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Excavations at

Potlands Farm, Patching, West Sussex

by

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South Eastern Archaeological Services

South Eastern Archaeological Services (SEAS) is a division of the Field Archaeology Unit, University College London, one of the largest groupings of academic archaeologists in the country. Consequently, SEAS has access to the conservation, computing and environmental backup of the college, as well as a range of other archaeological services.

The Field Archaeology Unit and SEAS was established in 1974 and 1991 respectively. Although field projects have been conducted world-wide, FAU/SEAS retain a special interest in south-east England with the majority of our contract and consultancy work concentrated in Sussex, Kent, Greater London and Essex.

Based in the local community, the Field Archaeology Unit sees an important part of its work as explaining the results to the broader public. Public lectures, open days, training courses and liaison with local archaeological societies are aspects of its community-based approach.

Drawing on experience of the countryside and towns of the south east of England the Unit can give advice and carry out surveys at an early stage in the planning process. By working closely with developers and planning authorities it is possible to incorporate archaeological work into developments with little inconvenience.

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1.0 INTRODUCTION

The archaeological investigation of land required for the A27 Patching Junction Improvement began with a desk-top assessment undertaken by Chris Blandford Associates (1992), which was completed in November 1992. The area considered in that report (fig.1) is to the west of Worthing in West Sussex and extends from Hammerpot in the west to Clapham in the east. The boundaries of the scheme form a corridor with a maximum width of 0.35km and a length of just under two kilometres. The soils of this area are predominantly gleyed, and the land-use of the area was dominated by farming. Pasture was noticeably more frequent than arable, and a significant amount of woodland and scrub was also present, in addition to a small number of buildings and roads, including the old line of the A27.

The desk-top report concluded that the existing A27 may have cut through an extensive prehistoric or Romano-British settlement. This conclusion was based on evidence from the West Sussex County Council Sites and Monuments Record (the SMR), and place-name evidence from the 1840 Tithe Assessment. The latter suggested the presence of pottery or brick/tile kilns in the area, for example Potlands Farm. The SMR entries included references to scatters of fire-cracked flint and possible Roman occupation, but this data was not of a very reliable character as it was based on personal communications and unpublished reports, and even in conjunction with the place-name evidence no firm conclusions could be drawn. However the desk-top survey highlighted the high archaeological potential of the area and further investigations were considered necessary.

The next phase of evaluation comprised a thorough walk-over of the area, surface artefact collection, geophysical survey and some machine trenching (Place 1993). This work was completed during January and February 1993. The walk-over survey did not produce any evidence of archaeological remains visible on the surface. However, the detailed surface artefact collection produced a large quantity of material from the fields suitable for field-walking. The assemblage included modern construction materials and much post-medieval pottery, but concentrations of fire-cracked flint and flint flakes, cores and one flint tool were also found to be present on the surface. A total of 23 flakes, three cores and one end-scraper were recovered, with the distribution of worked flint closely mirroring that of the fire-cracked flint, a strong indication of areas of prehistoric activity.

These areas were further investigated by machine-cut trenches to ascertain their extent and character. Eleven trenches were excavated but only one archaeological feature was observed, and this was found to contain no datable material, and only a handful of flint flakes were unearthed. However a programme of geophysical survey was also undertaken at that time, concentrating on areas which could not be field-walked, including pasture, and this produced significant results.

Large areas of pasture land were magnetically scanned and magnetic susceptibility surveys were carried out to identify buried archaeological features. Readings from the

vicinity of Potlands Farm, south of the existing A27 suggested an area of archaeological activity. Six machine trenches were excavated, but again the results proved inconclusive. In one area where the magnetic susceptibility reading had been particularly abnormal machining was not possible.

The opportunity to investigate that area arose in March 1994 after the demolition of Potlands Farm. Eight machine-cut trenches were excavated, not only at the farm but also in other areas where access had proved difficult. A small number of flint flakes and two scrapers were recovered from trenches along the line of the scheme but no datable features were encountered. Two trenches in the paddock to the north east of Potlands Farm between a partly canalised stream and the existing A27 uncovered a total of 38 archaeological features (fig. 2). These contained high densities of fire-cracked flint, flint debitage (both flakes and cores), charcoal and traces of pottery, which were initially dated to the Bronze Age (Stevens 1994a).

The decision was taken to strip topsoil from an area measuring 50m by 50m after consultation with representatives from West Sussex County Council, English Heritage and Peter Fraenkel and Partners (the road engineers) to identify, excavate and record any archaeological features before their destruction by the road-building scheme.

2.0 THE SITE

Introduction

The topsoil was removed from the designated area by 360° slew digger fitted with a large toothless ditching bucket to reveal the surface of the underlying 'natural' clay. The topsoil varied in thickness between 230mm and 330mm and contained modern brick and tile, pieces of fire-cracked flint and a small assemblage of flint artefacts. The surface of the clay was cut by a number of archaeological features, including pits, postholes, ditches and gullies (fig. 3). A large concentration of fire-cracked flint and charcoal was present at the southern extremity of the stripped area in close proximity to a trough cut into the natural clay. This kind of archaeological feature is usually referred to as a 'burnt mount' (for example Barfield and Hodder 1987; Nixon 1980). The first phase of topsoil stripping was completed on 12th April 1995.

The entire area was cleaned by hand initially to identify all archaeological features cut into the clay. However, due to the large number of features encountered, and the presence of a burnt mount, it was decided that only half of the stripped area should be thoroughly investigated. Hence attention was directed to the eastern half of the site, and after thorough cleaning a plan at the scale of 1:20 was produced. It was decided, after consultation with representatives from Peter Fraenkel and Partners, that a programme of further topsoil stripping should be implemented to ascertain the extent and level of survival of burnt mount complex. This work was undertaken by a 360° slew digger fitted with a toothless ditching bucket on 25th April 1995.

The area to be investigated formed a half sample of the stripped area. It was determined that all the archaeological features within the eastern half should be thoroughly investigated and recorded. Consequently, all discrete features, that is pits and postholes, were first half-sectioned stratigraphically and recorded. Then the second halves were removed to recover all the artefacts present within the fills of the features. Similarly, all linear features, that is ditches and gullies, had one metre long sections removed and recorded. The burnt mount was recorded by cutting sections across it from east to west and from north to south. All exposed sections of linear and discrete features were drawn at a scale of 1:10 and levelled with reference to the Ordnance Datum. Samples were taken from selected features for environmental analysis.

An extension of time of nine days was granted after consultation with representatives of West Sussex County Council, English Heritage, The Highways Agency and Peter Fraenkel and Partners. This allowed the scope of the work on site to be substantially broadened. The fills of all the linear features were then entirely excavated. Further samples were also taken for environmental analysis from both linear and discrete features, and the burnt mound was more thoroughly investigated. Samples were taken for both environmental analysis and radio-carbon dating from within the mound. Features sealed beneath the mound were also investigated, and all material excavated from the burnt mound was sieved for the retrieval of artefacts. Money was also made available for a watching brief in the areas adjacent to the site during topsoil stripping.

The Features

Introduction

The excavation programme lasted from 11th April to 20th May 1994, a total of six weeks. The revealed features included the burnt mound itself, an associated hearth used to heat the flint, and a trough where these hot stones were evidently used to heat or boil water. Other features were present beneath the mound, and close to it, were a group of postholes and a shallow gully. A number of further gullies, ditches and pits lying at some distance from the burnt mound were excavated. Two of the pits contained waterlogged deposits rich in environmental evidence.

The Burnt Mound Features

The Burnt Mound

The mound, feature **100** was a homogenous deposit consisting of a large dump of fire-cracked flint and charcoal, giving the deposit a dark grey colour (figs 3 and 4). The mound measured approximately 6m in diameter, but had a maximum thickness of only 300mm. The mound was formed around a trough cut into the natural clay, and appeared to have accumulated from material removed from the trough and dumped on to the ground surface. Only one datable artefact was retrieved, despite extensive examination and sieving of the mound make-up through a 5mm sieve. It was a sherd of pottery with a coarse flint temper dated to the Middle Bronze Age. Twenty-six flint flakes, two cores and a side scraper were also discovered.

The burnt mound sealed a shallow ditch or gully feature, **38** approximately 9m long and the postholes **123** and **125** (fig. 3). These features contained fills of an extremely similar nature to the mound itself but obviously pre-date it. The mound also sealed an old ground surface, which was sampled for environmental analysis.

A Middle Bronze Age date suggested by the single sherd of pottery is consistent with that assigned to other burnt mounds, a rare and ill-understood class of ancient monument which occurs most commonly in Ireland (O'Drisceoil 1988, 671). Many have been excavated there, both in the last century (Trench 1886; Quinlan 1887) and more recently, when more scientific methods have been used (Buckley 1986; Cleary 1986). Burnt mounds have also been excavated on the Isle of Man (Cubbon 1965). Examples are known from the British mainland, most notably in the New Forest, where 22 mounds have been identified (Pasmore and Pallister 1967), and in the West Midlands (Barfield and Hodder 1981). There has been much academic debate as to the function of the mounds (Barfield and Hodder 1987; O'Drisceoil 1988), but there is broad agreement that the burnt mound was a feature of the Bronze Age and this is supported by C-14 dating and by pottery analysis from examples on both sides of the Irish Channel.

The mound at Patching shows striking parallels with other recently excavated examples, including Deadman Bottom in the New Forest (Pasmore and Pallister 1967). That also consisted mainly of fire-cracked flint and had a gully underneath. The site at Cob Lane, Northfield, Birmingham also had features underneath the mound, and had a notable paucity of artefacts from the mound itself, despite sieving of two tonnes of stone (Barfield and Hodder 1981, 198).

The Trough

Troughs of varying character have been found on many excavated burnt mound sites. The trough at Patching, feature 120, had a smooth clay lining which, although similar in colour to the naturally occurring clay, was distinguished by the absence of flint pebbles. The clay appeared to be 'cleaner' than the natural. The trough measured 2.95m by 1.30m and was 350mm deep, which is somewhat larger than most other known examples (Hedges 1975, 63). It was filled with material similar to the make-up of the mound, although the fragments of fire-cracked flint were appreciably larger than those in the mound deposit. Despite thorough sieving, no artefacts were recovered from the trough. The trough was similar in size and character to that found in association with the mound at Deadman Bottom (Pasmore and Pallister 1967, 16). Many of the Irish troughs were lined with wood. For example, the waterlogged site of Curraghtarsna, County Tipperary had a trough consisting of a reused dug-out canoe (Buckley 1986, 70).

The Hearth

The crescent-shaped feature, 20, close to the trough and mound appears to be the remains of the hearth used to heat the flint (fig. 5). The feature contained two fills, context 21 similar in character to the mound make-up, and context 22, a mid-grey silty clay. Context 21 contained four flint flakes and a single sherd of pottery, with a medium flint temper, dated to the Late Bronze Age. Some of the hearths on other sites were arc shaped, for example at Ballyvourney I, County Cork, or had the form of a full horse-shoe as at the nearby Ballyvourney II (O'Kelly 1954, 110, 126).

The Postholes and Gully

A group of twenty postholes lay to the north-east of the mound, apparently clustered around a shallow five-metre long gully, feature 36 (fig. 3). The postholes were half-sectioned and the second half of the fills were removed (fig. 5). The largest, feature 69 had a diameter of 470mm and a maximum depth of 110mm, while the smallest, feature 85 had a diameter of 300mm and depth of 220mm. All the postholes had steeply sloping sides and a flat base, and had fills similar in character to the burnt mound make-up. Finds were sparse: the fill of feature 93 (fig. 5) contained two flint flakes and two sherds of pottery with a very coarse flint temper dating from the Middle Bronze Age, and the fill of 95 produced one flint flake.

Similar postholes were unearthed at Ballyvourney I and were interpreted as the remains of racks for hanging meat (O'Kelly 1954, 115). This interpretation is given support by the presence of the gully at Patching, which could have been constructed to carry away dripping blood.

The Other Features

The Ditches

A notable feature of the site at Patching was the long irregular ditches in the area to the north of the burnt mound (fig. 3). There were four main ditches. Two ran from east to west (features **16** and **18**). Two others ran from north to south, feature **14** of which **30** was probably originally a part, and feature **12** which probably also included **8** and **2**.

