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# Two Neolithic Pits at Kings Stanley Gloucestershire

by David Evans
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# Two Neolithic Pits at King's Stanley, Gloucestershire

by DAVID C. EVANS

With contributions by Alex Gibson, Tom Higham, Richard Hoyle, Elizabeth Huckerby, Fiona Roe, Adam Tinsley and Alan Vince.

I am grateful to the Bristol and Gloucestershire Archaeological Society for a £500 grant from the Research Fund in the name of Miss Irene Bridgeman.

## **The site** (Fig. 1)

The village of King's Stanley stands near the foot of the Cotswold scarp slope and is *c.*16 km south of Gloucester.

At the northern edge of the village is the church of St George and the adjacent archaeological features. These lie on the third gravel terrace of the river Frome overlying the Charmouth mudstone formation (Anthony Morigi pers. comm.) between two tributaries of the River Frome. The gravel varies in thickness from *c.* 0.4–0.8 m.

To the west of the church and part of its graveyard lies the orchard of Greystones, which contains the Neolithic pits. The orchard measures about 30 m east–west and 60 m north–south and is 37 m above sea level. The boundaries of the orchard are as follows. To the west, an area largely covered by builders' rubble, the ground slopes down towards a tributary of the Frome; to the north, on church land, the gravel slopes steeply down towards the river; to the south is the garden of Greystones; and to the east church land.

## **A brief summary of earlier excavations** (Fig. 2)

Observations by Peter Griffin that the slope at the northern end of the site was at least partially man-made led him to dig some exploratory trenches to the south of the slope on church land in 1961–3. These yielded 12th-century pottery. In 1964–5 he cut a section through the inner half of the slope (trench D). This showed a section of 12th-century moat and a Roman wall and ditch.

In 1966 David Evans took over the site. His excavations showed the presence of an early 12th-century moat, which was soon superseded by a larger moat dug just outside the first. Both would have destroyed earlier archaeology. Excavation in the orchard revealed the stone foundations of an aisled hall contemporary with the second moat, and under this the remains of an earlier building with wooden foundations. The hall, lying NE–SW was 9.4 m wide internally but the western extremity was not determined before excavation ceased.

Before the building of a housing estate to the north of the churchyard boundary, Paul Aston began excavation in 1973 (later continued by Peter Griffin) north of the Victorian terrace wall. This revealed the remains of a 14/15th-century stone building partially overlying a 2nd–4th-century Roman building, the majority of which lies beneath churchyard and possibly also the church. A late Iron Age gravel floor was also uncovered.

