the south-west, for example Cocksbarrow in the china clay area (Miles 1975) and Tregulland in North Cornwall (Ashbee 1958), these types of structural details have been interpreted as being associated with subsidiary or transitional phases in the histories of these sites. At Highgate, the posts may have remained as main structural features throughout the use-life of the site and were not dismantled or removed. At Highgate, the arc of postholes defining the north-eastern side of the site suggested that at some time, a wooden superstructure partially lined the north-eastern side of the site - perhaps in the form of a fence or screen. The western side was defined by shallow segmented gullies. Despite the lack of intercutting stratigraphy (see above) it may be possible to argue that the post-built screen was placed across the once-open north-eastern end of the site **after** the urn had been placed into the central pit, perhaps in order to close off access. The "outer" arc of posts - perhaps an additional screen - may have been added later. This would suggest that the overall plan of the site was consciously designed in a fashion where behaviour and movement around the site was tightly controlled. There are a number of barrow excavations in the county where "entrances" or access points into circular spaces have been recorded and at some of these sites such as Davidstow Moor site III (8) on Bodmin Moor (Christie 1988, 57) or at Crig-A-Mennis near Perranzabuloe (Christie 1960, 88), evidence for "closing off" or for the "ritual blocking" of such features has been found. Such insights into the "workings" of barrows is a reminder of the spatial dynamics of these places.

It could therefore be argued that the unusual arrangement of features at Highgate Ritual Enclosure evolved as the site underwent structural transformation through a number of stages. The double arc of posts which may have "closed down" the NE "side" of the site could relate to such dynamics (see above) and it is therefore possible to hypothesise that the final "arrangement" of features was influenced by a set of formal rituals. Given the absence of intercepting features it may be impossible to confirm this stratigraphically but accurate scientific dates obtained from at least three sealed contexts may shed some light on this proposed structural sequence (see section 2.4.3.4).

Unlike its neighbour Little Gaverigan, Highgate Ritual Enclosure had not been sealed by a protective mound. However, it may still have been a landmark, as any post-built

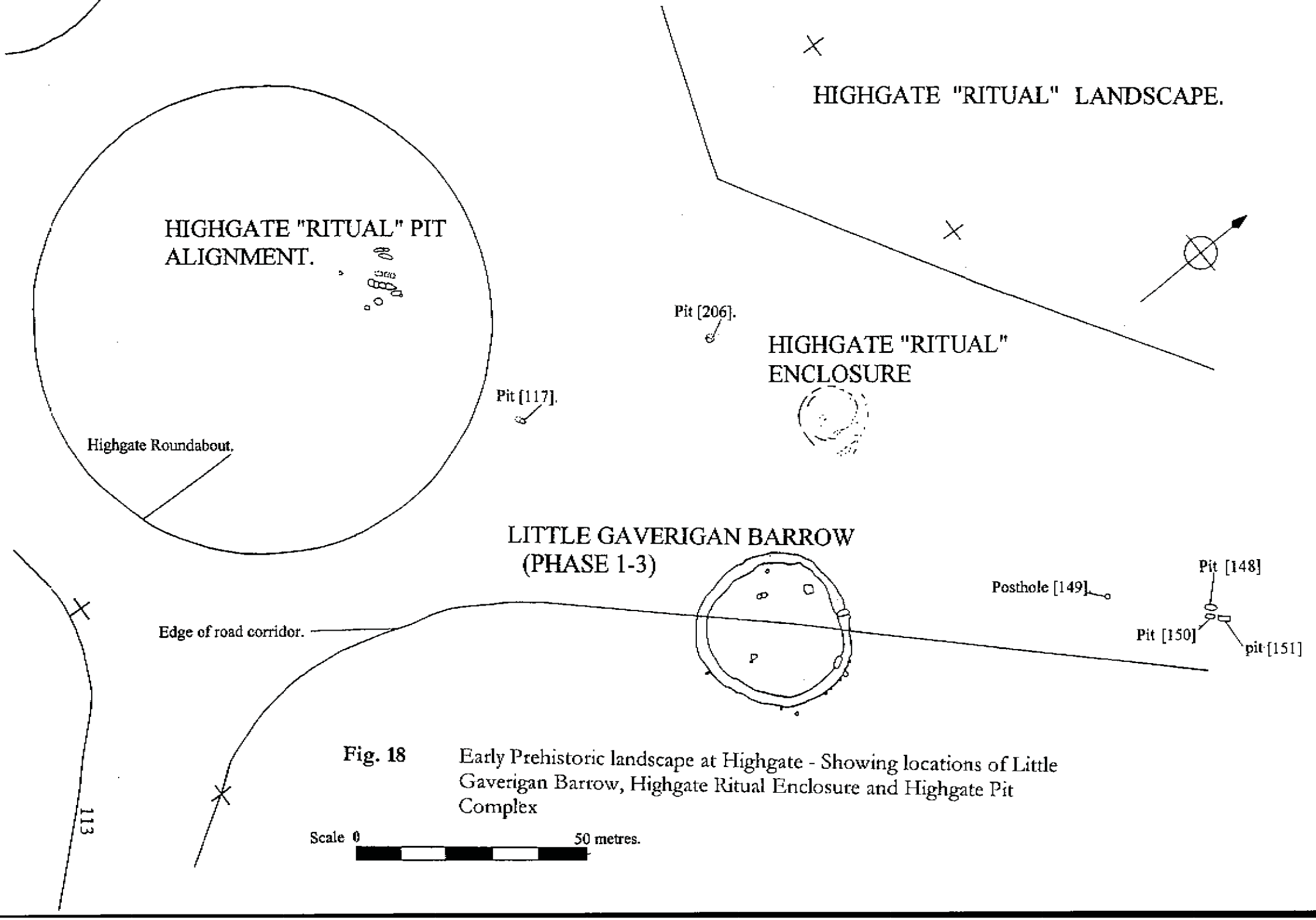


Fig. 18 Early Prehistoric landscape at Highgate - Showing locations of Little Gaverigan Barrow, Highgate Ritual Enclosure and Highgate Pit Complex

superstructure would have marked this spot and made it visible from some distance away. It is also likely that Highgate was in use at the same time as Gaverigan Barrow (although at what stage is not clear), and sets of radiocarbon dates from each site may help clarify this. The post-screen at Highgate and the large (perhaps totemic pits) found at Little Gaverigan (Phase 1, section 1.1.1), share the same north-east orientation. This may be more than just a coincidence. Perhaps both sites were is use before the mound at Gaverigan was built.