Feature **12** was the earliest of the ditches and is cut by **14** and **16** (fig. 6). The feature had a maximum width of 700mm and a uniform depth of 200mm, and was filled by a greyish-brown silty clay, context **13**, which contained six flint flakes, one end scraper, much fire-cracked flint and a single sherd of medieval pottery. The sherd was undoubtedly intrusive. The line of the ditch continued north as feature **8**, which had a similar fill and contained two flint flakes, and then curved to form feature **2**. It too contained a similar fill and a single flake. The direct physical relationships between the ditches had been destroyed by later features, but the similarity of the fills and their general orientation suggests they form part of a single longer feature.

Ditch **14** ran parallel to **12**, then converged and cut it (figs. 6 and 7). The ditch, which was a maximum of 1.13m wide, was cut by feature **18** further south, but its relationship with feature **16** had been obscured by a modern field drain. It was also cut by a ditch (**32**) and the hearth (**20**). There were two fills of ditch **14**. The upper was a greyish brown silty clay (**15**) with a maximum thickness of 120mm and the lower was a mid-orangey brown silty clay (**34**) with a depth of 200mm. Context **15** contained three sherds of medium flint-gritted pottery dated to the Late Bronze Age and 11 flint flakes. No pottery was recovered from context **34**, although nine flakes were present. Fire-cracked flint was present in both of the contexts within the ditch. Feature 30 may represent the line of the feature to the north; to the south the feature terminated with a vertical face.

Feature **16** was a wide ditch running east to west across the site (fig. 7). It cut **12** and was cut by **18**. The ditch profile varied along its length, and had a maximum width of 2.43m and a depth of 710mm. The feature contained five fills (contexts **17**, **26**, **27**, **28** and **112**), all silty clay deposits, varying in colour between mid-greyish brown and mid-brown. Only context **17** produced any artefacts, seven flint flakes and a Romano-British flagon top sherd of the 1st- or 2nd-century AD. However, all the ditch fills contained large quantities of fire-cracked flint, suggesting that the ditch is broadly contemporary with the other features at the site, and that the Romano-British pottery was intrusive.

The narrow ditch **18** was fairly uniform, 430mm deep and 800mm wide (fig. 7). It cut ditches **14** and **16**, and the hearth **20**. The feature contained three fills (**19**, **24** and **25**), which were similar in colour and character to those in feature **16**. Twenty flint flakes were recovered from Context **19** and two flakes were found within Context **24**.

There were also a small number of other linear features, including features **36** and **38**, and feature **4**. The latter ditch, lying in the north-east corner of the site, had a fairly uniform width of 940mm and a maximum depth of 310mm. It contained a greyish-black silty clay with abundant fire-cracked flint and was cut by **2** and **6**. The ditch ran out of the excavated area to the north and the south-east.

The other linear feature of archaeological significance was a nine-metre long ditch, feature **32**, the line of which was continued to the north-west by feature **40**. It was cut by both the long ditch **14** and the hearth **20**. The ditch was 380mm wide and 110mm deep and was filled by a greyish-black silty clay with abundant fire-cracked flint. No artefacts were recovered from the ditch.

These features could have been boundary ditches or they may have been for drainage in a low-lying wet area. The environmental evidence from the larger pits suggests that they were wet for at least part of their period of use. An alternative purpose of the ditches, therefore, may have been to directly fill the pits, rather than use the more labour intensive method of filling them from the stream. Unfortunately later activity at the site has obscured the relationship between the ditches and pits.

Two other linear features ran across the site from east to west (**6** and **10**) but these 'ditches' were post-medieval and were probably formed by the removal of a hedgeline or line of trees. Both features had been levelled by the importation of gravel and topsoil, which contained nineteenth- and twentieth-century pottery, and a George III copper half-penny of the period 1770-1775.

The Pits

A small number of discrete features were uncovered by the topsoil stripping. Feature **113** was a depression in the natural and further investigation of it produced interesting results. Feature **109** was found to contain a burnt-out tree-stump and was presumed to be of post-medieval origin. Other pits produced evidence of earlier activity.

Pit **83** contained a greyish-brown fill (**84**), which had a high content of fire-cracked flint, but no datable artefacts (fig. 8). Although the pit was over a metre in diameter, it was only 250mm in depth. Pit **95** was also comparatively shallow, with a diameter of 1.23m but a maximum depth of only 520mm (fig. 7). The fill (**96**) was similar in character to **84** but contained less fire-cracked flint and a single flint flake. The feature was cut by the long ditch **14**. Ditch **14** was itself cut by a small pit or post-hole, feature **71**, which contained a mid-greyish brown fill with a small quantity of fire-cracked flint, but no datable finds (fig. 6).

Feature 77 was a shallow irregularly-shaped pit with a maximum width of 2.65m and a uniform depth of 530mm, which was cut by feature 12 (fig. 6). It contained three separate fills (78, 79 and 80), which were all greyish-brown silty clays. The uppermost, context 78, was only 90mm thick and contained small quantities of fire-cracked flint, and the bottom fill context 80 was equally thin and contained no datable artefacts. The main fill, context 79 contained two flint flakes and five sherds of very coarse flint-gritted pottery, dated to the Middle Bronze Age. One of the sherds had a cordon. Context 79 also contained a single sherd of Late Iron Age or Romano-British East Sussex Ware, which was presumably intrusive.

The Waterlogged Pits

Feature 108, a large, deep and partly waterlogged pit lay close to the burnt mound. Initial cleaning had suggested that the area was archaeologically sterile, but closer examination produced a sherd of medieval pottery from within the orangey-yellow clay, which was then recorded as context 102. Below 102 was a pit which was filled by five identifiable contexts (103, 104, 105, 106 and 107). Context 105 was found to be partly waterlogged and contained well-preserved organic remains. All of the contexts contained fire-cracked flint in small quantities, and worked flint was recovered from context 103 (40 flakes and a side scraper), context 104 (15 flakes) and context 105 (15 flakes).

Pottery sherds were recovered from these three contexts. Three sherds of a coarse flint-gritted ware were found in context 103, which were dated to the Middle Bronze Age. Context 104 contained four sherds of a smoothed medium flint-gritted ware, dated to the Late Bronze Age, and context 105 produced a smoothed, finer ware of the same date. However, this context also contained three sherds of Romano-British pottery. Samples were taken for environmental analysis.

Following the discovery that features lay underneath areas presumed to be archaeologically sterile, the decision was made to excavate a test-pit in the uncleaned western half of the site to ascertain the presence and extent of any features. A 360° slew digger was used to excavate a test hole and a large feature was identified (131). The exact size and shape of the feature could not be ascertained due to the method employed and the presence of ground-water which flooded the machine-cut trench. Four separate waterlogged contexts were identified (127, 128, 129 and 130), each containing small quantities of fire-cracked flint. Environmental samples were taken and one of the samples produced a radio-carbon date (Q - 3259) of 900-800 cal. BC (95% probability), indicating that the feature was broadly contemporary with the burnt mound.

The Machine-Cut Trenches

A 360° slew digger was used to excavate two trenches in the south-east of the site to investigate the hollow (113). Both trenches immediately flooded with water. After

lengthy pumping, it was possible to investigate one of the sections of the easternmost trench. It revealed a number of contexts made up of gravel and clay (**114**, **115**, **116**, **117**, **118** and **119**) (fig. 8). Context **105** contained preserved organic matter in the form of small twigs, which appeared to be held together by vertical twigs. Samples were taken and examined by Richard Darrah, who found no obvious signs of human intervention, and described the wood as possibly 'intrusive or residual'. A radiocarbon date of 450-635 cal. AD (95% probability) (Q - 3258) was obtained from the wood, which supports that view.

3.0 THE WATCHING BRIEF

An agreement was made that South Eastern Archaeological Services would undertake a watching brief after the completion of the Potlands Farm excavation, both on the non-excavated western half of the site, and in the adjacent area. The area around the original site was reduced by mechanical excavation, bulldozer and 'box-scraper' machinery and all activity in the area was observed.

The watching brief began on 31st May and continued until 22nd June 1994. During the topsoil stripping of the area by bulldozer, no archaeological features were observed and no artefacts were recovered. Further ground reduction was undertaken by box-scrapers leaving a highly uneven surface that made the identification of archaeological features difficult. The removed material was scanned for artefacts but none was recovered. Later a piece of wood was uncovered by the machinery and work in the area ceased while the area was investigated.

The Timber Structure

The piece of visible timber formed the highest part of a wooden structure (**200**) buried within a deposit of orangey-yellow gravel. The assemblage consisted of 17 pieces of timber, forming a stave-built structure of some kind (fig. 9). The structure was slowly dismantled and each timber was given an identification letter, and was then measured and photographed. The wood was found to be extremely well preserved and could be sampled to examine the joints and the cut marks on the timbers. Pieces of the wood were also retained for dendrochronological analysis.

The staves were made from radially-split oak, which had been reworked with axes, and were held in position by a tie-back beam, which was itself supported by two planks. The stave-built structure was presumed to form part of a scheme of water management, prior to the canalisation of the nearby stream. Richard Darrah suggested a medieval date for the structure based on the technology, but samples taken for dendrochronological dating and sent to the University of Sheffield could not be matched to any tree-ring curve. The structure can be given a broad date range of 700 to 1200 AD on the evidence of the timber-working.

The Wattle-Lined Pit

The area around the wooden structure was cleaned by hand to identify and record any associated features. The structure itself was isolated. A pit (300) measuring 1.20m in diameter was uncovered to the east (fig.9). It contained three identifiable waterlogged fills, (301, 302 and 303). The pit was lined by a layer of wattle (303) of small twigs which had been interwoven. The other fills were greyish-brown silty clays which contained large quantities of small twigs, with occasional charcoal flecks. The water present prevented the certain identification of the bottom of the pit. No artefacts were recovered from the pit and its date remains unknown.

4.0 THE FINDS

Pottery
by Sue Hamilton, Institute of Archaeology

Context	Sherds
15	F3: 3 sherds
21	F3: 1 sherd
79	F1: 5 sherds, one of which shows a cordon
94	F1: 2 sherds
100	F2: 1 sherd
103	F2: 3 sherds
104	F4: 4 sherds
105	F5: 4 sherds

Fabrics

F1: very coarse flint-gritted

The fabric comprises very coarse, medium abundance flint grits. The matrix has an oxidised exterior surface and unoxidised interior surface and core. The fabric most probably dates to the Middle Bronze Age on the basis of the textural characteristics and the presence of a shoulder sherd with a slightly raised cordon on the carination. Wall thickness: 12mm.

F2: coarse flint-gritted

The fabric comprises coarse, medium abundant flint grits. The matrix is generally unoxidised throughout. The fabric is dated to the Middle Bronze Age on the basis of its textural characteristics. Wall thickness: 9mm.

F3: medium flint-gritted

This fabric comprises medium, medium abundant flint grit. The matrix is generally oxidised throughout, or has an unoxidised interior surface. The fabric is thinner (8mm) than F1 and F2. On the basis of texture and wall thickness a late Bronze Age date is suggested.

F4: smoothed medium flint-gritted

This fabric comprises medium, medium abundant flint grits. The matrix has oxidised surfaces and an unoxidised core. The smoothed surfaces and some evidence of wiping are characteristic of the Late Bronze Age. The wall thickness (10mm) is greater than F3.

F5: smoothed, fine flint-gritted

The fabric has the characteristics of a Late Bronze Age fine ware. The fabric comprises abundant fine flint grits. The exterior surface has been smoothed and the fabric is thin-walled (6mm). The matrix is unoxidised throughout.

Discussion

The range of fabrics present s ggest evidence of Middle Bronze Age and Late Bronze Age activity. The sherds are relatively large and uneroded, particularly the F4 sherds. This would suggest that the sherds are *in situ* or not far removed from their original point of use and/or disposal. The size of the assemblage, and the lack of diagnostic feature sherds suggests that further work on the assemblage would not generate any additional information.

Other Fabrics

Context	Sherds
1	Various medieval and post-medieval fabrics
13	Medieval 12th - 13th century
17	1st - nd century flagon top
79	1 sherd 'East Sussex Ware', LIA - RB
102	1 sherd 12th - 13th century fabric
105	3 sherds 1st - 4th century A.D.

The Flint

by Greg Priestley-Bell, Institute of Archaeology

Three distinct types of flint are present within the assemblage. Firstly, a light to medium grey slightly coarse-grained material with many inclusions, often with a light grown patina, comprising approximately 65% of the a tefacts. Secondly, a mottled light grey to dark grey fine-grained material with many inclusions comprising approximately 25%. Lastly a dark greyish blue very fine-grained flint with few inclusions making up the final 10%. One flake with beach pebble cortex is present.