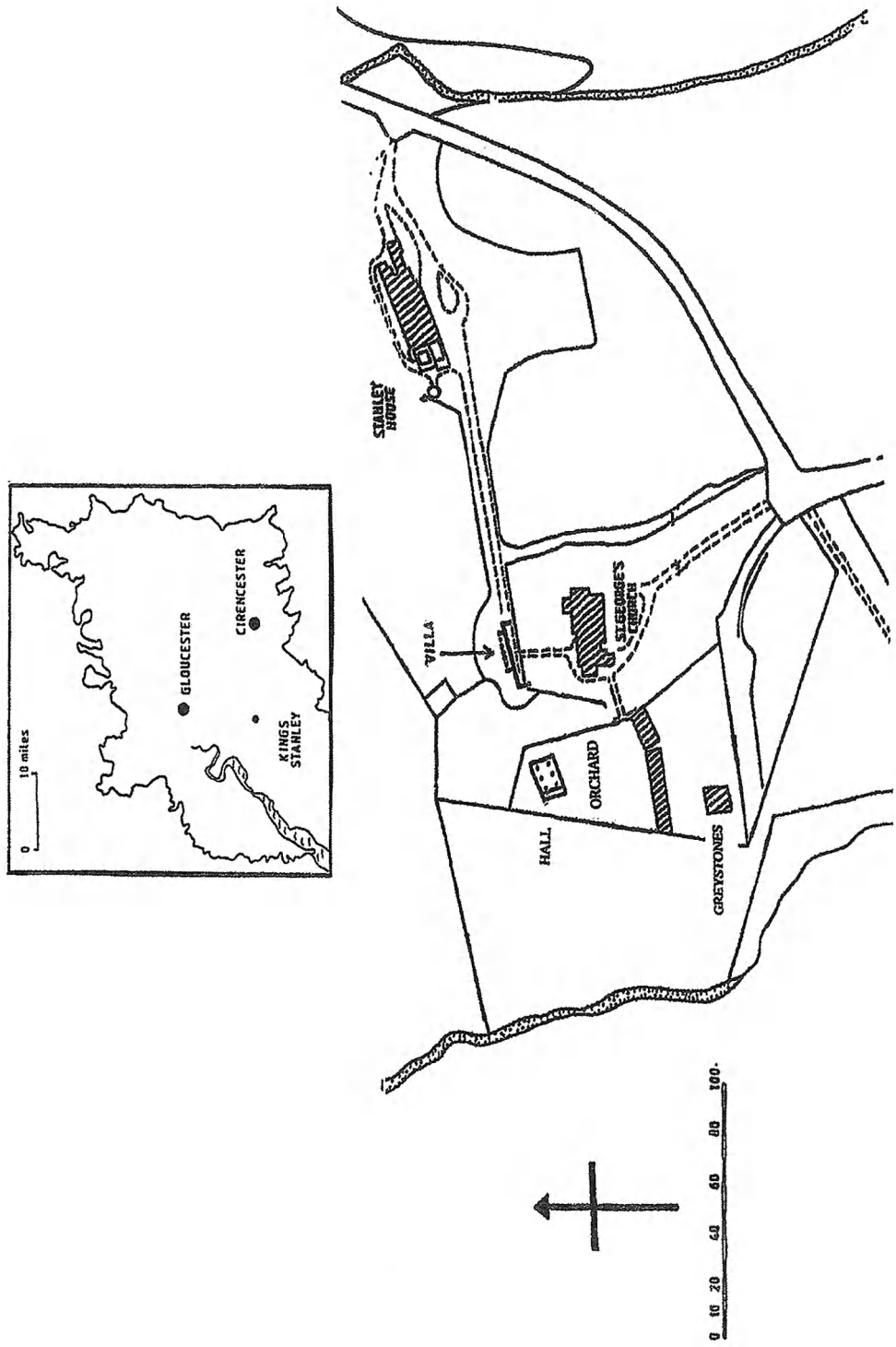


Fig. 1. Location plan.

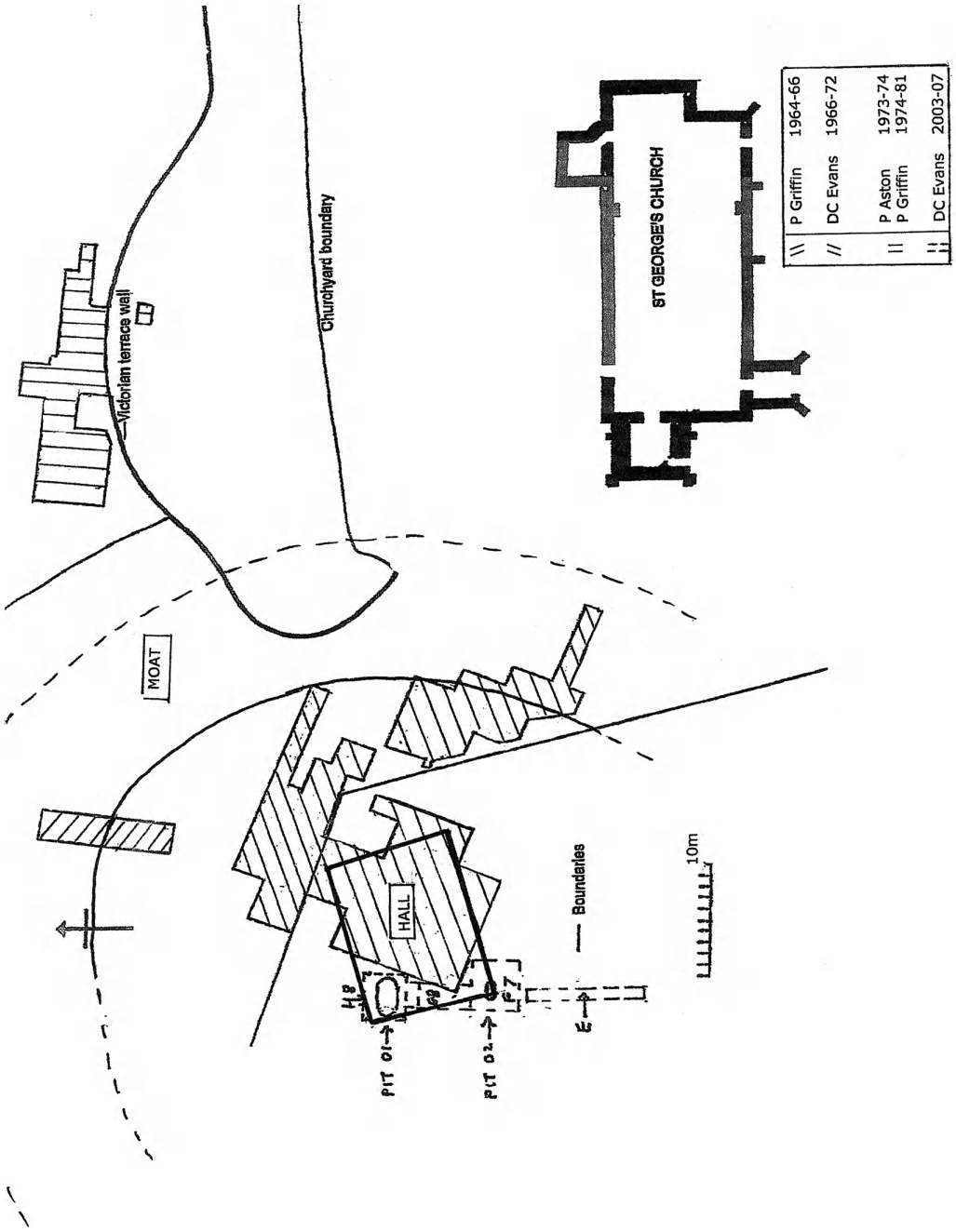


Fig. 2. Areas of excavation with dates.

In 2003 Evans returned to the orchard to determine the western extent of the hall. The length of the hall was 13.4 m internally. After this had been completed excavation below the hall revealed Neolithic features.