General trends in the study of south-western Bronze Age monuments have indicated that barrows and cairns are often multi-phased and may often start as "simple" enclosures without mounds (*cf* Watch Hill and Little Gaverigan, see section 1.6.1). In many respects the "mound" may be taken to represent the final "closing down" of activity at these sites. In form and design, Highgate Ritual Enclosure appears to represent the variety we have come to expect from Early Bronze Age funerary monuments. Its lack of a mound means that, as a site type, it is likely to be under-represented in the archaeological record. The absence of a mound has ensured its invisibility within the modern landscape, but whether it was ever intended to be covered by a mound remains unknown. Indeed the possibility remains that it represents just one (early) phase of an "incomplete" barrow (that is one incomplete because of the absence of a mound). Unmounded ring ditches are now quite common in some areas of Devon and their comparison with Highgate may be useful in further analysis. The sites at Bulleigh Meadow and elsewhere in Devon show the potential for the study of this type of monument in the south-west and indicate that Cornish examples should not be treated in isolation (Berridge and Simpson 1992).

Its discovery close to Little Gaverigan Barrow and indeed, an alignment of possible prehistoric pits (Highgate Pits, see section 3.0) in this part of the project area highlights the importance of the opportunity to examine areas immediately within the vicinity of barrow sites. It is clear from larger-scale surveys on the uplands of the south-west that barrows are rarely solitary features in a landscape and that their special significance is derived from their setting as well as from the activities which took place within them.

It is likely that Highgate Ritual Enclosure and Little Gaverigan Barrow were contemporary and although they were clearly used in different ways (one for formal burial and the other for "token" burial) they appear to be linked in terms of ritual activities. Both sites provides further examples of the varied and complex character of early prehistoric funerary and ritual behaviour in the south-west (*cf* Miles 1975).

WB93 INDIAN QUEENS BYPASS.
DETAILED PLAN SHOWING
SPATIAL ARRANGEMENTS
OF HIGHGATE "RITUAL" PITS.