More than 32% of the total assemblage is patinated with only 3% rolled and 2% broken. A fairly high degree of light edge-damage is present, although probably not due to ploughing as iron staining is completely absent. Cortical flakes (where 10% or more of the dorsal surface was cortex) comprise 33% of the assembl ge.

Waste Flakes

The waste flakes are predominantly of hard-hammer manufacture with broad unprepared platforms. Very few true blades are represented, that is flakes with a length twice or greater than their width, with roughly parallel edges, and with traces of previous parallel removals on their dorsal surface.

Scrapers

A total of 11 scrapers are present, comprising seven end-scrapers and four side-scrapers. All the retouch was direct, either abrupt or semi-abrupt, with crossed-abrupt retouch present on the side scraper from context 17.

Borer

A borer or side-scraper from context 1 was been formed by direct retouch of varying extent to the distal end and left lateral edge. An area of denticulation with a notch, also produced by direct retouch, is present on the right lateral edge. The proximal end and part of the right lateral edge has been blunted by abrupt indirect retouch to perhaps facilitate the use of the tool as a borer or saw.

Cores

Two cores and a core fragment are present: one core and a core fragment from context 100, the burnt mound, and one core from context 1, the topsoil. The cores from Context 100 have a single striking platform with uni-directional flake scars, and show evidence of platform preparation. The scarring on the debitage surface of the core fragment from Context 100 suggests soft-hammer percussion. The core from context 1 has a single platform with no traces of platform preparation, while the centripetal flake scars are characteristic of hard-hammer percussion.

Conclusions

The weathered appearance of much of the cortex and the presence of differential patination and thermal fracture surfaces, suggests that the raw material was collected from the surface.

The ratio of debitage to tools 20.4:1 and the high proportion of cortical flakes (33%), perhaps indicates a short reduction sequence using limited raw materials. The absence of small debitage may be due to its removal by surface weathering.

The assemblage taken as a whole therefore represents most stages of a flaking industry of Neolithic or Bronze Age character, producing medium sized hard-hammer flakes, with a minimum of modification, as blanks for scrapers

A table of the flint distribution is appended below.

Wood

by Richard Darrah

Twenty-three samples were taken from 17 pieces of cleft oak. The longest of these was 2.38m.

The timber was all oak which had been cleft and re-worked with axes. The use of wide-bladed hewing axes on slow-grown timber points to a medieval date. In London the combination of slow-grown oak and broad axe hewing technology would date between 700 and 1200 A.D., but in a rural setting a supply of slow-grown oak may be available later. The date of the structure could be confirmed by dendrochronological dating.

Growth pattern so the oak suggest that four trees were used in the construction. The structure was made from radially cleft oak stakes backed by cleft and hewn planks which had been held together with wedged pegs. Axe and auger toolmarks survived on the surfaces including a complete blade edge profile of a narrow-bladed cross-cutting axe. Despite the use of wedged pegs the structure was not part of a boat as none of the pieces was carefully shaped.

The wood was in good condition, it was self-supporting and was not brittle. The wood surfaces were not as well preserved as the core of the wood and a few clear toolmarks survived.

Dendrochronology

by Cathy Graves, Sheffield University

Cross-sectional slices were cut from 11 timbers from the revetted structure. The samples were identified as oak (*Querus* spp.) and prepared and analysed using standard dendrochronological techniques (Baille 1982; Hillam 1985). The tree-ring patterns of six of the samples crossmatched and were combined to form a 99-year site master curve. Within this group the results indicated that two pairs of the timbers were likely to have been derived from the same tree, thus this group represents a maximum of four trees. Three other samples also crossmatched to form a 91-year curve. All three of these timbers may have come from the same tree. The remaining two samples cross matched and were averaged together to form an 81-year master curve.

The three group master curves were compared with each other but no reliable matches were found. Thus all three master curves were compared with numerous reference chronologies from the British Isles. Initially chronologies spanning the Roman, Saxon and Medieval periods were used, but as no consistent results were obtained the search was extended to include prehistoric sequences and chronologies from elsewhere in Europe. No reliable results were produced from any of the curves and hence the structure remains undated.

Palynology

by Patricia Wiltshire, Institute of Archaeology

This assessment concentrates on a number of prehistoric features in the proximity of a burnt mound (100). Three features and a total of 24 subsamples were examined for palynological status:

(1) Shallow ditch associated with the mound:
Context 39: Laboratory Sample 1009: two subsamples processed.

(2) Waterlogged pit:
Feature 108: Laboratory Sample 1008: five subsamples processed.

(3) Deep, large waterlogged pit:
Feature 131: Contexts 127/129: Laboratory Samples 1010,1011,1013,1014.

Both subsamples from the shallow ditch (39) proved to be sterile of palynomorphs. The waterlogged pit (108) presented difficulties with regards to the stratigraphic integrity of the sediments since Roman pottery was found in a lower fill (105) while Bronze Age pottery was found in an upper fill (108).

The large, deep pit (131) presented difficulties with sampling; the basal fills were submerged and it was impossible to ascertain the stratigraphic relationship between these and the upper sediments. Two overlapping monoliths of sediment were obtained from the upper fill (127) while two overlapping tins of sediment were taken from a

large block of submerged peat, cut by hand from the underlying deposit (129). It is possible then, that an hiatus exists between contexts 127 and 129.

Standard preparation procedures were used (Moore *et al.* 1991). Fresh sediment was measured for 2cm^3 volume displacement. Pollen preparations were stained with safranine and suspended in glycerol jelly and assessed for palynomorph content, state of microfossil preservation, and palynomorph assemblage. Preparations were examined with a Zeiss phase-contrast microscope at x 400 and x 1000 magnification where necessary.

Identification was made with the pollen key of Moore *et al.* 1992, and type material. Nomenclature follows that of Bennet *et al.* 1991, Punt and Clark 1984, Punt *et al.* 1988 and Stace, 1991. Cereal-type pollen refers to all grains of >40 mμ with a mean annulus diameter of 8-10 mμ (Edwards, 1989).

Ten standard traverses were examined in each preparation and all palynomorphs encountered were noted. Overall abundance and preservation of palynomorphs was assessed subjectively using a five-point scale:- (+ = present: 1 = poor/low: 5 = very good/high).

The results for features **108** and **131** are appended on Tables 1 and 2 (a and b) respectively. In each case details of lithology and palynomorph abundance and state of preservation are given

Waterlogged Pit - Feature 108

The top of monolith was at 85cm from the top of the feature so that the first subsample was taken at 87cm. In the laboratory it was difficult to relate the lithology of the monolith of sediment to the section drawing. However, it would seem that the subsample at 87cm was from fill **103**; 99cm and 105cm were from fill **105**; 110cm and 120cm were from fill **105**. Because of possible stratigraphic mixing it is extremely difficult to evaluate temporal changes in vegetation from this feature. However, it would seem that the pollen spectra in the three lower subsamples differ from those in the upper two. These differences might be meaningful but this is difficult to ascertain without detailed analysis and more secure dating. On the basis of the observed variation the sequence is divided into two pollen assemblage zones, PJ/108/1 and PJ/108/2.

PJ/108/1 (105, 110 and 120cm)

Table 1 shows that microscopic charcoal was very abundant in every subsample. Palynomorph preservation and abundance were high in the basal sample but there is little palynological evidence that the feature was waterlogged. However, Cyperaceae (sedges) and *Callitriche* (water star-wort) were recorded, and these are characteristic of wet places.

The immediate site appears to have been dominated by woodland with *Quercus* (oak) and *Coyrlus avellana*-type (c.f. hazel) being the most abundant woody taxa. However, *Betula* (birch), *Acer campestre*-type (c.f. field maple), *Alnus* (alder), *Fagus* (beech), *Prunus* (c.f. sloe), *Salix* (willow) and *Tilia* (lime) were also growing in the catchment. Some trees were also supporting *Hedera* (ivy). Although woodland seems to have dominated the very local landscape, the canopy was probably fairly open to allow the light-demanding ivy, field maple, willow, and c.f. sloe to flower. Along with lime, these plants must also have been growing fairly near to the feature, since they are all insect pollinated and their pollen is thought not to travel far from source.

The ferns found in these samples, namely *Polypodium* (polypody fern), *Pteridium* (bracken), and *Pteropsida* monolete indet. (undifferentiated ferns) could all have been components of the woodland. Some of the herbs could also have been growing at the woodland edge, or associated with stands of trees, such as *Hyacinthoides* (bluebell), *Anemone* (c.f. wood anemone), *Mercurialis* (dog's mercury), *Geum* (e.g. wood avens), *Stellaria holostea* (greater stitchwort), and *Melampyrum* (cow-wheat). It is interesting that cow-wheat often indicates disturbed woodland and burning.

Poaceae (grasses) were well represented and the herbaceous taxa suggest that areas of open, weedy grassland were present as well as disturbed and compacted soil. The presence of *Calluna* (ling) might indicate that heath vegetation was growing in the catchment (bracken could be another indicator), although both ling and bracken can exist in open, acid woodland, or in acid, well-drained pasture.

There is little doubt of human activity since cereal-type pollen was found in every subsample. Cereal pollen is usually deposited very close to the growing plant and its presence might indicate cereal-growing locally. However, it must be remembered that the processing and transporting of corn can disseminate pollen further afield.

PJ/108/2 (87 and 99cm)

Palynomorph abundance and preservation were better at 99cm than at 87cm, and the better preservation may be due to waterlogging of the sediment. The green aquatic alga *Spirogyra* and pyrite framboids were present. Framboids are formed under highly anaerobic conditions where fermenting organic matter provides substrates for sulphate, and iron-reducing bacteria (Wiltshire *et al.* 1994). They can form in compacted sediments but more often develop in sulphidic, waterlogged deposits. Their presence in archaeological contexts might be indicative of periods when features contain standing water and decaying plant material. The presence of sedges and *Lythrum portula* (water purslane) might suggest that these plants were growing in muddy soil around, or even in, the feature, although the proximity of the stream must be considered; overbank flooding could disseminate pollen of water plants over any inundated area.

Woodland was much reduced when compared with the previous zone and all woody taxa, except hazel, were recorded as a mere presence. In the uppermost sample, only

oak and birch were present and many of the woodland herbs were also absent. Weedy grassland and disturbed soils were still recorded but fern spores increased dramatically. Cereal-type pollen was also more abundant at 99cm and *Sphagnum* moss spores were found.

The picture gained is one of diminished woodland but the considerable increase in fern spores is enigmatic. Either ferns capitalised on the reduction of trees by spreading into open areas, or reworked sediment/soil was finding its way into the feature. Another possibility is that plant material was being dumped into the pit. Ferns are certainly a useful resource and can serve many functions such as for thatching, bedding, mulching and tinder. Both plants are characteristic of heathland and could have been growing elsewhere together. If bracken were being collected and brought to the site, the presence of *Sphagnum* might be explained by its spores adhering to dumped bracken fronds.

Interpretation of the pollen spectra in this feature is difficult in view of the doubts about its stratigraphic integrity. The upper fills certainly seem to record changes in the local environment, but whether these are due to ecological and/or anthropogenic impact on the landscape, or whether they are simply because of mixed taphonomy and local 'industry', is difficult to ascertain.

Large Waterlogged Pit - Feature 131

Sampling the sediments of this feature was difficult, as described above, because of standing water. The results on Tables 2a and 2b suggest that part of the sequence was, indeed, lost during sampling and an hiatus exists in the record. It would seem appropriate, therefore, to consider the lower and upper sediments individually. The depths shown on the results table for the upper sediment are the depths from the surface of the feature. The depths for the lower sediment were simply measured from the top of the monolith of peat cut by hand. It is not possible to determine the size of the hiatus.

Lower Sediments(0.5-10cm)

Palynomorph abundance and preservation were moderately good/very good (Table 2a). Microscopic charcoal was moderately/very abundant throughout and this is not surprising considering the proximity of the burnt mound.

The pollen spectra, presence of *Spirogyra*, and iron pyrite framboids, indicate that the pit contained standing water, at least periodically. It certainly contained water early in its history; framboids were relatively frequent and obligate aquatics/emergents such as *Lemna* duckweek, and *Alisma* (water plantain) were present. The sporadic appearance of framboids might suggest that watertable was lowered periodically resulting in a rise in redox potential of the sediments. Framboids are easily oxidised in the presence of free oxygen.