## EXCAVATION OF THE NEOLITHIC FEATURES

This revealed two elongated pits running approximately east–west and dug into the natural gravel which lies *c*.1 m below the modern surface.

### Pit 01

This, situated at SO 80900410 was 3.8 m long at the lip and 3.2 m at the base and the ends were rounded (Figs 3.1 and 3.2). It was of irregular shape but was *c*. 1.8 m wide at the lip, 0.3 m wide at the base and had a depth of 0.8 m. It was not symmetrical in cross-section. The north face, which was regular in shape, sloped at an angle of *c*. 45 degrees while that on the south, which was very irregular, began at *c*. 35 degrees and became almost vertical for the final 0.25 m. A step had been cut into the top of the gravel halfway along the north side to aid access to the pit in the later stages of digging (it certainly aided those excavating). The pit profile was sharp and there was no gravel slip or silt accumulation in the base, suggesting lack of weathering of the open feature.

Fig. 3.1. Pit 01 from the east during excavation.

Fig. 3.2. Pit 01 from the north-east showing west end before full excavation to north and south.

The bottom of the pit was mostly just above the base of the natural gravel over the underlying clay, which was exposed near the pit centre.

The pit fill was of a fine reddish-brown clay, a colour unique on the site and contained a large quantity of limestone fragments, most under 4 cm in length but a few up to 12 cm. Also present were fragments of sandstone, mostly polished by water erosion, mudstone, two pieces of chalk and a piece of haematite which may have been deliberately rubbed to produce the reddish-brown colour characteristic of this mineral. Two areas of fill showed a concentration of charcoal, and there was a scatter of fire-hardened pieces of clay containing flecks of charcoal.

The pit produced sherds of Peterborough Ware (Mortlake substyle) and Grooved Ware, a small incised limestone plaque, a pierced fragment of sandstone, a possible bead, flints and animal bone.

There was a posthole beside the south-west corner, 20 cm in diameter and 15 cm deep. It was filled at the same time as the pit.

**Pit 02**

This was located 8.2 m to the south of Pit 01 (Fig. 4). It was of a similar shape but much smaller and measured 1.8 m in length, 0.6–0.9 m wide at the lip, *c.* 0.25 m at the base and it had a maximum depth of 0.3 m. The regular north face sloped at *c.* 40 degrees, while the irregular south one was almost vertical. The western end was rounded; that to the east was irregular. The profile was sharp and there was no gravel slip or silt in the base. In this area of the orchard the natural gravel layer is much thinner than to the north. As with Pit 01 the pit base was close to the underlying clay.

Fig. 4. Pit 02 from the west. Scale totals 30 cm.

The fill was of the same reddish-brown clay as Pit 01 but the limestone fragments present were few and small and there was no charcoal. The pit produced flints and animal bone.

It was assumed that any other surviving Neolithic features would have been dug into the natural gravel and perhaps filled with the same characteristic clay. The foundations of the hall were 15 cm above the gravel and that of the earlier building 5–10 cm below the hall where discernible, so neither disturbed the gravel.

A late 11th/early 12th-century ditch running east–west was found 1 m south of Pit 01. It was 1 m wide and cut 0.5 m into the gravel. This would have affected any shallow earlier feature.

A resistivity survey carried out in 2003 was unproductive so in 2006 trench E was mechanically excavated and then a 5 cm power augur was used to probe the available remaining orchard area at 1 m intervals. The southern 10 m of orchard could not be probed owing to buried rubble preventing penetration. Only gravel was found at the depth expected if it had not been disturbed.

## Radiocarbon dating

A charred hazelnut (*Corylus avelana*) from a sealed context 45 cm above the base of Pit 01 was submitted to the Oxford University Radiocarbon Accelerator Unit.

**Radiocarbon determination** by Tom Higham (Fig. 5)

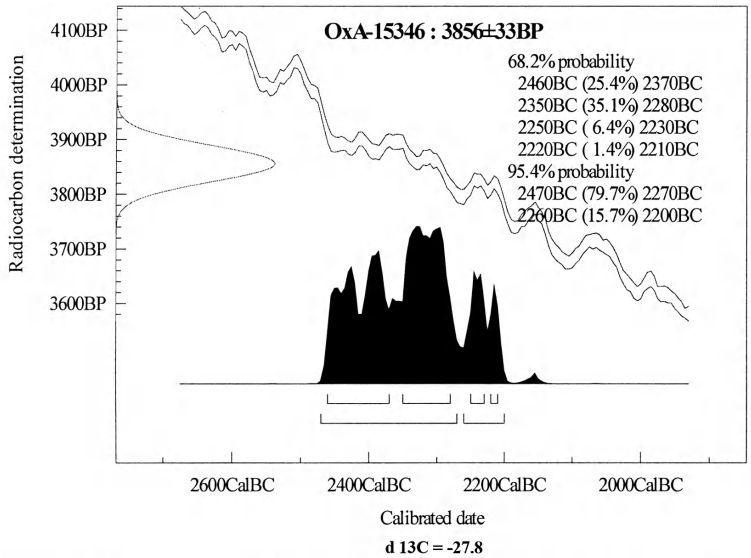


Fig. 5. Radiocarbon determination.