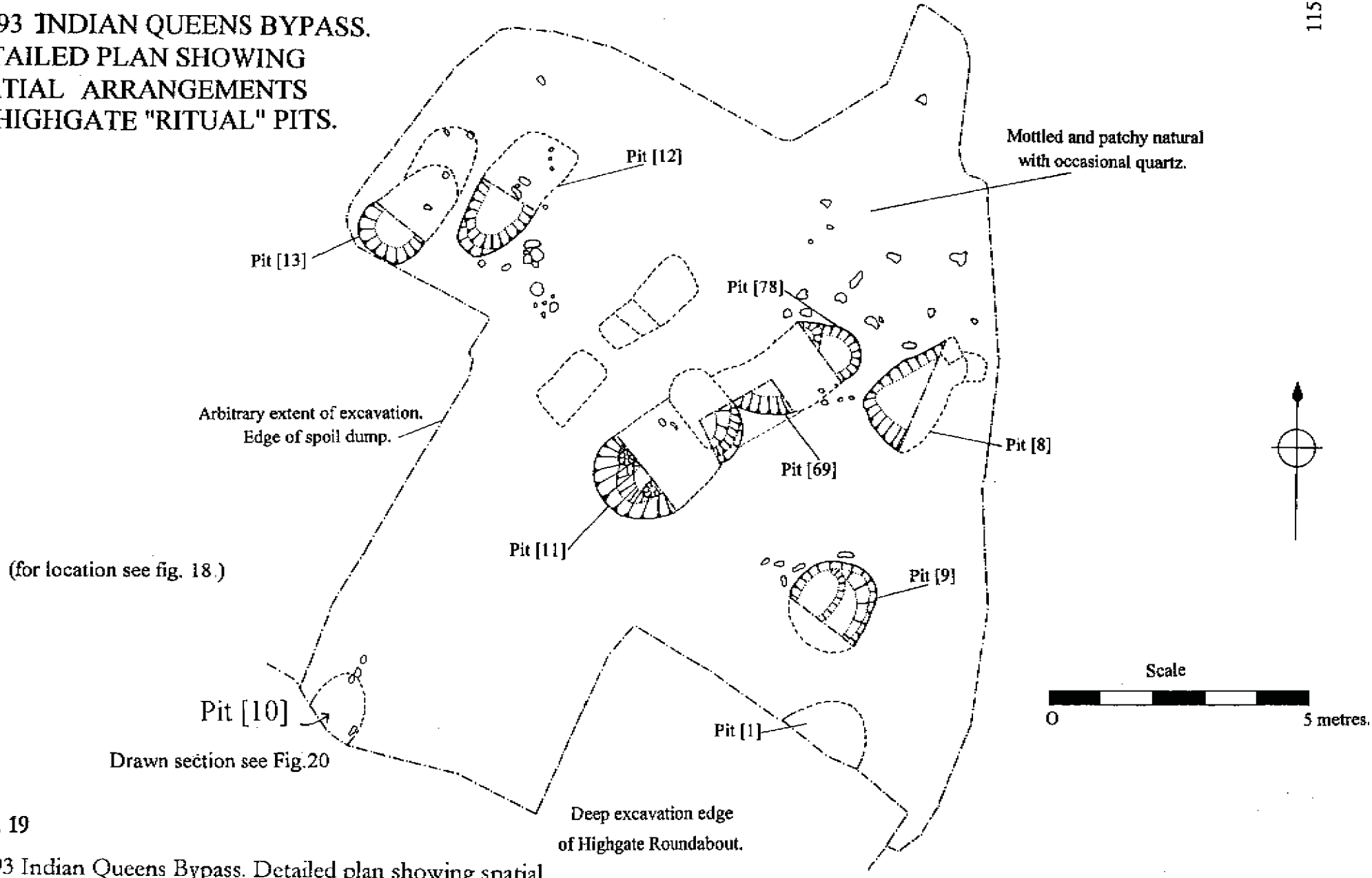


Fig. 19

WB93 Indian Queens Bypass. Detailed plan showing spatial arrangements of Highgate "ritual " pits (SW 9241 5910)- A30 Project, Cornwall (CAU Archive GRH:187/12).

3.0 FACTUAL DATA - The Excavation and recording of Highgate Pits - HR93

Background

During September 1993 groups of pits were discovered by the watching brief team along the road corridor at a location now known as Highgate Interchange (centred at SW 9241 5910) (Fig.2). This group comprised 13 large sub-rectangular and oval pits and were found approximately 100 metres to the south of Little Gaverigan Barrow and Highgate Ritual Enclosure. All were surveyed and recorded in section - time and resources were not available for total excavation of each pit. Following advice from Vanessa Straker a limited number of environmental samples were recovered in the hope that they might produce material suitable for radiocarbon dating. No datable finds were recovered from any of these features.

3.1 STRUCTURAL AND STRATIGRAPHIC DATA by Jacky Nowakowski with Andy Jones

This site investigation recorded an apparent alignment of 13 sub-rectangular or oval pits collectively known as Highgate pits. Six were found to have cut earlier pits so that in total, 16 large pit features were recorded in section. All were relatively distinctive in shape and profile - the majority being wide-mouthed narrowing to vertical sides with flat, level bases. Their dimensions varied from 1.10 m to 4.30 m long, 0.63 to 1.80 m wide and from 0.45 m to 2.10 m deep. One main group (pits [1], [8], [9], [10], [11], [12], [13], [69] and [78]) was found centred at SW 9240 5910 (Fig. 19), two isolated pits ([117] and [206]) were found centred at SW 9245 5915, and a group of "associated" smaller pits and postholes lay at SW 9255 5919. All these features (apart from the latter group) were located on china clay subsoil. Topsoil stripping across the entire area had removed at least 10 cm of the ground level into which these features had been dug. In section the pits varied, but some showed evidence for having been recut into earlier pits. In two cases, small postholes were found dug into silted, backfilled deposits (see below). Given that these pits were discovered during road construction, the extent and distribution of these features was limited to the areas available for investigation. It is probable that other similar features lie outside the area of the road corridor. Any future work in this locality would usefully be directed at recovering a fuller distribution plan.

The pits can be broadly grouped into three categories - deep pits with flat bases: [4], [98], [117] and [123]: "medium-sized" pits with flat bases: [13], [78] and [108] and shallow pits with "bowl-shaped" profiles: [8], [11], [12], [54] and [69].

The most striking feature of these pits was their shared alignment (coded as [104]): all were oriented on a north-east to south-west axis. While this alignment could be a reflection of a mineral lode, in general, these pits did not appear to exhibit the characteristics of known mining features and at this interim stage of analysis - despite the lack of datable finds and with the absence of radiocarbon dates - they have been interpreted as being prehistoric in origin. It is possible that they represent a further component of the ceremonial landscape setting of the Early Bronze Age sites of Little Gaverigan Barrow and Highgate Ritual Enclosure (see below and Fig. 18). If these were originally prehistoric features then they may have been the large socket holes for either stone or wooden markers erected in the

landscape during prehistory adding a further architectural dimension to this "ritual landscape".

Apart from the shared alignment and close proximity to Early Bronze Age sites, the manner in which these features were dug and infilled is of some interest, perhaps adding support to their prehistoric interpretation. Some had earlier or perhaps contemporary slots sunk into their bases - perhaps for wooden posts or even "special deposits". Some appeared to have been left open for natural silting to occur (e.g. Fig.20 pits [1] and [10]) with the occasional "organic deposits" - that is lumps of turf - perhaps having been placed into the open cuts or having fallen in from upcast spoil mounds (e.g. Fig.20 pits [1] and [10]). A later phase of activity was recorded in the largest group (centred at SW 9240 5910) consisting of some being recut as shallower pits (e.g. Fig.20 pits [1] and [10]). These secondary features had been infilled both by natural silts as well as by backfilled deposits characterised by layers with high organic content. In two pit sections "capping" layers of white natural clay were recorded. Given the fact that when discovered, many of these features had already suffered a degree of truncation, it is impossible to ascertain whether an apparent "sealing layer " was a shared characteristic.

Finally, a group of perhaps "associated" smaller pits and postholes were discovered at SW 9255 5919 some 180 metres to the north-east of the main group (Fig. 18). Individually these were generally much smaller in scale and comprised three pits and a posthole. However they shared the same north-east to south-west alignment as the main group and given their evidence for recutting and infill, were similar to the main group. There were some differences however in this group and in one pit [148], the traces of a fire was identified, whilst wooden posts had been erected on the infilled surfaces of two other pits. A solitary posthole [149] was found at the eastern end of this group of features. Although no finds or diagnostic dating evidence was recovered from any of these features the possibility that they, too, might belong to a prehistoric "ritual landscape" must not be discounted. Their position at the eastern end of this possible pit alignment ([104]) must have raised the visibility of any such alignment beyond the western end of the site (Jones and Nowakowski 1994).