Other plants characteristic of high water table and muddy soils such as *Ranunculus (Batrachium*-type) (e.g. water-crowfoot), *Mentha*-type (e.g. water mint), and sedges were also found. The high frequency of water star-wort also indicates standing water or very muddy soil; species of starwort have a variable habit and can grow completely submerged or in wet soil.

A single egg of a trichurid worm (intestinal parasitic nematode) was found in the basal sediment. This might have been derived from people or their domestic animals, but such eggs are often widely dispersed and there is no strong evidence that the feature contained faecal matter.

The local landscape appears to have been supported oak woodland. Hazel was moderately abundant and *Fraxinus* (ash), alder, birch, and lime were also growing in the catchment, although pine might have been growing some considerable distance away. In spite of the obvious dominance of oak, either the canopy must have been fairly open, or there were substantial glades adjacent to feature 131. Light-demanding plants such as willow, c.f. sloe, *Sambucus* (elder), *Malus*-type (e.g. crab apple), *Ligustrum* (privet), and *Euonymus* (spindle) were also components of the woodland. Considering their poor pollen dispersal, it is likely that they were growing in close proximity to the feature. Ivy was also frequent and *Lonicera* (honeysuckle) was recorded. Both these climbers require fairly high light intensity for flowering and, again, their poor pollen dispersal means that they were probably growing in the immediate vicinity, or even overhanging the feature.

The range of trees, shrubs and climbers suggest that the woodland was varied, offering a wide range of resources. A variety of ferns appear to have been growing in the woodland, particularly bracken which, as well as being valuable for the reasons suggested earlier, is a rich source of potash when burned.

The presence of open areas is confirmed by the relatively large number of herb taxa. In addition to the ferns, the woodland floor seems to have supported bluebells, wood avens, and wood anemone, and the grass pollen might have been derived from woodland grasses. However, disturbed, open soil is also suggested by cow-wheat, and ruderals such as *Artemisia* (mugwort), *Capsella*-type (e.g. shepherd's purse), and *Polygonum aviculare* (knot-weed).

Cereals were being grown in the vicinity and cereal-type pollen is consistently present throughout these basal sediment.

Upper Sediments (90cm)

Again, palynomorph abundance and preservation were moderately good to excellent, and microscopic charcoal was very abundant. The numerous finds of the fruiting bodies of *Glomus*-type (a vesicular-arbuscular mycorrhizal fungus) indicates that bioactive soil was finding its way into the feature. It is possible that disturbance by people or animals could have resulted in a degree of soil erosion. The surface of the

feature certainly seems to have been wet and *Spirogyra* was found frequently, while iron pyrite framboids were found at three levels. The wetness of the site is also indicated by plants which are characteristic of open water, or very wet muddy soil. These include *Chrysosplenium* (golden saxifrage), sedges, water purslane, (e.g. water mint, water star-wort, and the hornwort *Anthoceros punctata)*.

Although there are indicators of wetness at the site, there is little palynological evidence of persistent standing water. There is a very marked increase in abundance of star-wort pollen in the upper sediments, and such high frequency might be taken to indicate stagnant water; but, as already stated, these plants are able to spread over mud. It is possible that the pit was sometimes filled with water but the lack of framboids in the upper levels might suggest a periodic drying and partial aeration.

The local area seems to have still supported mixed woodland with oak being a dominant component along with hazel and alder. The species composition of the woodland also seems to have been even richer than before, with shrubs, climbers and herbs indicating the openness of the canopy. In fact, although the local woodland seems to have remained species-rich, the increase in abundance and frequency of herbs suggests that it had been considerably disturbed and thinned. Oak representation was less than that in the lower sediment.

Grasses increased greatly and herbaceous plants characteristic of pasture and weedy grassland such as *Plantago lanceolata* (ribwort plantain), Lactuceae (*Taraxacum*-type, (e.g. dandelion), *Lotus*-type (e.g. bird's foot trefoil), *Trifolium*-type (e.g. clovers, and *Centaurea nigra*-type (e.g. knapweed) were more frequent. Ruderals indicative of disturbed and trampled soil such as knot-weed, *Plantago major* (greater plantain), *Urtica dioica* (nettle), *Ranunculus*-type (buttercups), and *Rumex spp.* (docks) were represented.

Many of the herbs listed on Table 2b have wide ecological tolerance to soil reaction and hydrology. They could have been growing in more than one habitat, and on a variety of soils but, taken together, they indicate an opening up of the woodland.

Cereal-type pollen was markedly more abundant than in the lower sediment and an intensification of arable husbandry is suggested. The high levels of herbs which are characteristic of weedy grassland and pasture also points towards pastoral activity.

Final Comments

In spite of possible taphonomic problems in feature 108, and a hiatus in the record in feature 131, the pollen assemblages from the two pits are remarkably similar. In basal sediments, both record mixed woodland, dominated by oak, with the woodland canopy being relatively open. The two features also show a marked reduction in the oak woodland and increase of arable activity in the period represented by the upper sediments. It is highly likely that the features are contemporaneous. A radiocarbon date of Late Bronze Age was obtained from feature 131 but, unfortunately, the depth

from which the wood was obtained is unknown so that it is not possible to assess the age of the basal sediments. However, the very low representation of *Ulmus* (elm) suggests that the features were made well after the Neolithic period.

It is difficult to ascertain a function for the pits but, in view of the very large amount of microscopic charcoal in the sediments, it is likely that they were associated with activities linked to the burnt mound. They might have been water reservoirs although the closeness of the stream might suggest this to be unnecessary. The large pit might have been a source of water for domestic animals although, during excavation, it appeared to be exceedingly steep-sided. In any event, both features were wet and contained standing water during some part of their functional lives.

The industry associated with the burnt mound was occurring in a richly (but not densely) wooded landscape with glades of herb-rich patches of open ground. This woodland was opened up further and cereal production seems to have increased locally. For fine-scale information on landscape change, detailed counting of palynomorphs and finer resolution sampling would be needed.

Soil Micromorphology

by Dr Richard Macphail, Institute of Archaeology

A number of Kubiena box soil samples were collected from the Patching Junction site, West Sussex by Simon Stevens of South Eastern Archaeological Services in 1994 on behalf of Mrs P E J Wiltshire (environmental coordinator). Of these, sample 1006 was selected for assessment by Dr R I Macphail. It was impregnated with crystic resin and then sent to the University of Stirling for thin-section manufacture. This sample bracketed the junction between an old ground surface and a prehistoric 'burnt mound'.

The Soil Survey of England and Wales soil map does not cover this area because it is classed as urban, but the map suggests that the mound and buried soil are formed of fine drift (silty clays) either stagnogley soils (Wickham 4 soil association) or typical argillic brown earths (Carstens soil association) (Jarvis *et al*, 1983). The former are poorly drained silty drift soils over Tertiary clays, whereas the latter is a well drained silty drift over Clay with Flints.

As the samples were collected for the author, the exact topographical situation and local soil types are not understood by the author at this assessment stage. It appears, however, that the soils are formed of a coarse silt - very find sand drift, approximating to the silty clay loams of southern England that have a loessic origin (Avery 1990, 225). It can be assumed that the buried soil (natural) is an iron and clay depleted upper subsoil Eb horizon of a possible argillic brown earth soil. The upper most humic topsoil appears to have been lost. The soil also included charcoal integrated into the soil which is unrelated to later earthworm working of the mound. Therefore the site has had an anthropogenic ancestry before the burned mound was constructed at this location.

The micromorphology of the mound and buried soil is complicated and needs further unravelling. Nevertheless, a number of points can be noted. Open fires can produce a stratigraphy of, from the top down: highly weatherable ash, blackish not fully combusted charcoal and humic topsoil, reddened (poorly humic) soil and unburned soil (Courty *et al.* 1989, 105). The mound appears to have many typical features. It has a fissured charcoal-rich soil layer containing fire-cracked flints (all weatherable ash has been lost). The mound may therefore have been constructed of humic topsoil material (now burnt a blackish colour), large amounts wood and flints from local Clay-with-Flints to hold heat. The thin section analysed shows only small amounts of the reddened zone, perhaps because this is best noted in (more iron-rich) clay. The mound includes unwashed clay in a large void, which on burning appears to have been strongly rubified. (If the soil had been rubified *first* clay is unlikely to be translocated by water because it is *baked*). Also subsoil clay, some of which had been rubified has been later earthworm-worked into the underlying natural iron and clay poor Eb horizon. These last findings may imply that the mound was possibly clay-capped, some of which infiltrated into the mound before burning, again a possible mechanism to hold heat (oven?).

Little is known about the soil structure of burned rock mounds/middens, because often these have been the focus of high biological activity which has reworked their stratigraphy (Paul Goldberg, personal communication with reference to Wilson-Leonard sites in Texas; brief mention in Macphail and Goldberg, 1994). At Patching Junction there appears to have been little biological working after the initial post-fire period, so that the stratigraphy is well-preserved. The site offers information about the prehistoric soils and mound construction. Any bone or ash remains appear to have been lost through acidic depletion.

The Charcoal

by Mark Robinson

A 25-litre sample was taken from the burnt mound make-up (Context 100) The sample was examined and the charcoal removed. The charcoal was found to orginate from, in ascending order of quantity, alder, oak, hawthorn and buckthorn. The oak charcoal contained pieces from large timbers as well as from slowly grown wood from branches. A fuller charcoal report is in preparation and may be included in the report to be submitted for publication.

5.0 DISCUSSION

The burnt mound at Potlands Farm, Patching was the first such monument to be positively identified and excavated in Sussex. There have been other possible burnt mound sites in the county (Curwen 1934, 148, Gilkes 1992, 234), but the example at Patching was unique in regard to the quality of evidence retrieved and the level of study undertaken. The opportunity to excavate features in the area around the mound was also significant and allowed a broader appreciation of its setting.

The number and quality of artefacts recovered was noticeably poor but this is usual at burnt mound sites (Hedges 1975, 67) and the acidic nature of the soil had destroyed any bone which had been present. The presence of a Middle Bronze Age sherd actually in the mound material is noteworthy. A Bronze Age date for features at the site is supported by the radio-carbon date from the waterlogged pit 131, (900-800 cal. BC) and by other sherds of both Middle and Late Bronze Age fabrics in other features. It is unfortunate that a radio-carbon date could not be ascertained from the charcoal present in the mound make-up; regrettably the sample taken for this purpose was discarded by a third party, unaware of its potential value.

Burnt mounds are often found in clusters as at Curraghtarsna, County Tipperary (Buckley 1986, 71) and it appeared that this also might have been the case at Patching. An entry in the West Sussex SMR (number TQ 00 NE74 PRN 4491) describes a layer of 'burnt flint' revealed during the digging of a new ditch, in a field to the west of the Potlands Farm site at Northlands Farm (fig. 1). However an archaeological investigation commissioned by John Jones (Excavation) Ltd in advance of groundworks in the area revealed that this was an alluvial deposit of white flint nodules with no evidence of heating (Stevens 1994b, 4). Watching briefs carried out during various phases of the scheme revealed no intense concentrations of fire-cracked flint in the topsoil or uncovered during groundworks (Place 1993; Stevens 1994c). Certainly, if other mounds had survived in a radius of approximately a kilometre to the south, east and west of the known burnt mound site, their presence would have been noted during the watching brief.

The date and setting of the mound are relatively clear; its function is not so easy to ascertain. As noted above, there has been much academic debate and most early writers seem to assume a connection with cooking (e.g. Trench 1886; Cantrill and Jones 1911; Layard 1922) and many more recent excavators have come to similar conclusions (e.g. Hodges 1955; Fahy 1960; Cubbon 1965). However, as early as 1913 Forseyeth questioned this interpretation and suggesting a possible connection with 'hot baths' (Forseyeth 1913, 179). This theory is given further support in the 1930s when excavations at New Down Farm, Clapham (Curwen 1934) produced large quantities of fire-cracked flint. Although this site does not meet all the necessary criterion to be considered as a true burnt mound, the commentary is significant. Curwen does not dismiss the cooking theory altogether, but does introduce ethnological parallels of sweathouses in Finland, and the references in the works of Herodotus to such structures built by the Scythians (Curwen 1934, 148-9).