## THE FINDS

**The Pottery** by Alex Gibson with illustrations by Adam Tinsley

*Introduction*

In summer 2005, 736 gm of prehistoric pottery were sent to the writer for comment. All sherds had been cleaned and conjoining sherds refitted prior to submission. These were examined macroscopically using a x10 magnifying glass. No microscopic analysis has been undertaken and therefore any fabric descriptions are liable to correction should microscopic/chemical analyses be undertaken.

Based on fabric and decoration, seven vessels were identified belonging to the middle and later Neolithic periods. No vessels were reconstructable though there were a substantial number of conjoining sherds in vessel 1.

*Vessel 1*

Peterborough Ware vessel, Mortlake substyle, represented by 21 sherds (after refitting) weighing a total of 411 gm (Figs. 6.1–6.4).

The fabric is hard and well fired with a reddish-brown outer surface, a rather more buff-coloured inner surface and a black core. The surfaces are smooth and well finished and the fabric has been opened using grog giving the pot a slightly 'soapy' texture. Wall sherds average some 10 mm thick. The rim has a flat outer moulding averaging 15 mm wide and an internal lip. The neck

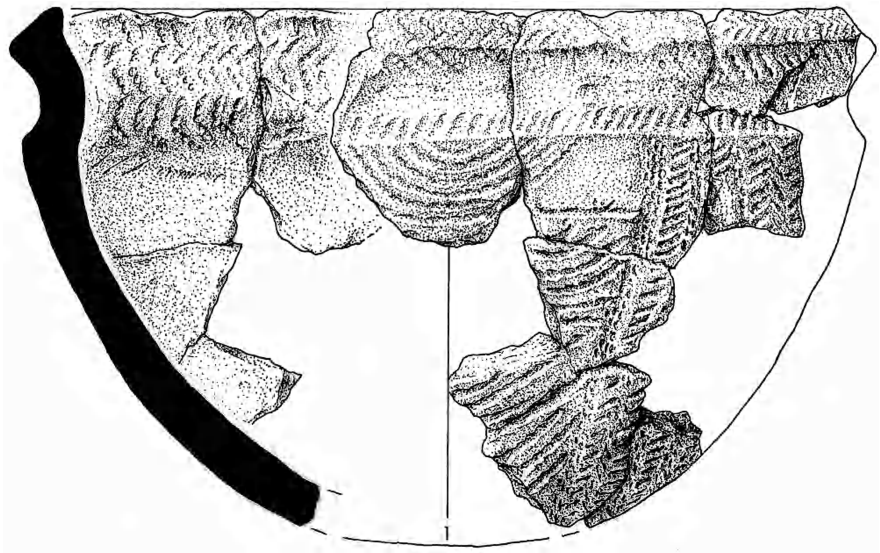

Fig. 6.1.

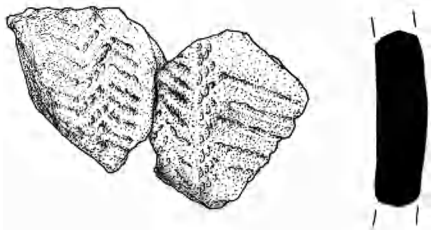

Fig. 6.2.

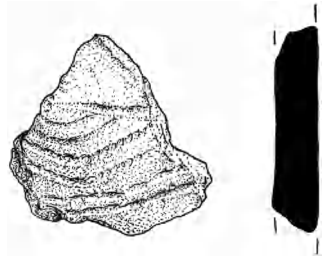

Fig. 6.3.

Fig. 6.4.

Figs. 6.1–6.4. Vessel 1. (Scale 1:2 for all pottery)

is approximately 8 mm deep and 25 mm wide giving to a pronounced shoulder and hemispherical body.

All the decoration has been executed using twisted cord. The decoration inside the rim comprises 2.5 rows of herringbone motif extending to 30 mm below the rim. The rim moulding is decorated with 1.5 rows of the same technique which is continued into the upper portion of the neck with a single row of oblique impressions. The base of the neck just above the shoulder is decorated with another row of close-set oblique impressions. On the belly of the pot the decoration is more complex. Below the shoulder it appears to be panelled with a panel of concentric semi-circular swags bordered (at least on the right) by a panel of at least 4 rows of vertical herringbone. This vertical herringbone seems to continue down the belly of the pot whereas the panel of swags has a depth of 26 mm whereupon it is bordered by a horizontal line. There would appear to have been a panel of either more swags or multiple oblique lines below this.

Belly sherds from the lower part of the vessel demonstrate multiple rows of vertical herringbone. The rim diameter of the vessel had been 200 mm.

[After Tinsley had illustrated the vessel it was possible to ascertain that its volume had been *c.* 1800 cc up to the shoulder.]

*Vessel 2*

Peterborough Ware vessel, Mortlake substyle, represented by 8 sherds (after refitting) weighing a total of 201 gm (Figs. 6.5–6.7).

The fabric is hard and well fired with a reddish-brown outer surface, a rather more buff-coloured inner surface and a black core. The surfaces are smooth and well finished and the fabric has been opened using grog giving the pot a slightly 'soapy' texture. Wall sherds average some 10 mm thick.

The scheme of decoration is difficult to reconstruct but some sherds are decorated with twisted cord herringbone motif (up to 4 lines) while other sherds are decorated with parallel twisted cord lines or with opposed diagonal lines suggesting opposed filled triangles. This motif suggests that the sherds may be from a Fengate style vessel.