3.2 ENVIRONMENTAL DATA

3.2.1 **Sampling strategy** by Jacky Nowakowski and Andy Jones

A total of eight bulk samples were recovered from the main group of pits (samples [1032] to [1039]). These were taken from "organic-rich looking" deposits for the recovery of charcoal, any suitable dating evidence and plant macroplant fossils. A minimum of 5% of the volume of each context was sampled, although in two particular cases (samples [1034] and [1036]) 60% and 30% of each context were sampled respectively.

Nine bulk samples were recovered from contexts in the pits and postholes centred at SW 9255 5919 (the "associated group", see above). These were also sampled for the recovery of charcoal, any suitable dating evidence and plant macrofossils. A comparison with the samples from the main pit group was considered useful although very limited information was available (see Table 13). The volume of samples recovered from this cluster of features varied from 0.5% to 100% depending on the presence of "organic-rich looking" deposits.

All the samples were material was wet-sieved and processed by Carl Thorpe (CAU) in July 1994 and records are kept within the archive files.

3.2.2 **Plant macrofossils and charcoal** by Vanessa Straker

Report dated: 29th March 1996

The samples were processed in a siraf-type flotation tank and the floats were collected on a 250 micron sieve and residues on a 1mm mesh. The residues were sorted for finds.

This report presents the results of the assessment of the floats. These were all scanned, rather than sorted, under a binocular microscope and the abundance of grain, chaff, weed seeds, charcoal and other macrofossils is listed in Table 13. Nomenclature is according to Stace (1991). An attempt was made to quantify the charcoal. This could not be weighed as it had not been separated from the other components of the float, but rough estimates were made of the numbers of fragments greater and smaller than 2mm in all dimensions. This size was chosen as if charcoal is to be of use for radiocarbon dating, it should be identified, and this is only really practical on fragments greater than 2mm.

3.2.2.1 **Results**

The floats contained only charred plant macrofossils, the majority of which was charcoal as the soils were too acid for the preservation of molluscs or unburnt bone.

The results are given in Table 13. As at Highgate Ritual Enclosure, no grain or chaff was observed. However, in some samples burnt heathland vegetation including gorse seeds and spines, sedge seeds and possible heather roots and twigs were identified. In pit 4 ([6]) and pit 8 ([31]) it had been noted during field recording that turves were placed into each of these pits and this was confirmed by the presence of macrofossils noted above. In pits 1 ([3]), 11 ([43]), 13 ([92]) and 78 ([85]), similar vegetation was also found, although the presence of turf was not evident.

Burning turf as fuel is common in areas where wood is scarce, and the dumping of ash in refuse pits would be a likely origin for the charred seeds, but the apparently deliberate placing of a "burnt turf" in a pit is unlikely to be related to domestic activity, especially if as in this case, no other evidence for food consumption or processing is evident.

Table 13 Assessment of bulk samples from Highgate Pits

Sample	Context	Volume (l)	Weight (kg)	% sampled	Volume of float (approx. ml)	Type	Gorse	? heather roots	other weeds	Comments C14 dating P: potential; HP: high potential; LP: low potential
1032	3			5	23	pit 1	M spines	F	O	gorse pod, seeds inc. *Carex*, sedge. M -twigs > 2mm, F <2mm P
1033	5			5	1.5	pit 4	-	-	-	
1034	6			60	2	pit 4	M spines, O seeds	F	O	F twigs < 2mm, M >2mm HP
1036	43			30	30	pit 11	O spines, O seeds	-	O (inc. *Carex*)	charcoal:M twigs and frags >2mm, F <2mm. P
1037	31			5	15	pit 8	M spines, O seeds	F	O	F twigs < 2mm, M >2mm HP
1038	92			5	18	pit 13	M spines	M	O (inc. *Carex*)	F twigs < 2mm, M >2mm HP
1039	84			5	15	pit 78	-	-	-	O roots and twigs > 2mm, O < 2mm. LP
1035	85			5	2	pit 78	M spines, O seeds	F	O	F twigs < 2mm, M >2mm. HP
1052	157				1	pit 148	-	-	-	
1050	161				5	pit 148	-	-	-	O charcoal <2mm
1049	164	sample	missing			pit 148				
1051	154				5	posthole 149	-	-	-	O charcoal < 2mm

1053	165				5	pit 150	-	-	-	O charcoal < 2mm
1054	172				2	pit 151	-	-	-	O charcoal < and > 2mm LP
1055	169				4	pit 151	-	-	-	O charcoal < and > 2mm LP
1056	208				10	pit 2508	-	-	-	F twigs < 2mm, M > 2mm. P
1057	210				5	pit 206	-	-	-	O charcoal > 2mm. LP (1 frag)

3.3 STATEMENT OF POTENTIAL

3.3.1 Potential of Structural data by Jacky Nowakowski

Stratigraphic and structural analysis of these features has been completed (Jones and Nowakowski 1994). The lack of diagnostic dating evidence however is problematic and it is hoped that detailed analysis of the environmental data will provide a useful context in which to further examine the character and actual chronology of these enigmatic features. These features were clearly well sealed beneath the ploughsoil and the absence of above ground traces (which maybe expected had they been created by mining in the form of spoil dumps) may provide further support to their proposed antiquity. A comparison of the characteristics of these large pits with those found at Little Gaverigan barrow (phase 3, section 1.1.3) may also prove useful and this data must be compared with the environmental data recovered from Little Gaverigan Barrow and Highgate Ritual Enclosure - in particular the analysis of the turf and silt material. Some of the samples have produced material suitable for scientific dating (see table 13) and the opportunity should be taken here to test the hypothesis that these pits are prehistoric in origin as the argument for their being so presently rests on circumstantial evidence (see below, section 3.6.1). Potentially useful contexts for scientific dating have been listed in section 3.5.