The bathing theory has been put forward in more recent times (Lucas 1965; Barfield and Hodder 1987) and the dearth of bones from the majority of sites does give this idea credence. O'Drisceoil (1988, 675) notes that any bones could have been scavenged away by hunting dogs or wild animals, and that most burnt mound sites occur on acid soils. Also experimentation by O'Kelly (1954), Fahy (1960) and others has illustrated that hot stones can be used to cook food quickly and efficiently. There are also numerous ethnographic parallels (listed in O'Drisceoil 1988, 675).

Cooking is accepted here as the 'most likely primary function' (O'Driscoeil 1988, 675) of burnt mounds, although bathing or sweating may also have occurred at the sites. It is also interesting to note that the siting of the Patching burnt mound is similar to that of Cob Lane, Northfield, Birmingham (Barfield and Hodder 1987, 371) and others, in that the immediate area would be liable to flooding and therefore unsuitable for any kind of permanent habitation. This may indicate a seasonal occupation, a theory put forward by O'Kelly (1954, 137-38) who suggests that a number of Irish sites might be the remains of impermanent hunting camps. The pollen evidence suggests a location within a wooded area with clearings, ideal for hunting. Buckley's (1986, 70) theory that burnt mounds represent the remains of ritual feasts should not be discounted either, as there may well have been a ritual element to the slaughter of the hunter's prey.

Whatever the function or history of the site, the burnt mound uncovered at Potlands Farm, Patching is highly notable as an example of this type of monument hitherto unknown in Sussex. It is hoped that with further archaeological monitoring of developments both in the South-East and elsewhere, more mounds will be revealed. The recently discovered example at Canary Wharf (Bowsher 1991) and the site at Patching have shown that new sites may be found in unexpected locations. Such new finds may help, in due course, with an understanding of the function and distribution of these monuments.

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APPENDIX 1

Frequencies for Flint Artefact Categories by Context and
Frequencies for Selected Variables by Context

Context	Tot	WF	ES	SS	B	CR	CX	PAT	RO	BK	HH	SH	UND
1	57	49	6	-	1	1	16	12	3	-	36	-	21
3	1	1	-	-	-	-	1	-	-	-	1	--	-
9	2	2	-	-	-	-	-	1	1	-	2	--	-
13	7	6	1	-	-	-	4	-	-	-	5	-	2
15	11	11	-	-	-	-	4	-	-	-	7	-	4
17	7	6	-	1	-	-	1	3	-	-	3	--	4
19	20	20	-	-	-	-	6	7	-	-	17	--	3
21	4	4	-	-	-	-	4	2	-	-	4	-	-
24	2	2	-	-	-	-	2	1	-	-	2	-	-
34	9	9	-	-	-	-	3	1	1	2	7	-	2
35	1	1	-	-	-	-	1	-	-	-	1		-
39	1	1	-	-	-	-	1	-	-	-	1	-	-
79	2	2	-	-	-	-	-	-	-	-	2	-	-
94	2	2	-	-	-	-	1	-	-	-	2	-	-
96	1	1	-	-	-	-	1	-	-	-	-	-	1
100	29	26	-	1	-	2	11	4	-	1	13	1	15
102	18	17	-	1	-	-	-	-	1	1	11	-	7
103	41	40	-	1	-	-	16	17	2	1	33	1	7
104	15	15	-	-	-	-	5	9	-	-	8	-	7
105	15	15	-	-	-	-	6	6	-	1	10	-	5
Totals	**245**	**230**	**7**	**4**	**1**	**3**	**83**	**63**	**8**	**6**	**165**	**2**	**78**

Key:

Tot + Total
WF + Waste Flakes
ES+ End Scraper
SS+ Side Scraper
B + Borer
CR + Core
CX + Cortex > 10% of dorsal surface

PAT + Patinated
RO + Rolled
BK + Blank
HH + Hard Hammer
SH+ Soft Hammer
UND + Undiagnostic Percussor

APPENDIX 2

TABLE 1

Patching Junction - 1994/90 (Pit 108)

Palynology

Feature	108				
Depth (cm)	87	99	105	110	120
Lithology					
Light grey clay/orange sandy mottles/broken pebbles	+				
Dark grey clay with occasional gravel		+	+		
Dark grey clay				+	+
Abundance/Preservation					
Palynomorph abundanace	1	4	3	3	4
Palynomorph preservation	2	3	3	3	5
Fungi					
Glomus-type					+
Algae					
Spirogyra		+			
Alga indet.	+				
Other Remains					
Iron pyrite framboids		+			
Wood fragments				3	
Microscopic charcoal	2	4	4	4	4
Trees/Shrubs/Climbers					
Acer campestre-type			1	+	+
Alnus			+	+	+
Betula		+	+	1	1
Corylus avellana-type	1	4	+	3	5
Fagus					+
Hedera		+		+	
Prunus			+	+	+
Quercus	2	+	5	5	3
Salix		+		+	
Tilia		+	+		
Dwarf Shrubs			+		
Calluna					
Ferns/Mosses/Hornworts					
Anthoceros punctatus					+
polypodium	+	+	+		
Pteridium	5	3	+	+	1
Pteropsida monolete indet.	3	5	+	+	
Sphagnum		2			
Crop Plants					
Cereal-type	+	2	+	+	+

TABLE 1 - Palynology (continued)

Depth (cm)	87	99	105	110	120
Herbs					
Anemone		+	+		
Apiaceae indet.		+	+		+
Artemisia	+				
Aster-type					+
Brassicaceae (Sinapis-type)		+	+		
Caryophyllaceae (Arenaria-type)		+			
Caryophyllaceae indet.	1				
Centaurea nigra-type					+
Chenopodiaceae indet.	+				
Fabaceae (Trifolium-type)					+
Galium-type			+	+	+
Geum					+
Hyacinthoides			+		
Hypericum perforatum-type					+
Lactuceae indet.	+		+	+	+
Melampyrum			+		
Mercurialis				+	
Plantago lanceolata	+	+		1	+
Plantago major			+		+
Poaceae	2	2	1	3	3
Polygonum aviculare-type	+				
Ranunculus-type	+	+	+	+	+
Rosaceae indet.		+			+
Rumex acetosa-type				+	
Sangulsorba minor ssp. minor			+	+	+
Stellaria holostea		+	+		
Succisa		+			
Aquatics and Plants of Wet Soil					
Callitriche			+		
Cyperaceae		+			+
Lythrum portula	+				

TABLE 2A

Patching Junction - 1994/90 -Pit 131

Palynology

Feature	Pit 131																
Context	127														129		
Depth	9	15	24	35	45	48	54	61	73	83	90	.5	2	3	4.5	6	10
Lithology	+																
Light grey sandy clay with gravel		+	+														
Grey clay with gravel				+													
Dark grey clay with gravel					+	+						+					
Dark grey clay with occasional gravel							+	+	+	+							
Dark grey clay with gravel/pebbles/wood											+						
Grey clay with fine orange sand lenses and gravel													+				
Dark grey clay/organic material with twigs														+			
Dark grey clay																+	+
Black organic with fibrous twigs or roots															+		
Dark grey clay with wood fragments and gravel																+	+
Abundance/Preservation	4	4	5	4	2	4	3	4	4	4	4	4	4	4	3	4	4
Palynomorph abundance	4	3	4	4	4	4	3	4	4	4	4	3	4	4	3	3	3
Palynomorph preservation																	
Fungi					+				+	+	+						
Glomus-type				+	+	+	+	+	+	+	+	+		+		+	+
Spores indet.																	
Algae	+	+	+	+			+	+	+	1	+	+			+	+	1
Spirogyra						+					+						
Alga indet.																	
Other Remains						+		+			1		1		+	2	1
Iron pyrite framboids																	3
Wood fragments														+			
Trichuris	4	4	5	5	3	3	5	4	5	4	3	5	4	3	4	4	4
Microscopic charcoal																	
Trees/Shrubs/Climbers											+						
Acer campestre-type	1	+	1	+		+	1	1	1	+	+	+	+	+	+	+	2
Alnus		+		+	+		+			+		+	+				
Betula	1				+												
Carpinus	1	1	1	+	1	1	1		2	2	+	2	2	+	1		
Corylus avellana-type				+	+	+	+	+					1			+	
Euonymus																	

TABLE 2A - Palynology (continued)

Feature	Pit 131																
Context	127											129					
Depth	9	15	24	35	45	48	54	61	73	83	90	.5	2	3	4.5	6	10
Fagus			+						+								
Fraxinus			+					+								+	
Hedera	+	+		+	+	+	+		+	+	+	+	+	+	+	1	1
Ilex					+												
Ligustrum	+																
Lonicera						+	+		+						+		
Pinus								+	+		+	+					
Prunus		+	+		+								+	+			
Quercus	3	2	2	4	4	5	4	4	5	2	3	5	5	5	5	5	5
Rosaceae (Crataegus-type)		+															
Rosaceae (Malus-type)													+	+			
Salix		+	+	+					+	+		+		+			
Sambucus					+			+			+	+		+	+	+	2
Tilia	+	+		+		+						+	+				+
Ulmus					+												
Dwarf Shrubs																	
Calluna	+	+		+	+		+		+	+							
Ferns/Mosses/Hornworts																	
Anthoceros punctatus							+		+	+							
Dryopteris filix-mas								+				+	+		+	+	+
Ophioglossum						+											
Polypodium		+	+		+	+		+		+	+	+	+	+	+	+	+
Pteridium	1	3	1	2		2	+	1	+	+	1	1	1	+	+	1	2
Pteropsida monolete indet.		+	+		+	+	+	+	+	+	+	+		+	+	+	+
Crop Plants																	
Cereal-type	1	+	1	1	1	+	1	1	2	2	+	+	+	+	+	+	+

TABLE 2B

Patching Junction - 1994/90 - Pit 131

Palynology

Feature	Pit 131																
Context	127											129					
Depth	9	15	24	35	45	48	54	61	73	83	90	0.5	2	3	4.5	6	10
Herbs																	
Achillea-type	+	+		+	+	+		+	+		+	+	+		+	+	+
Anemone												+					
Anthyllis vulneraria	+																
Apiaceae (c.f. Petoselinum)							+										
Apia eae indet.	+	+	+	+	+	+		+	+	+		+		+	+		+
Artemisia					+							+		+		+	+
Aster-type		+									+					+	
Brassicaceae (Capsella-type)											+						+
Brassicaceae (Sinapis-type												+					+
Caryophyllaceae (Arenaria-type)																	
Caryophyllaceae (Cerastium-type)		+	+	+		+										+	
Caryophyllaceae indet.		+	+									+				+	
Centaurea nigra-type	+	+				+											
Centaurium										+							
Chenopodiaceae indet.			+	+		+	+	+	+	+		+	+		+		+
Fabaceae (Lotus-type)		+	+		+			+	+								
Fabaceae (Trifolium-type)	+	+		+		+			+	+			+				
Fabaceae (Vicia-type)												+					
Fabaceae indet.		+	+	1	+	+	+	+	+	+	+						
Fallopia convolvolus											+						
Galium-type						+		+		+							
Geum						+		+	+			+					+
Hyacinthoides		+												+			
Lactuceae (Taraxacum-type)	+	+	1	+	+	+	+	+	+	+		+	+	+	+		+
Lactuceae indet.				+													
Lamiaceae indet.						+											
Melampyrum	1	1	+	+	+	+	+	+	+	+	+	+	+		+		+
Mercurialis	+						+				+						
Plantago lanceolata	+	1	1	+	1	1	1	+	+	2	1	+	+		+	+	+
Plantago major		1	+														
Plantago media/major			+								+						
Poaceae	5	5	5	5	5	4	5	5	5	5	4	1	1	1	+		+
Polygonum aviculare-type	+		+						+		+	+	+			+	+
Potentilla-type	+	+	+	+	+	+		+								+	+

TABLE 2B - Palynology (continued)

Feature	Pit 131																
Context						127									129		
Depth	9	15	24	35	45	48	54	61	73	83	90	0.5	2	3	4.5	6	10
Prunella-type								+									
Ranuculus-type	+				+	+	+		+		+						+
Rosaceae indet.		+				+		+		+	+	+	+		+	+	+
Rumex acetosa-type				+	+		+	+	+	+							
Rumex acetosella			+	+					+	+							
Rumex crispus-type											+						
Rumex obtusifolius-type				+													
Sanguisorba minor ssp. minor	+	+	+	+	+		+	+							+		
Scrophulariaceae (c.f. Linaria)											+						
Sedum		+							+								
Stachys sylvatica-type										+							
Stellana holostea		+	+					+									
Succosia		+						+									
Urtica dioica	+																
Viola indet.							+										
Aquatics and Plants of Wet Soil																	+
Alisma																	
Callitriche	1	2	2	2	1	1	1	+	3	2	+	+	+	+	+	+	
Chrysosplenium						+					+						
Cyperaceae	+	+		+	+	+			+	+	+			+		+	+
Lemna															+	+	+
Lythrym portula		+	+		+	+		+									
Mentha-type	+	+	+				+	+			+	+				+	+
Ranunculus (Batrachium-type)																+	