The fabric and twisted cord impressions of this vessel are so similar to those of vessel 1 that they may be from the same vessel, the distinction between vessels 1 and 2 being largely subjective based principally on the decorative scheme.

[After Gibson had written the report and Tinsley had illustrated it, a sherd was found to conjoin the largest fragment of vessel 2. This showed a profile with a greater curve on the belly than that of vessel 1. Thus vessel 2 is indeed a separate pot (see Fig. 6.5).]

Fig. 6.5.

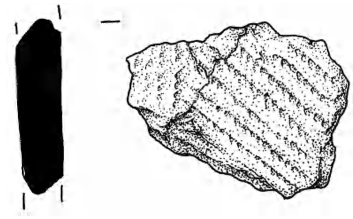

Fig. 6.6.

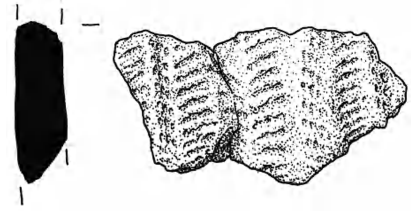

Fig. 6.7.

Figs. 6.5–6.7. Vessel 2.

*Vessel 3*

Grooved Ware vessel in a hard, well-fired grog-filled fabric with a slightly 'soapy' feel similar to vessels 1 and 2 above (Figs. 6.8, 6.9)

The 9 sherds weigh 57 gm and the fabric averages some 10 mm thick. The outer surface is light brown, the inner surface is generally black with one sherd having a light brown interior. There are slight traces of internal sooting and the core is black.

The decoration is incised in a series of broad lines and appears to have been arranged in filled triangle motif. This may suggest a vessel in the Durrington Walls substyle though such an identification on one technique and one motif must be regarded as tentative.

Figs. 6.8, 6.9. Vessel 3.

*Vessel 4*

Grooved Ware vessel comprising 5 sherds weighing a total of 32 gm (Fig. 6.10).

The fabric is hard and well fired with smooth 'soapy' surfaces and with traces of grog and crushed shell inclusions. The outer surface is dark brown and the inner surface is slightly lighter. The core is black and the fabric averages 9 mm thick.

The decoration is incised in a series of broad lines, just as vessel 3 above, and appears to have been arranged in filled triangle motif. This may suggest a vessel in the Durrington Walls substyle though again such an identification on one technique and one motif must be regarded as tentative.

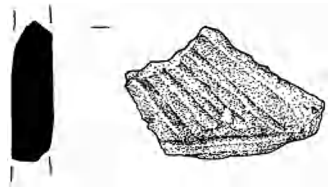

Fig. 6.10. Vessel 4.

*Vessel 5*

Internally decorated Grooved Ware vessel represented by 4 sherds weighing a total of 19 gm (Figs. 6.11–6.13).

The sherds are light brown to light grey throughout and average 5 mm thick. The fabric is hard and well fired and contains finely crushed grog and shell. One of the sherds is from the base angle of the pot. Two sherds have a line of small crescentic impressions on the inner surface.

Fig. 6.11.

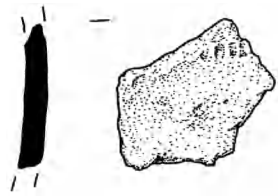

Fig. 6.12.

Fig. 6.13.

Figs. 6.11–6.13. Vessel 5.

*Vessel 6*

Undecorated abraded vessel represented by 2 sherds weighing a total of 9 gm (Fig. 6.14).

The sherds have dark brown surfaces and a black core. They are all abraded and the fabric contains finely crushed grog and varies in thickness. One sherd represents a base. Possibly Grooved Ware.

Fig. 6.14. Vessel 6.

*Vessel 7*

Single undecorated sherd (2 gm) in a soft, friable fabric (not illustrated).

The outer surface is light brown, the inner surface and core are black. The sherd is *c.* 11 mm thick and contains abundant crushed shell. Possibly Grooved Ware.

*Discussion*

The assemblage comprises two Peterborough Ware vessels and up to five Grooved Ware vessels though vessel 7 consists of insufficient material to allow a certain identification. Vessel 6 is identified as Grooved Ware due to its fabric and the presence of a flat base. Vessels 1 and 2 are in a very similar fabric and are both decorated with well-defined twisted cord. They may possibly be from the same vessel but this is uncertain due to the lack of conjoining sherds. Nevertheless, there may be some sherds wrongly allocated in both sherd groups: particularly the herringbone decorated sherds.

The swag decoration on vessel 1 is unusual, particularly on the body of the vessel. Twisted cord swags are known on rim sherds such as the vessels from Crookhaven, Ford, Northumberland (Longworth 1969: Kinnes and Longworth 1985: 135 and plates), Biggar, Common, South Lanarkshire (Johnston 1997, illus 21:3) and at the other end of the country on a vessel from Baston Manor, Kent where the elements of a filled opposed triangle motif has a distinctive curve (Philp 1973, Fig. 6:9) though this may in part be due to the curvature of the rim. Twisted cord concentric arcs also occur on a Fengate style rim from the West Kennet long barrow (Piggott 1962: 24, Fig. 13) though it is uncertain whether they originally formed semicircles. Twisted

cord arcs occur inside the rim on a vessel from the pre-barrow surface at Arreton Down, Isle of Wight (Alexander *et al.* 1960: 20, Fig. 7) while incised swags occur on a Peterborough rim sherd, interpreted as Fengate Ware, from the cursus at Springfield, Essex (Buckley *et. al.* 2001: 72, Fig. 21) and, more crudely, on a Mortlake style vessel from Caesar's Camp, Heathrow (Grimes 1960, Fig. 75). Fengate style sherds from the causewayed enclosure at Etton also carry concentric curvilinear motifs but once again these seem to be restricted to the collar (Pryor 1998, Fig. 204).