The following analyses is recommended

- Series of scientific dates to test and confirm or refute the prehistoric date of the pits (tasks 8 and 9).
- Full descriptive and interpretative account of the history of the pits (task 46).
- If shown to be prehistoric in origin, then these sites will be discussed alongside and contribute to interpretations of Little Gaverigan Barrow and Highgate Ritual Enclosure. This will form part of a discussion of an examination of land-use at this location during early prehistory (task 43). If a prehistoric origin can not be demonstrated then these sites will be discussed as part of a general reconstruction of land-use in recently enclosed land and contribute to the historical data discussions (tasks 55 and 57).

3.4 POTENTIAL OF ENVIRONMENTAL DATA

3.4.1 Plant macrofossils and charcoal by Vanessa Straker
Report dated: 29th March 1996.

3.4.1.2 Plant macrofossils - Recommendations

Table 14 Recommended analysis of Bulk samples - HR93

Pit	*Context no*	*Sample no:*
1	3*	1032
4	6*	1034
8	31*	1037

11	43	1036
13	92*	1038
78	85*	1035
2508	208	1056

These assemblages will provide a unique opportunity to obtain information on the nature of heathland vegetation in a context that can be radiocarbon dated. The evidence for heathland in prehistoric Cornwall comes from pollen analysis from various sites and is only able to provide a general picture of heathland development rather than a precisely dated assemblage of a specific vegetation type.

3.4.1.3 **Charcoal - Recommendations** (Report dated: 14.10.97)

Introduction and methodology : as for Little Gaverigan (see section 1.4.3).

The samples recommended for full analysis are listed in table 15.

Table 15 Highgate Pits - Samples for charcoal identification

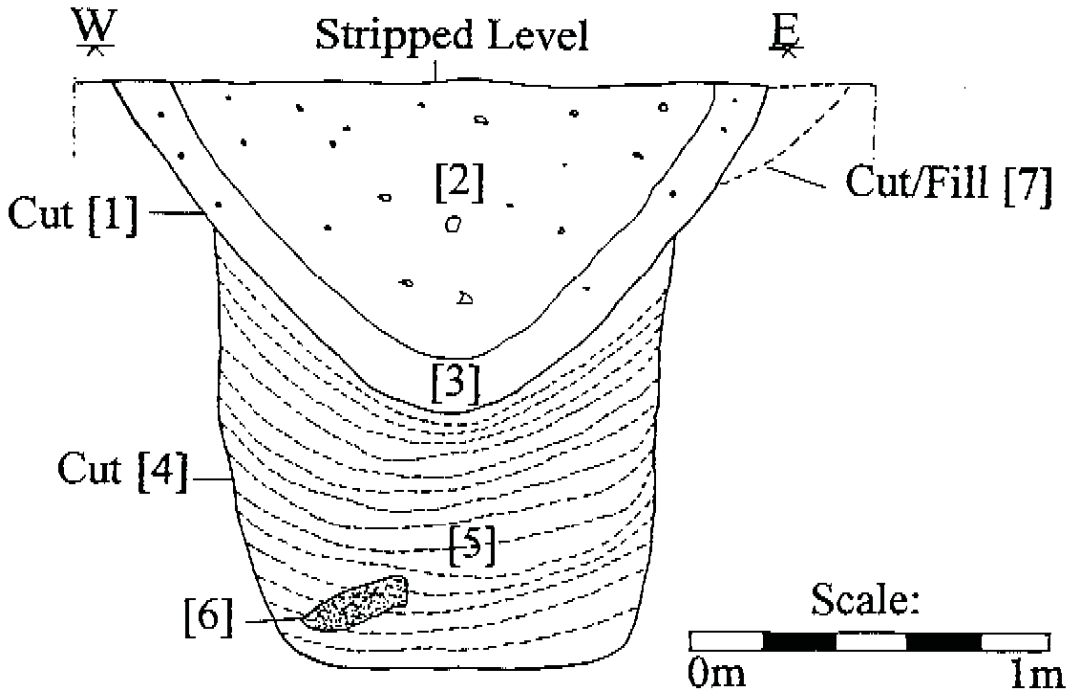
Sample	Context	Type	Gorse	? heather roots	Comments
1032	3	pit 1	M spines	F	M > 2mm, F < 2mm. twigs
1034	6	pit 4	M spines, O seeds	F	F twigs < 2mm, M > 2mm
1036	43	pit 11	O spines, O seeds	-	charcoal:M twigs and frags > 2mm, F < 2mm.
1037	31	pit 8	M spines, O seeds	F	F twigs < 2mm, M > 2mm
1038	92	pit 13	M spines	M	F twigs < 2mm, M > 2mm
1039	84	pit 78	-	-	O roots and twigs > 2mm, O < 2mm.
1035	85	pit 78	M spines, O seeds	F	F twigs < 2mm, M > 2mm.
1054	172	pit 151	-	-	O charcoal < and > 2mm
1055	169	pit 151	-	-	O charcoal < and > 2mm
1056	208	pit 2508	-	-	F twigs < 2mm, M > 2mm.
1057	210	pit 206	-	-	O charcoal > 2mm (1 frag)

3.4.1.4 **Potential for radiocarbon dating**

The contexts listed in Table 13 have the greatest potential for dating, those marked with an asterisk being the most suitable. All the dates will have to be accelerator measurements as the samples are small. Because of the nature of the vegetation, it should be possible to provide samples of short-lived taxa for dating, either of charcoal, or other macrofossils such as gorse spines or seeds.