Fieldwork

Site Code	Worthing Museum Acc. No. 1994.90					
Identification Name and Address	Potlands Farm, Patching					
County, District &/or Borough	West Sussex					
Full 12 Fig. OS Grid Refs.	TQ 0915005500					
FAU/SEAS Project Number	1994/106					
Type of Fieldwork*	Eval.	Excav ✓.	Watching Brief ✓	Standing Structure	Survey	Other
Type of Site*	Green Field ✓	Shallow Urban	Deep Urban	Other		
Dates of Fieldwork**	Eval.	Excav. 11.04.94→ 20.05.95	WB. 31.05.95→ 22.06.95	Other		
Sponsor/Client	Peter Fraenkel & Partners					
Project Manager	Chris Place					
Project Supervisor	Simon Stevens					
Period Summary***	Palaeo.	Meso.	Neo.	***BA***	IA	RB
	AS	***MED***	***PM***	Other		

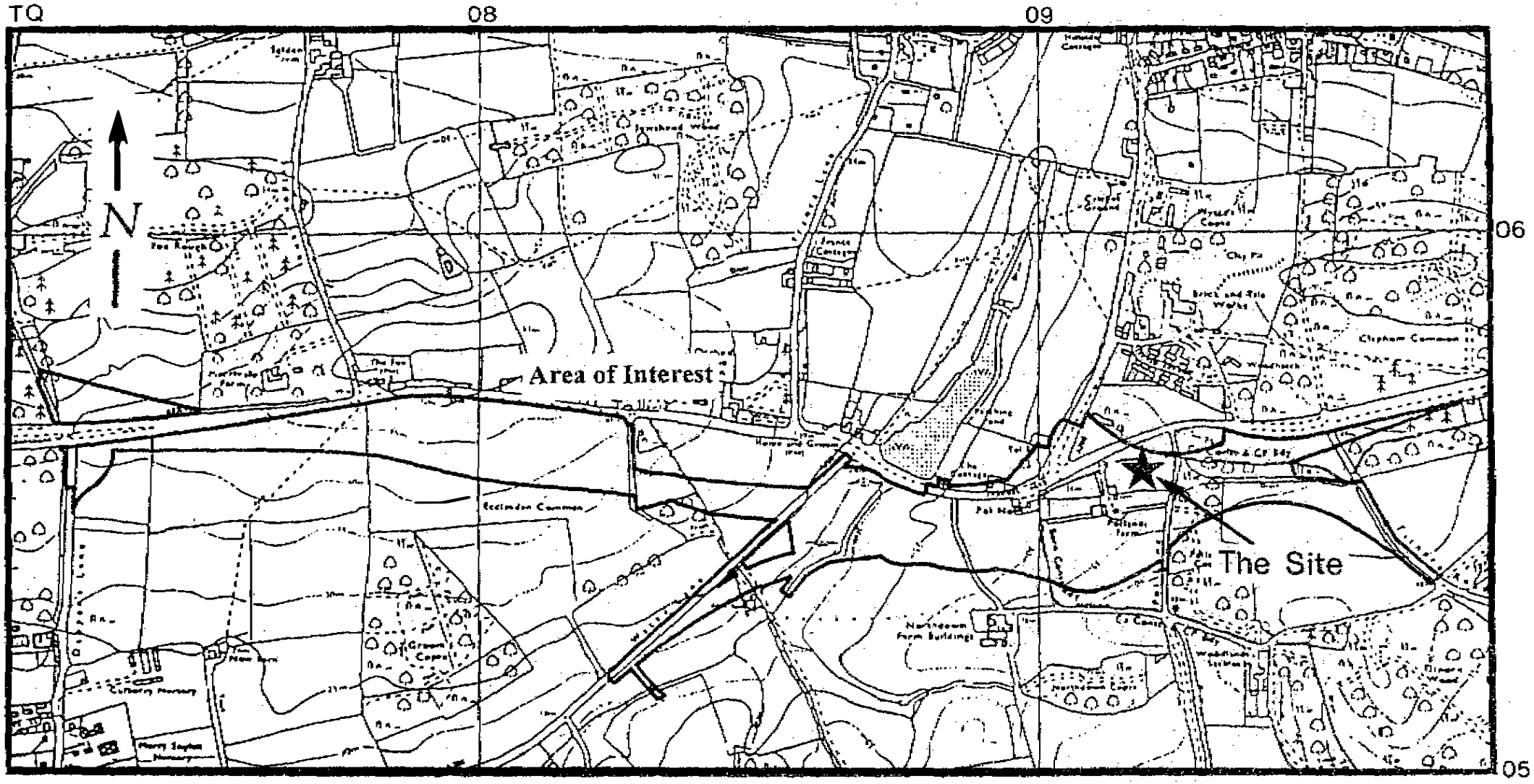
100 Word Summary

The excavation of an area measuring approximately 50m x 50m revealed the remains of a Bronze Age burnt mound and associated features including a trough and hearth. This class of monument is common in Ireland but rare in England, and the Potlands Farm example is the first to be identified and excavated in Sussex. A subsequent watching brief produced evidence of medieval activity in the area.

Archive; contents and location.

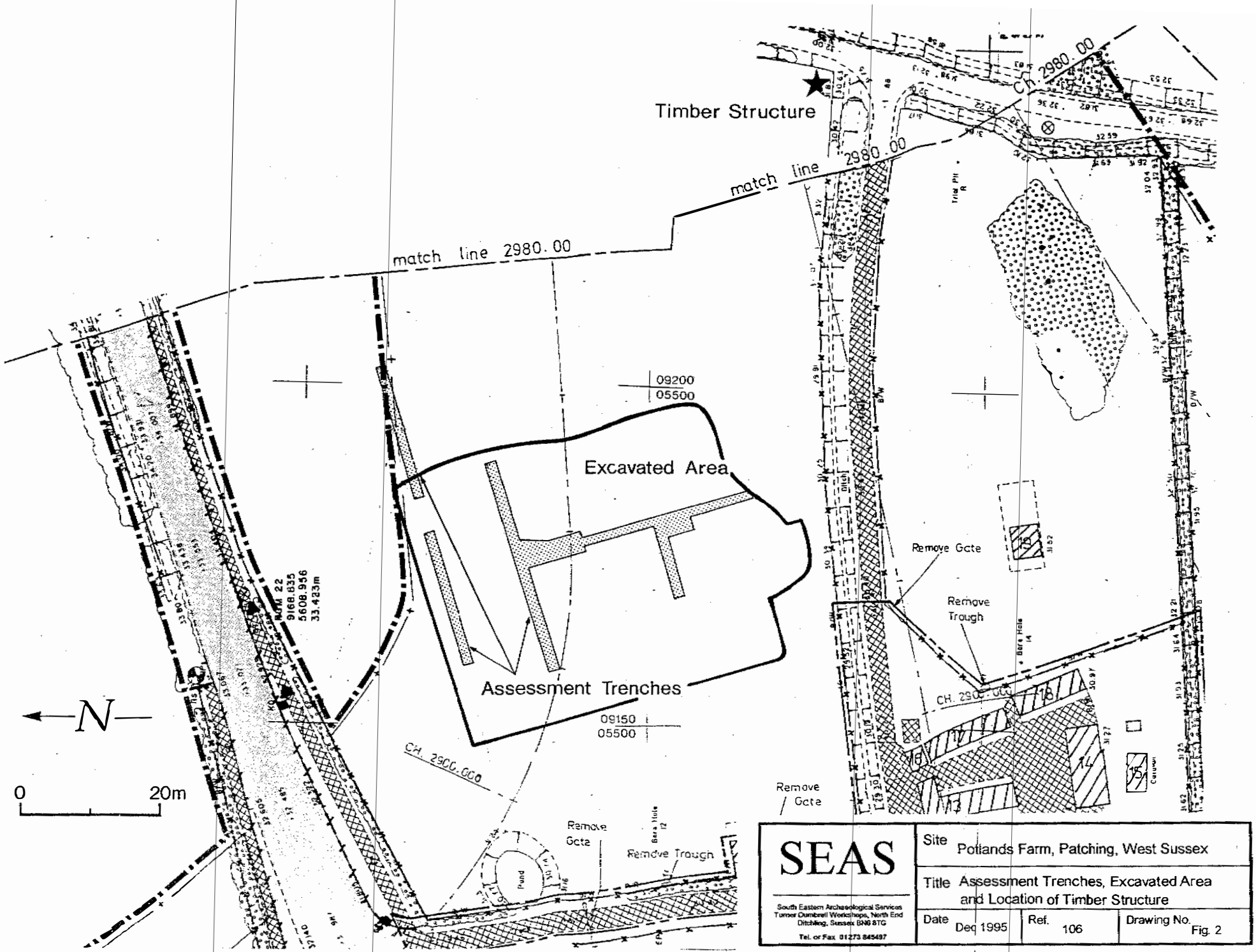
Item	Yes	No	Location
Site Abstract		✓	
Location Plan(s)	✓		SEAS Office, Ditchling
Fieldwork Report	✓		SEAS Office, Ditchling
Original Site Record Sheets	✓		SEAS Office, Ditchling
Original Site Drawings	✓		SEAS Office, Ditchling
Photographs	✓		SEAS Office, Ditchling
Site Notebooks	✓		SEAS Office, Ditchling
Artifacts	✓		SEAS Office, Ditchling
Finds Records	✓		SEAS Office, Ditchling
Site Matrix	✓		SEAS Office, Ditchling
Spot Dating Sheets		✓	SEAS Office, Ditchling
Conservation Records		✓	
Stratigraphic Summary	✓		SEAS Office, Ditchling
Artifact Summary	✓		SEAS Office, Ditchling
Environmental Summary	✓		SEAS Office, Ditchling
Documentary Summary		✓	