Semicircular swags in twisted cord (or indeed any technique) on the bodies of vessels are much more difficult to parallel. Bone-impressed swags decorate the interior of a Mortlake style bowl from the ditch of the Bagshot long barrow (Keiller and Piggott 1939: 142) and Piggott suggested that the ornament may have been made by a necklace of small bones such as vertebrae. Piggott also notes similar decoration on vessels from Barnham, Suffolk, and Cassington, Oxfordshire, though these vessels are unpublished and not known to the present writer.

A Mortlake style vessel from Salford, Bedfordshire, is profusely decorated inside with birdbone impressions in a variety of linear and curvilinear forms while the outside is decorated with a swirling curvilinear arrangement of small crescentic impressions (Dawson 2005: Fig. 2.7). Ian Kinnes, who undertook the pottery report for this assemblage, wrote: 'Externally the multiple nested curves and undulations are unique for Mortlake and find no ready match in any other tradition... In short, a unique vessel, for which it is tempting, therefore, to assign a special function' (Dawson 2005). The parallel between that vessel and the present vessel is not great but is the closest so far known to the writer. The unusual fabric (for Mortlake) of the present vessel may also suggest that it is 'special'.

Of course the Peterborough pottery was associated with Grooved Ware sherds and while current radiocarbon evidence places Peterborough earlier than Grooved Ware, nevertheless there is an overlap in chronologies where both traditions would have been in contemporary use. Grog-filled fabrics are common in Fengate and Grooved Ware assemblages and circular spirals, concentric circles or indeed swags are also known in Grooved Ware assemblages, particularly in the Durrington Walls style (Wainwright and Longworth 1971, Fig. 58). The swags on the present vessels along with the grog-filled fabrics may well represent a manifestation of the overlap of these two usually separate traditions.

Vessels 4 and 5, though represented by small sherds only, appear to be from fairly large vessels, probably, in the Durrington Walls style, with broad zones of opposed filled triangles. Grooved ware is rare in Gloucestershire with only four sites (Saintbridge, Gloucester; Lechlade Cursus; Lechlade, The Loders; Lechlade, Roughground Farm) being recorded by Longworth and Cleal (1999). The Saintbridge presence is represented by a single sherd. From the ditch of the Lechlade Cursus, 235 sherds were attributed mainly to the Durrington Walls substyle (Barclay *et al.* 2003: 202–5) and sherds with converging lines similar to the present assemblage were present. A minimum of two vessels in the Woodlands style were recovered from a pit at the Loders and at least six vessels in the Clacton style were identified from the pit group at Roughground Farm (Longworth and Cleal 1999: 185). Over the Welsh border, however, in Powys, similar Grooved Ware (in fabric and decoration) was found in pre-barrow contexts at Upper Ninepence, Walton (Gibson 1999, Figs 52–56), associated with radiocarbon dates centring on 2700–2600 cal BC.

The internally decorated Grooved Ware vessel, No. 5, is decorated with single lines of small crescentic impressions. This adds to a small but growing body of internally decorated Grooved Ware vessels (other than internal decoration of the rim or the area immediately below it), usually open vessels with splayed sides making the interiors readily visible. Three internally decorated vessels were found at Upper Ninepence, Powys (Gibson 1999, Fig. 54), employing a variety of techniques, especially fine twisted cord maggots and triangular motifs. The largest assemblage of

internally decorated vessels was recovered from Tye Field, Lawford, Essex (Shennan *et al.* 1985), where 12 vessels were identified followed by Durrington Walls where 10 vessels were recovered (Wainwright and Longworth 1971, Fig. 58). At Tye Field, the majority of the vessels are decorated in a variety of triangular motifs as are those at Durrington Walls, Wilts where ladder and lozenge motifs are also present.

Triangular motifs, narrowing with the vessels' internal diameters, tend to be the preferred motifs on these vessels (Gibson 1999: 83) but too little survives of the present assemblage to be certain as to the arrangement of the impressions.

Current radiocarbon dating suggests that Peterborough ware was in existence from *c.* 3300 BC and was fully formed in all its substyles by 3000 BC (Gibson and Kinnes 1997). What is less certain is the date of the demise of this tradition. Grooved Ware, by contrast is difficult to place before 3000 in England (Garwood 1999) and most dates for the Durrington Walls style cluster after 2900 BC. Three dates from Roughground Farm span virtually the whole of the third millennium BC from 2900–1960 cal BC when calculated to 2 standard deviations (Garwood 1999: 168). It is possible, indeed likely, that there was a period when both ceramic styles were in contemporaneous use, possibly between 3000 and 2700 BC so that the association of the sherds from both ceramic traditions here should not be a great cause for concern. Furthermore, the association of Peterborough Ware, Grooved Ware and Beaker at West Kennet suggest that the curation of vessels was widely practised.