HR 93 RITUAL PIT COMPLEX

SOUTH FACING SECTION THROUGH PITS: [1], [4], AND [7]



SOUTH FACING SECTION THROUGH PITS: [10], AND [98]

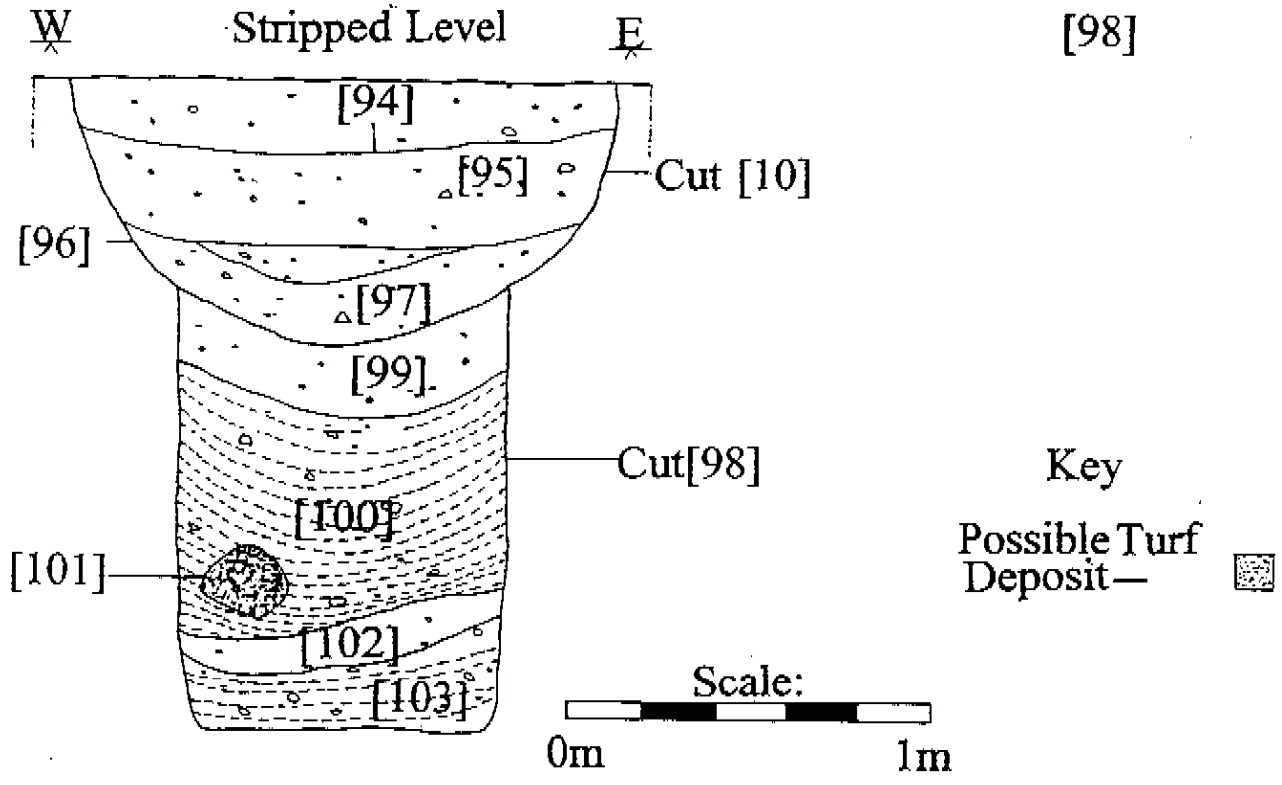


Fig. 20 *Drawn by Andy and Anna Jones* **(GRH:187/4)**

3.5 Radiocarbon dating by Jacky Nowakowski

Given the absence of any datable finds from any of the features collectively termed Highgate "Ritual" pits, it would be extremely useful to attempt to date by scientific means the origin and construction of these features. There exists at present only circumstantial evidence to suggest that these were related to the prehistoric landscape (see section 3.1). The environmental assessment has identified material suitable for accelerator dating from the following contexts which on stratigraphic merit have the potential to provide relatively secure dates for some of these features.

Pit [1] *Sample [1032] context [3]* (Fig 20)
Material suitable from layer [3] within pit 1 is available for dating. This deposit represented the lowest spread within pit 1 and would provide some indication of when this pit was dug as it recut earlier pit 4 (see Fig.20). This date may be usefully compared with the later phases of activities at Little Gaverigan barrow when the barrow ditch was recut and backfilled (see phase 4, section 1.1.1).

Pit [4] *Sample [1034] context [6]* (Fig 20)
Context [6] was an individual turf placed into the lower part of pit [4]. This may provide some indication of the date of silting and abandonment of this large pit. Furthermore a date from here could be usefully compared with dates obtained for activities assigned to phases 2 and 3 at Little Gaverigan Barrow.

Pit [8] *Sample [1037] context [31]*
Deposit [31] was an individual turf found in the lower part of pit [8]. This may provide an abandonment date for this feature. Pit [8] was a shallow feature but formed part of the cluster of pits found at Highgate Roundabout (see Fig.21). A date from here could be usefully compared to that obtained from pit [4].