Archive Accepted By Museum	Date	Curators Signature

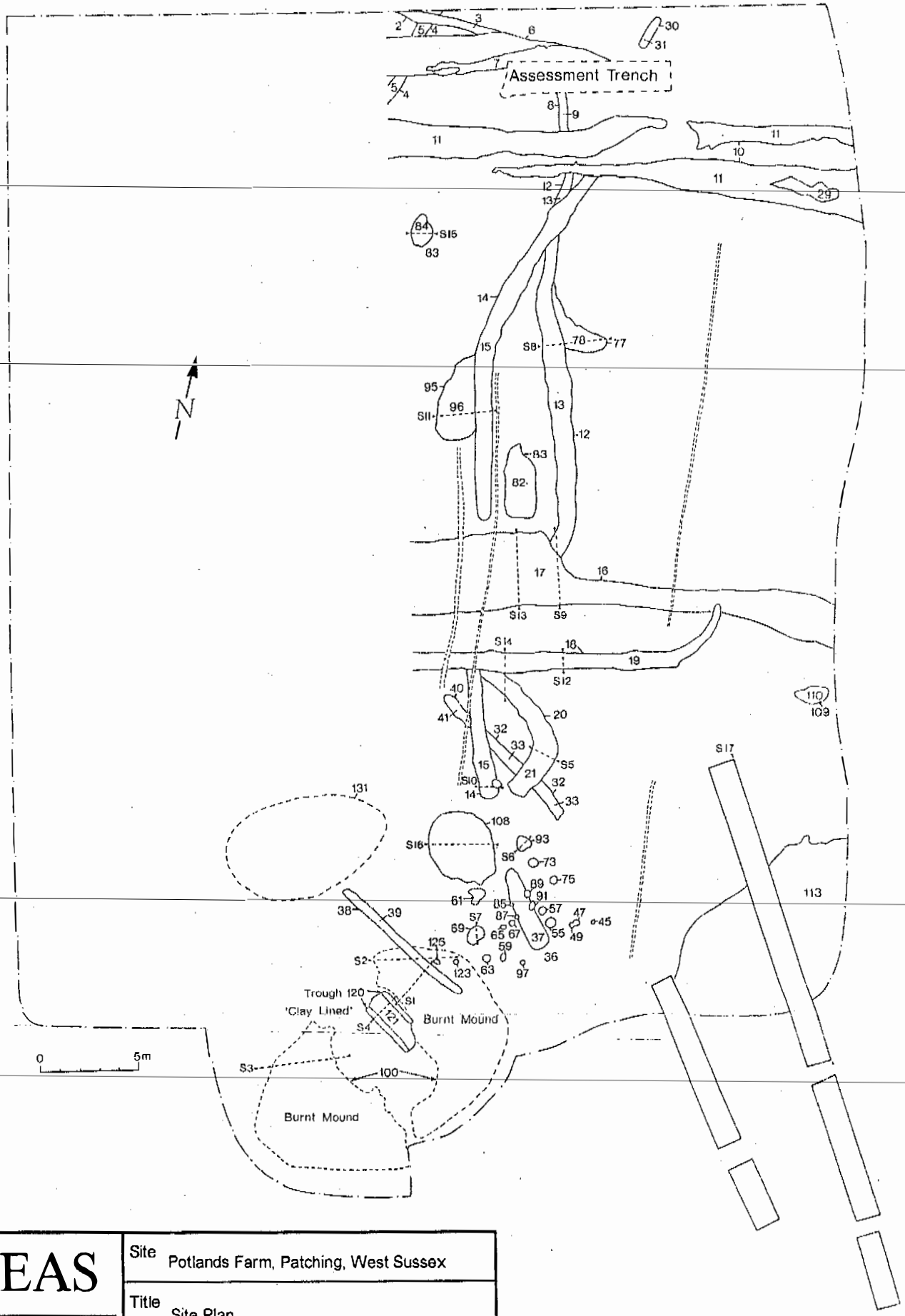


0 500m

SEAS	Site: Potlands Farm, Patching, West Sussex		
South Eastern Archaeological Services Turner Dumbrell Workshops, North End Olchfield, Sussex BN5 8TG Tel. or Fax 01273 845497	Title: Area of Interest and Site Location		
	Date: Dec 1995	Ref. 106	Drawing No. Fig. 1

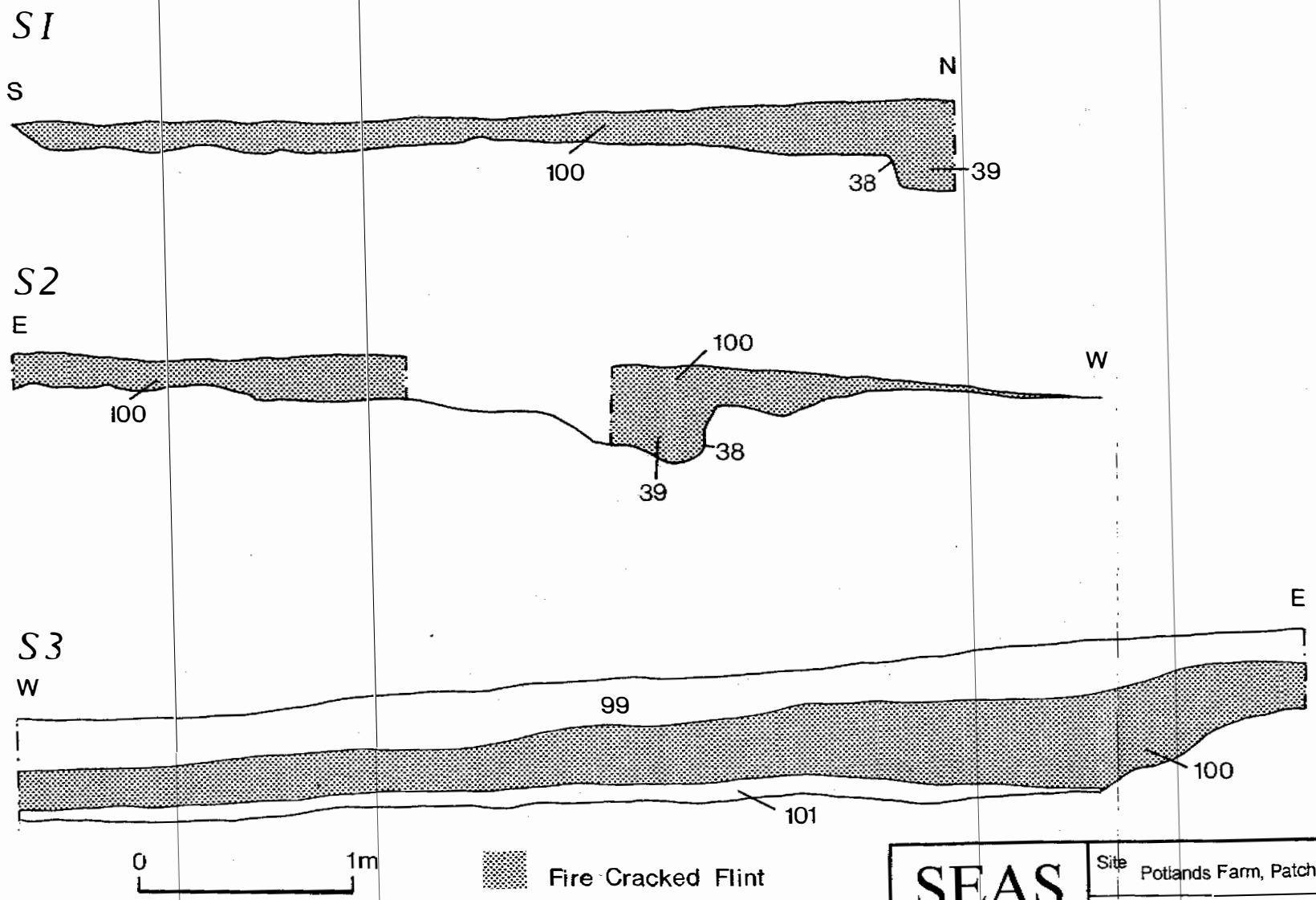

Timber Structure
match line 2980.00
match line
2980.00
Ch. 2980.00
09200
05500
Excavated Area
Assessment Trenches
09150
05500
CH. 2900.000
Remove Gate
Remove Trough
Remove Gate
Remove Gate
Remove Trough
Pond
Bore Hole 12
Bore Hole 14
Trial Pit
Ditch
Culvert
N
0
20m
SEAS
South Eastern Archaeological Services
Turner Dumbrell Workshops, North End
Ditchling, Sussex BN6 8TG
Tel. or Fax 01273 845497
Site Potlands Farm, Patching, West Sussex
Title Assessment Trenches, Excavated Area and Location of Timber Structure
Date Dec 1995
Ref. 106
Drawing No. Fig. 2

POTLANDS FARM, PATCHING



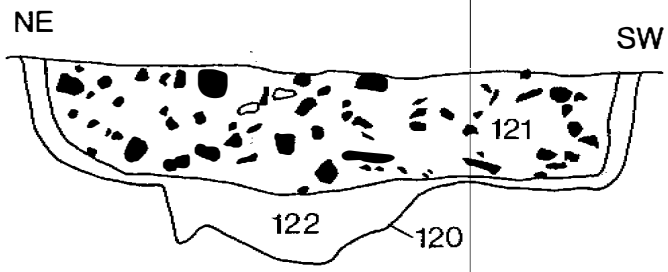
SEAS	Site Potlands Farm, Patching, West Sussex		
South Eastern Archaeological Services Turner Dumbrell Workshops, North End Ditching, Sussex BN8 6TG Tel. or Fax 01273 846497	Title Site Plan		
	Date Dec 1995	Ref. 106	Drawing No. Fig. 3

The Burnt Mound

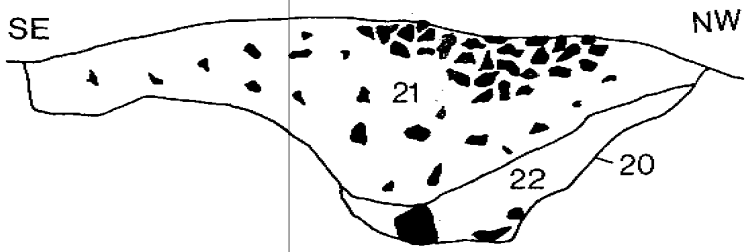


SEAS	Site: Potlands Farm, Patching, West Sussex		
South Eastern Archaeological Services, Turner Dumbrell Workshops, North End, Ditching, Sussex BN8 6TG. Tel. or Fax 01273 845497	Title: Sections across the Burnt Mound		
	Date: Dec 1995	Ref. 106	Drawing No. Fig. 4

The Trough S4

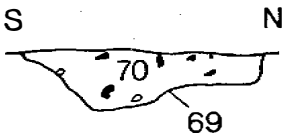


The Hearth S5



Postholes S6

S7



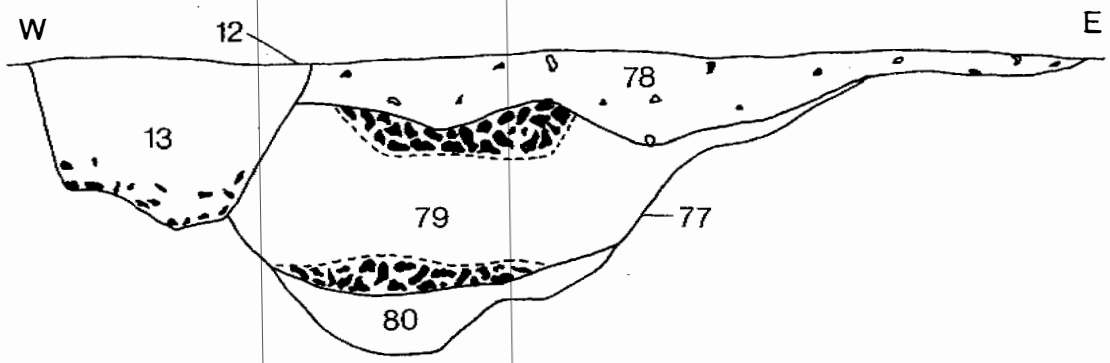
Key

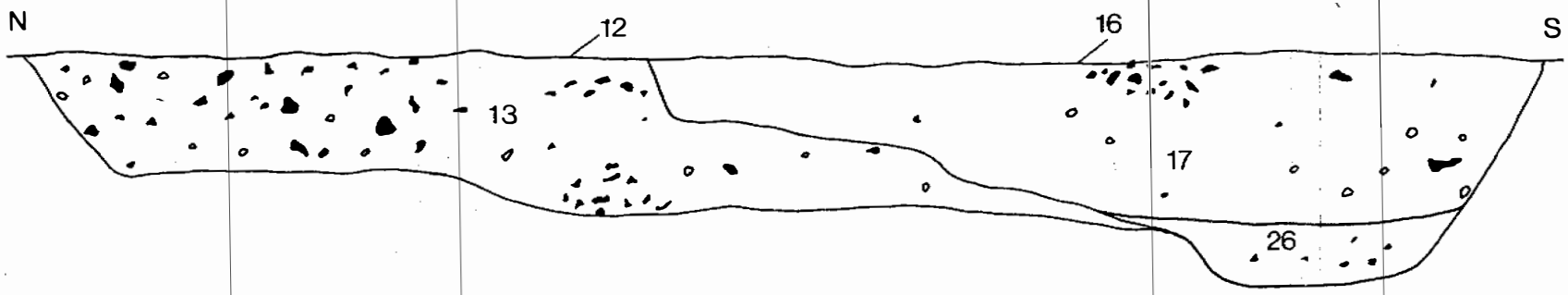
- Burnt Flint
- Flint

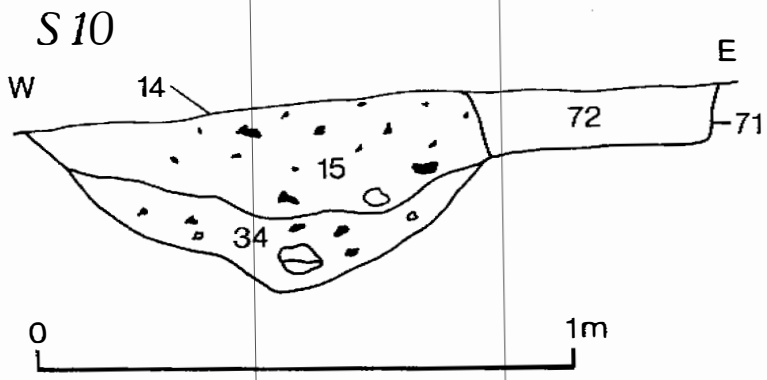
0 1m

SEAS	Site Potlands Farm, Patching, West Sussex		
South Eastern Archaeological Services Turner Dumbrell Workshops, North End Ditchling, Sussex BN6 8TG Tel. or Fax 01273 845497	Title Sections across Trough, Hearth and Postholes		
	Date Dec 1995	Ref. 106	Drawing No. Fig. 5