**Characterisation Studies of Vessels 1 and 4** by Alan Vince

Samples of two Neolithic pottery vessels stylistically identified as Mortlake Ware (sample V3227, vessel 1) and Grooved Ware (sample V3228, vessel 4) found in Pit 01 were analysed with the aim of establishing, first, whether they were made from the same raw materials and second, whether the source of the raw materials could be provenanced. The study employed thin-section and chemical analysis. The thin-sections were stained using Dickson's method (Dickson 1965). This staining differentiates dolomite (unstained) from ferroan (stained blue) and non-ferroan (stained pink) calcite. The following inclusions were noted in thin-section.

*Mortlake Ware (Vessel 1)*

Rounded quartz. Moderate rounded and subangular grains up to 0.3 mm across, mostly monocrystalline with little straining. A few are polycrystalline and appear to be of sedimentary origin (i.e. could be classed as sandstone fragments) and rare chert fragments occur.

Clay/ironstone. Moderate sub angular fragments of dark brown to opaque clay/ironstone, in one case consisting of two bands of opaque material with a band of fine sandstone between. The sandstone band has a high proportion of feldspar laths. Moderate voids, both rounded and rectangular, are present, probably indicating the former presence of shell and other calcareous inclusions.

Organics. Moderate linear voids, *c.* 0.l mm wide and up to 1.0 mm long, usually with a darkened halo indicating the presence of organic matter in the inclusion.

Clay pellets. Moderate angular fragments with a lighter colour than the groundmass but similar texture. Some have signs of lamination and coherent birefringence. These are probably relict clay.

The groundmass consists of optically anisotropic baked clay minerals, sparse angular quartz, and dark brown/opaque grains up to 0.1 mm across.

*Grooved Ware (Vessel 4)*

Shelly marl. Angular fragments of marl containing fragments of non-ferroan bivalve shell, up to 1.5 mm long, in a matrix of clay minerals, scattered ferroan calcite and sparse dark brown/opaque grains up to 0.1 mm across. Some of the shell has layers of prismatic ferroan calcite on either side of the non-ferroan core. This may be part of the original shell, which would therefore probably be an inoceramid or may be a subsequent coating (the fragments are too small to show whether the coating covers broken shell edges). Echinoid spines of ferroan calcite are also present. The clay component of the marl fragments is similar in texture to that of the groundmass, but is sometimes darker in colour, due to either iron or an organic content.

Dark brown/opaque grains. Sparse angular fragments up to 0.7 mm across.

The groundmass contains optically anisotropic baked clay minerals, sparse muscovite laths up to 0.1 mm long, moderate ferroan calcite and dark brown/opaque grains up to 0.1 mm across.

*Discussion*

The Mortlake Ware sample contains inclusions derived from terrace sands. The high proportion of clay/ironstone is matched with samples of gravel from the site itself and the clay groundmass is likely to have originated as a lower Jurassic mudstone weathered, and perhaps redeposited, in Quaternary or recent times.

The Grooved Ware sample was probably produced from a shelly marl clay. Similar clays occur in the lower Jurassic which outcrops throughout the Vale of Gloucester, although extensively masked by later deposits. Similar fabrics have been observed as far afield as north Lincolnshire and it is unlikely that ceramic petrology alone can provenance this fabric.

The thin-sections therefore indicate that the two vessels were made from different raw materials and that the Mortlake Ware sample was potentially produced very close to the site.

**Acknowledgements**

Thin-sections by Steve Caldwell, Department of Earth Sciences, University of Manchester. Sample preparation at Lincoln by P. Hill.

## STONE OBJECTS

**Incised Limestone Plaque** by Fiona Roe

The limestone object (Fig. 7.1) is small, measuring only 39 × 23 × 7 mm, weighs 7 gm, and is finely incised on one side with numerous straight lines arranged more or less radially and about 1 mm or less apart. The lines continue over the edges except for one corner showing the stone to be almost complete.

The limestone is light coloured and is not in fresh condition but appears to be oolitic with some fossil shell fragments. The source is likely to be the local Jurassic limestone.

Other examples of incised pieces of stone from Neolithic contexts are not unknown but are usually on a larger scale. Two square chalk plaques found in Grooved Ware context near Stonehenge Bottom measured up to 72 mm across and had carefully executed designs (Vatcher 1969: 310). An engraved chalk plaque is also known from Butterfield Down (Fitzpatrick 2004/5: 107).

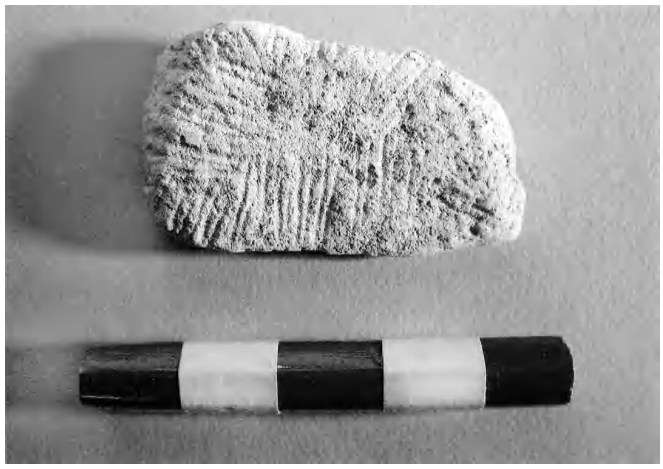

Fig. 7.1. Incised limestone plaque.