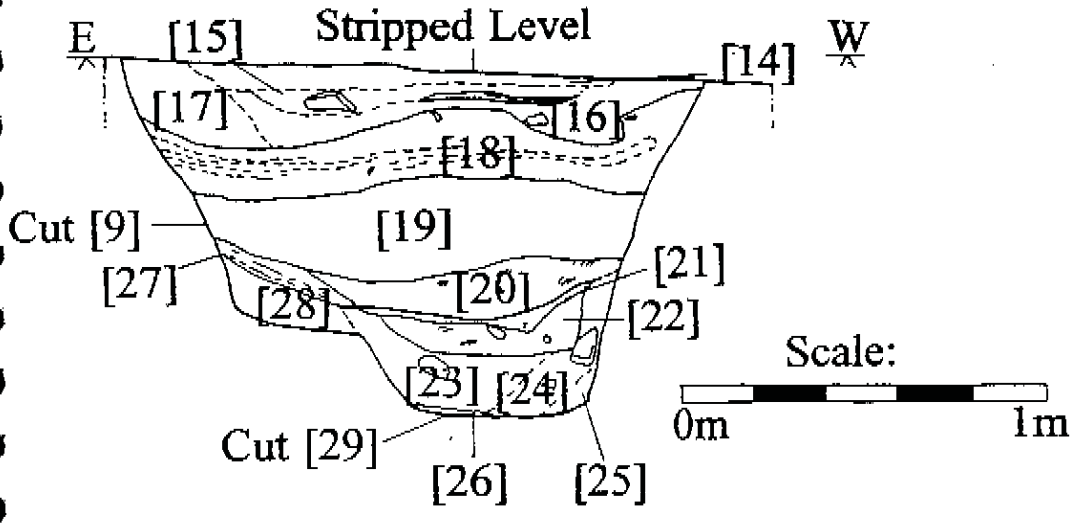
Pit [13] *Sample [1038] context [92]*
Context [92] was a lower fill in pit [13] which may represent natural silting. A date here would represent the abandonment of this feature and could be usefully compared with a date from pit [4] (see above). Pits [13] and [4] shared similar characteristics. Both were deep and sub-rectangular and both were later recut. These also formed part of the cluster of pits found at Highgate Roundabout (see Fig.19).

Pit [78] *Sample [1035] context [85]*
Pit [78] was infilled by several deposits. [85] was one of the lower pit fills noted for its high organic content and may provide an abandonment date for this feature. Pit [78] is also part of the cluster of pits found at Highgate Roundabout (see Fig 19) and a date from here would usefully compare with those obtained from pits [4], [8] and [13] (see above).

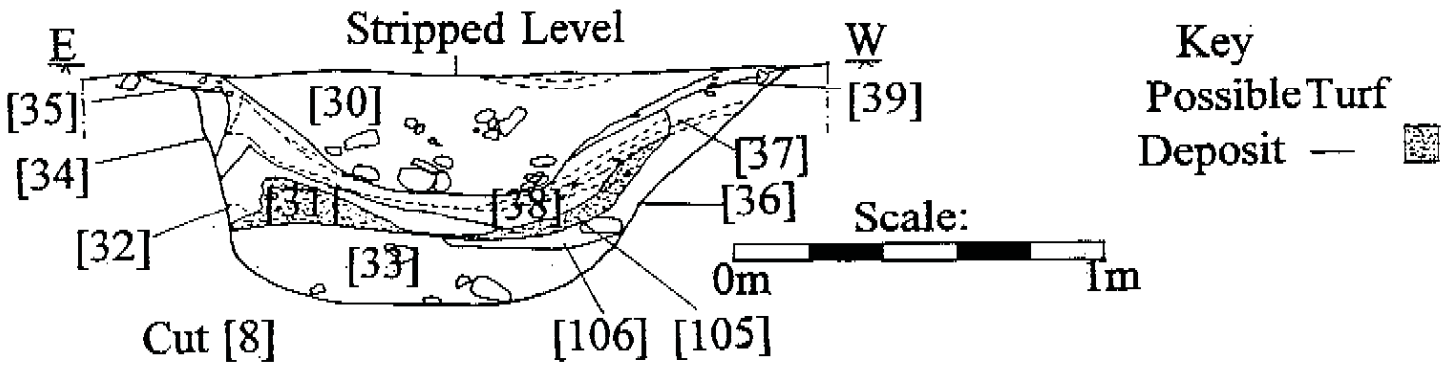
Unfortunately none of the pits in the smaller group found some 180 metres to the north-east of the main group (see section 3.1 and Fig. 18) and which are considered part of the contemporary landscape, produced any material suitable for scientific dating.

HR 93 RITUAL PIT COMPLEX

NORTH FACING SECTION THROUGH PITS: [9], AND [29]



NORTH FACING SECTION THROUGH PIT [8]



WEST FACING SECTION THROUGH PITS: [11], [107], [108]

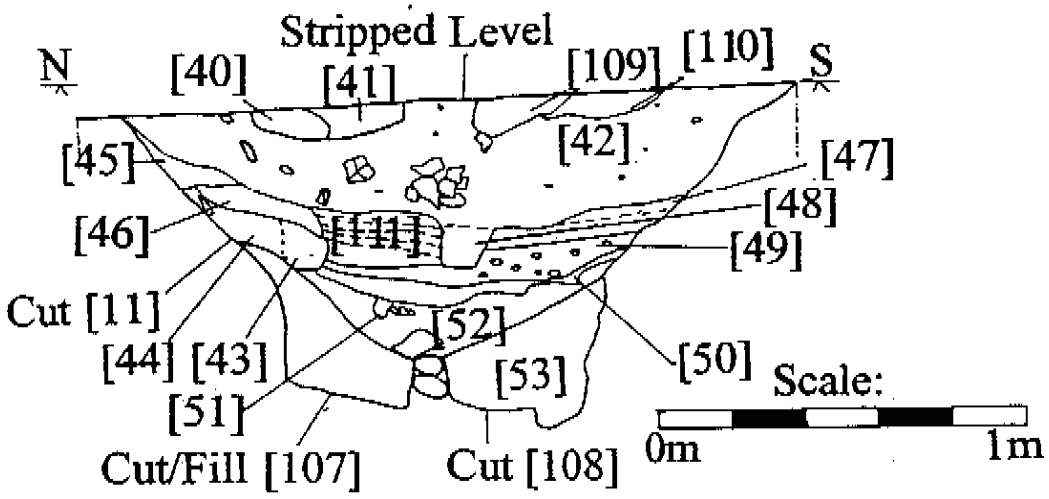


Fig. 21 *Drawn by Andy and Anna Jones and Janice Grove* **(GRH:187/3)**

Summary
The submission of material suitable for scientific dating from the above listed contexts may help clarify the possible prehistoric date of these enigmatic pit features at Highgate. All dates will have to be accelerator measurements; a minimum of 4 and a maximum of 5 is recommended. If prehistoric dates are available from these features then they could be usefully compared with dates obtained from Little Gaverigan Barrow and Highgate Ritual Enclosure. Scientific dates from these features will also be significant in providing some indication of the development of heathland vegetation in this landscape (see section 3.4.1). Furthermore if these feature prove to be prehistoric in origin then they are extremely significant as they will provide the first dates available for prehistoric pit alignments in the south-west (see section 3.6.1).