The Ditches

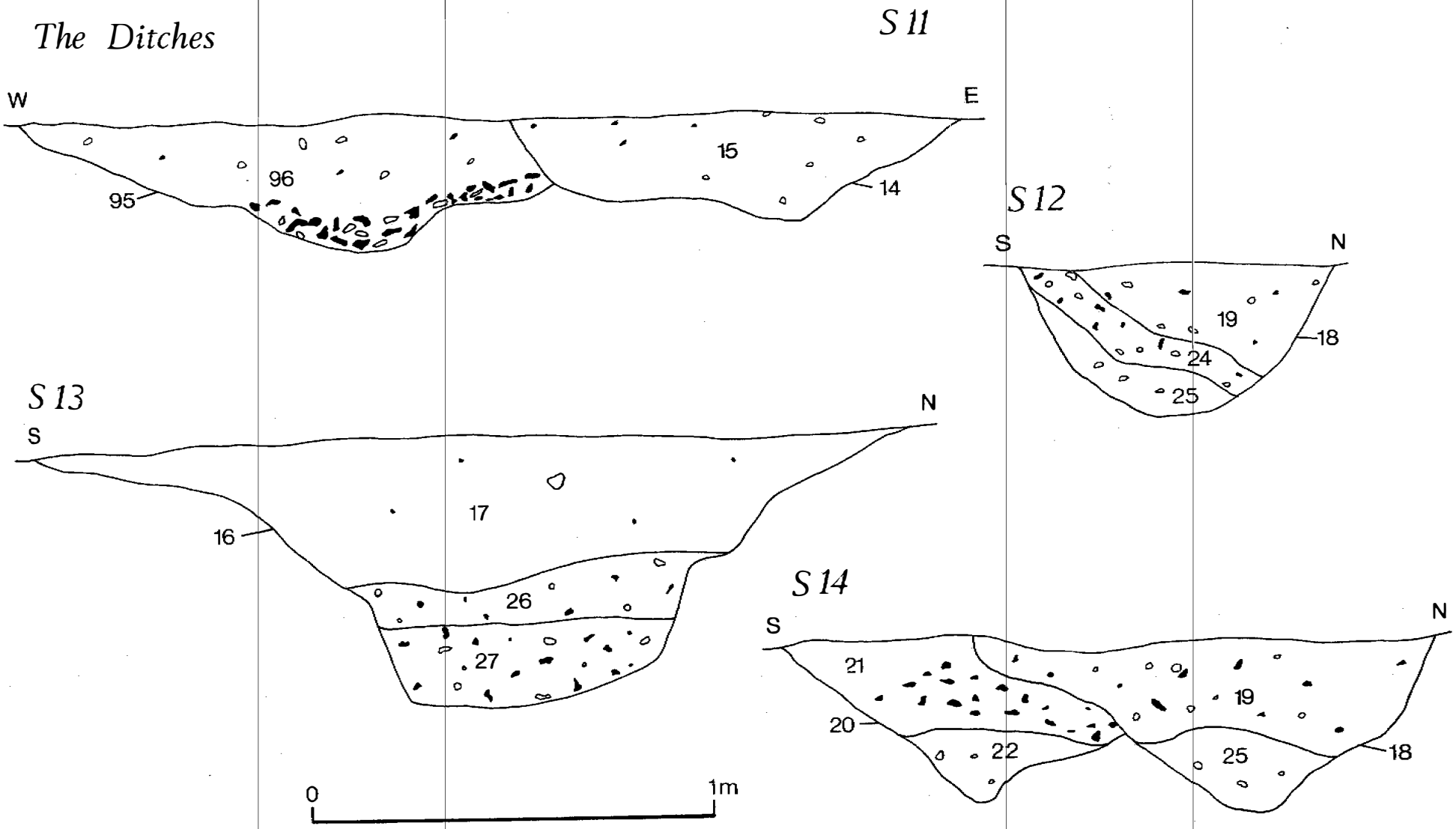




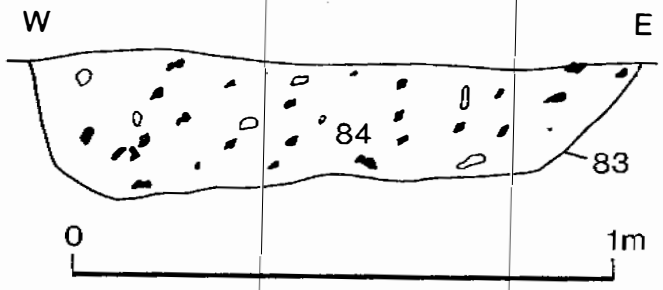


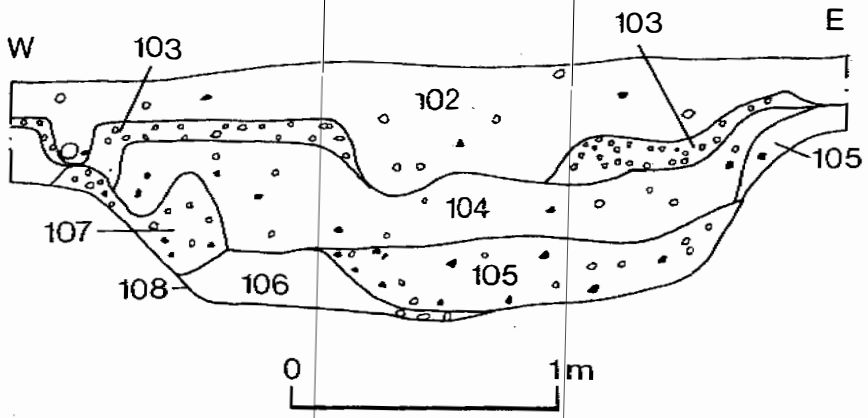
SEAS	Site: Potlands Farm, Patching, West Sussex		
South Eastern Archaeological Services, Turner Dumbrell Workshops, North End, Ditchling, Sussex BN6 8TG, Tel. or Fax 01273 846497	Title: Sections across Ditches		
	Date: Dec 1995	Ref. 106	Drawing No. Fig. 6

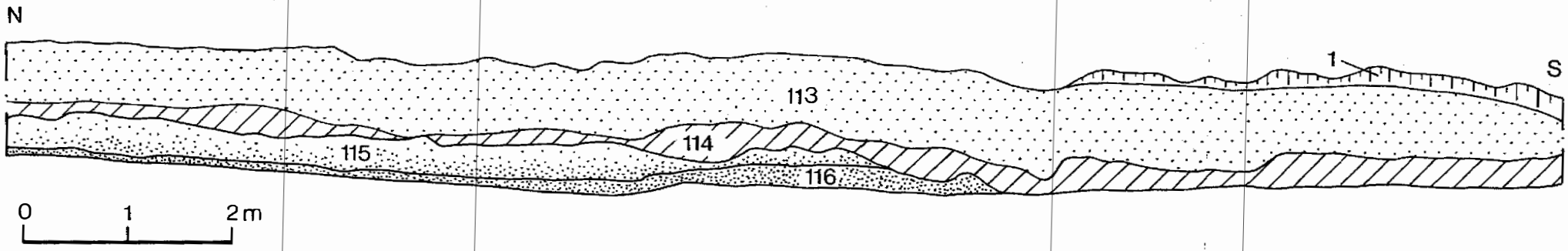
The Ditches



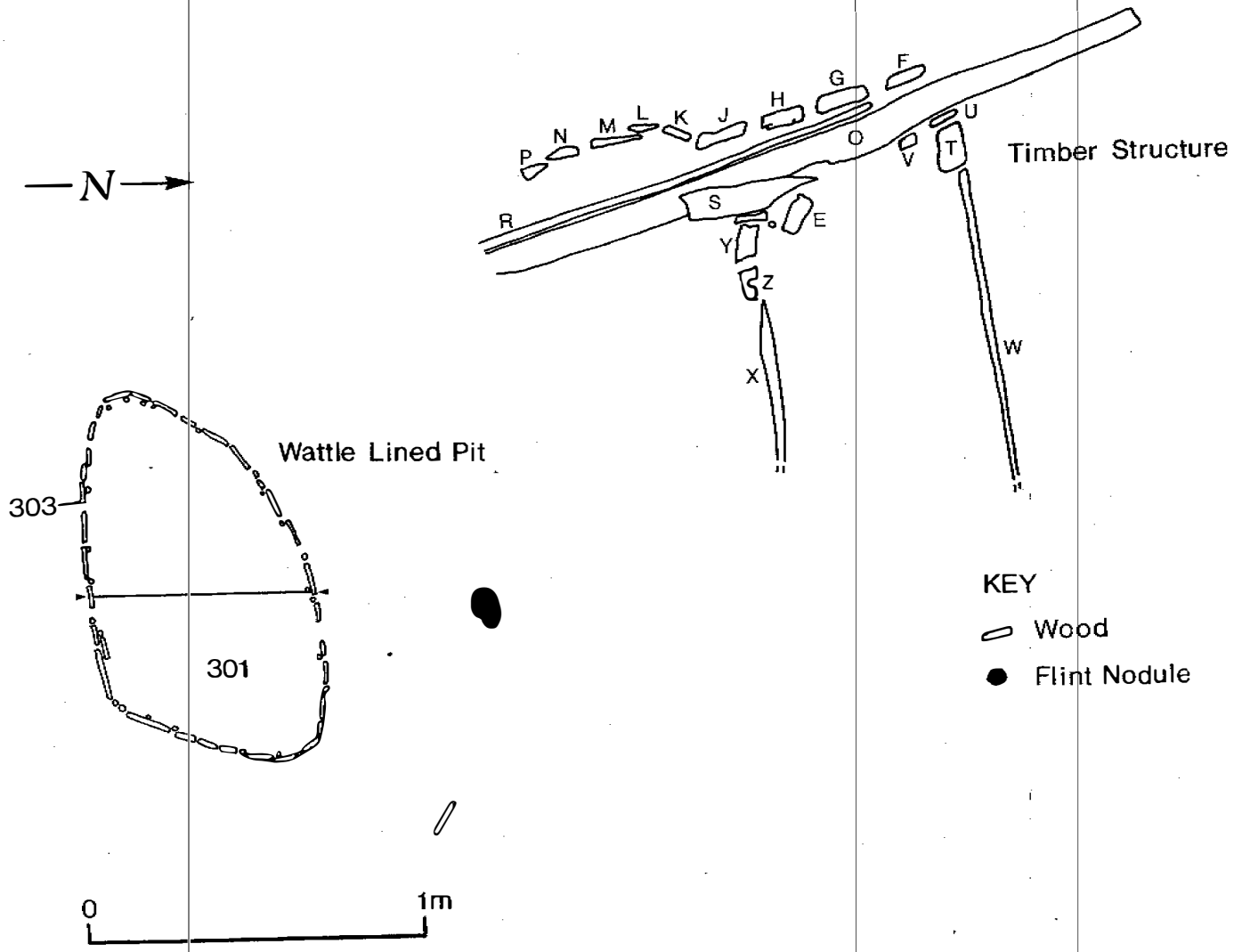
SEAS	Site: Potlands Farm, Patching, West Sussex		
South Eastern Archaeological Services Turner Dumbrell Workshops, North End Ditchling, Sussex BN6 8TG Tel. or Fax 01273 845497	Title: Sections across Ditches		
	Date: Dec 1995	Ref. 106	Drawing No. Fig. 7







SEAS	Site Potlands Farm, Patching, West Sussex		
South Eastern Archaeological Services Turner Dumbrell Workshops, North End Dächling, Sussex BN6 8TG Tel. or Fax 01273 845497	Title Sections across Pits and Machine-Cut Section		
	Date Dec 1995	Ref. 106	Drawing No. Fig. 8



SEAS	Site Potlands Farm, Patching, West Sussex		
South Eastern Archaeological Services Turner Dumbrell Workshops, North End Ditchling, Sussex BN6 8TG Tel. or Fax 01273 845497	Title Plan of Timber Structure and Wattle-Lined Pit		
	Date Dec 1995	Ref. 106	Drawing No. Fig. 9