3.6 Summary for Potential for analysis of the data from Highgate Ritual Pits by Jacky Nowakowski

3.6.1 Contribution of the results of the excavation of Highgate Ritual Pits to research into south-western Early Bronze Age Ritual landscapes.

This curious but tantalising collection of pits and features provides us with a challenge as it is clear that without the benefit of supporting datable material their interpretation and origin will remain unresolved. They may either be regarded as relatively recent historic features - possibly connected with mineral or china clay prospecting - or as significant landscape features of some considerable antiquity. If the latter interpretation is confirmed by independent scientific dates then several lines of further analysis need to be undertaken. Supporting environmental data together with the submission of samples for scientific dating is therefore recommended.

Prehistoric pit alignments have not, to date, been recorded in the south-west making the discovery at Highgate of major significance if an origin in prehistory is confirmed. The unfortunate lack of associated finds is problematic but there are some contextual or behavioural traits here which broadly tie in with evidence recorded at Little Gaverigan Barrow and Highgate Ritual Enclosure - for example the evidence for silting recorded in several of the pits is similar to the silting episodes noted within the circular ditch and within the two large pits found at Little Gaverigan barrow (see section 1.1.3). The limited evidence for "clay capping" found in two of the pits is also of some interest - this was similar to the white clay deposit sealing the mouth of the cremation pit at Highgate Ritual Enclosure (section 2.1). The qualities of the local clay seem to have been attractive to many of the barrow builders in the St. Austell area and its use as symbolic sealing layer on many of the sites examined in the 1970s led the excavator, Henrietta Miles, to comment that such activity linked the sites "within one continuous ritual tradition" (Miles 1975, 73). Also of interest and similarity was the north-east location of the two large pits at Gaverigan barrow, the north-east location of the wooden "screen" or "facade" at Highgate Ritual Enclosure and the notable north-east and south-west alignment of these large pits. This shared feature, which seems more than just a coincidence is perhaps the most striking and convincing evidence, albeit circumstantial, for the prehistoric origin of the larger pits at Highgate.

Prehistoric pit alignments examined elsewhere in Britain such as those found on the Millfield Basin in Northumberland (Miket 1981; Harding 1981), were characterised not only by the "structured deposition" of grooved ware and cremated animal bone, but as Miket noted "the intended functions of the pits were tied to their positioning" (Miket *ibid.*, 145). At Highgate we do not have the supporting material evidence which demonstrates a prehistoric date, but we do have some knowledge of the broader landscape setting of these features. If this pit alignment is prehistoric in date then it may well have been tied into the local landscape arrangement of ceremonial sites of Early Bronze Age date and it may therefore be argued that the pit alignment was an integral part of that early landscape. Landscape surveys on the south-western uplands such as Bodmin Moor and West Penwith have documented the phenomenon of "ritual landscapes": areas of land set aside from areas of settlement during the later Neolithic and Early Bronze Age periods. The upstanding evidence for stone rows and embanked avenues - particularly on Bodmin Moor (see Johnson and Rose 1994) - illustrate quite clearly that this was a feature of the south-west in prehistory. Pits alignments such as those at Highgate may be a variation on features found in these types of landscapes. The chance discovery of this "site" highlights the need for extensive contextual work on threatened early prehistoric barrows so that the scope of investigation may be broadened beyond the edges of discrete sites or earthworks.

The case for the prehistoric origin of the Highgate Pits awaits further supporting independent dating evidence. If however these features prove to be prehistoric then, as has been stated, their discovery is highly significant and exciting not only for its contribution to the A30 project, but also for the study of early ceremonial landscapes within the county. If these are found to be broadly contemporary with Highgate Ritual Enclosure and Little Gaverigan Barrow then all these sites would represent part of a "ritual landscape" which may well have been more extensive. The discovery of a displaced cup-mark stone (SF <328>) found nearby at SW 9255 5884 during the watching brief contributes further to the emerging impression of a landscape set aside for ritual and ceremony during the Early Bronze Age - cup-marked stones were commonly associated with sites of this class and period in Cornwall (*c.f.* Christie 1986, 100-102). It is indeed intriguing that the nineteenth century Tithe map for the area recorded a number of fields in the vicinity which included the name "barrow", hinting at the former presence of features which have long been obliterated. During the mid. nineteenth century, Thomas observed a number of possible barrow sites on high land $^{1/2}$ mile east of Fraddon village (Thomas 1851). Although the area has since been heavily worked for China Clay and these sites no longer exist, Thomas also noted that there was at one site a large granite stone which stood 10 feet high in the centre of the barrow (SMR: SW95 NW/13/10). The association between burial, ritual and longstone sites is not uncommon in the south-west and indeed seemed to be an occasional features of some of the barrows excavated in the St. Austell area by Henrietta Miles, as for example at Caerloggas II (Miles 1975, 45 and 49).

4.0 Summary of recommended analyses of Little Gaverigan Barrow, Highgate Ritual Enclosure and Highgate Ritual Pits by Jacky Nowakowski

Proposed analyses for all sites:

- Scientific dating is recommended to confirm the apparent co-existence of all three sites.
- If shown to be coeval, then these sites collectively contribute to a detailed insight into particular land-use behaviour in this part of the study area during prehistory. An interpretative summary of the character of this landscape will be produced and the significance of these results will be set within a regional and national framework of research focusing on the importance of place and ritual (task 47).