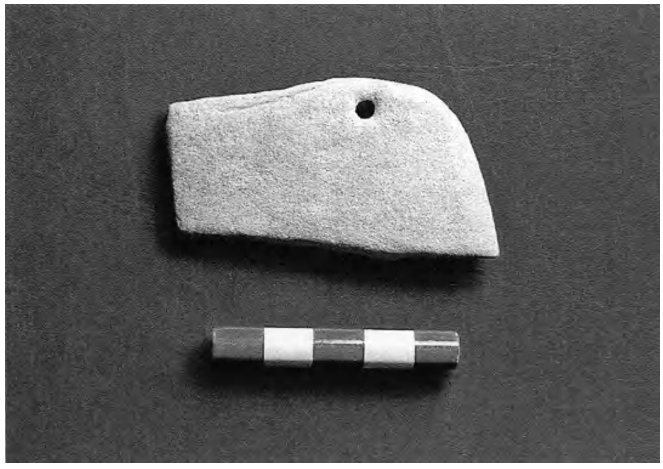

Fig. 7.2. Pierced sandstone fragment.

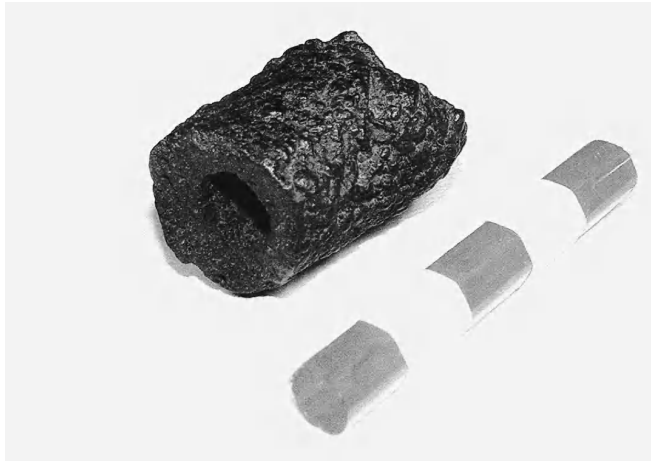

Fig. 7.3. Possible cylindrical bead.

Figs. 7. Stone objects. Scale totals 5 cm.

Interpretation of the enigmatic small object from King's Stanley must remain uncertain for the meanwhile. Such small items are easily missed in the archaeological record so that close parallels for this find are barely to be expected, though it is hoped that some in time may be forthcoming.

[The exact position of the plaque in the pit is not known. Because of the object's small size the incised decoration was not identified until the clay fill of the pit (which was very wet at the time and included many hundreds of small pieces of limestone) was re-examined on the surface. This showed it to have originated from close to the pit centre in the bottom 30 cm of the fill.]

### Pierced Sandstone Fragment

This sandstone object found resting on the pit side 50 cm from the base measured 60 × 30 × 5 mm and weighed 27 gm (Fig. 7.2). It had smooth surfaces and rounded unbroken edges. The broken edges were sharp, suggesting that the object had been snapped. The drilled hole had a diameter of 3 mm, 4 mm at the surface.

The purpose of the object is unclear, but the piercing would admit a thong tie and the smoothness of the surfaces suggests that both were significant. Most probably it was a fragment of a ceremonial wristguard. This opinion was also given by Geoffrey Wainwright (pers. comm.). The source of the sandstone is likely to be local.

### Possible Cylindrical Bead

This measured 30 mm in length and 18 mm in diameter with a straight and symmetrical bore diameter of 8 mm and weighed 23 gm (Fig. 7.3).

Graham Lott reported that it looks very much like sphaerosiderite concretion (hence the lumpy surface texture – technically a rhizocretion) which has developed round a rootlet or possibly a burrow. They are quite common at many geological horizons, most notably, he thinks, in Carboniferous Coal Measure type environments. He thinks this is unlikely to have come from the local Middle Jurassic succession but possibly came from the older Carboniferous rocks of the Bristol–Forest of Dean areas. The core of these rhizocretions, which can be of considerable length, is often softer than the outer wall. It is unlikely that the core would be straight and symmetrical naturally (extract from pers. comm.).

Examination using an ophthalmoscope revealed three 'U'-shaped grooves. These were not symmetrically arranged but grouped together. There is no reason, however, why a tool used to remove the softer core should symmetrically score the harder exterior.

The closest Carboniferous rocks mentioned above are some 24 km from the site. It is quite possible that the object was collected because of its unusual nature and colour and the softer core was removed to allow its use as an ornament.

## **The Flint** by Richard Hoyle

*Introduction*

An assemblage of 402 struck flints and 270 fragments was recovered from the two pits (Tables 1–4). The flint-work is in contemporary association with the Neolithic Peterborough Ware and Grooved Ware from deposits in Pit 01. However, the only chronologically diagnostic tools recovered from both features are typologically Mesolithic pieces and there was no dating evidence in Pit 02 other than flint. The questions which needed addressing therefore were whether the two contexts were the same, could they be contemporary and, particularly, could the flints assist with the dating of Pit 02?

Table 1. Pit 01. Struck flint by category.

| **Category** | **Total** | |
|---|---|---|
| Flake | 67 | |
| Bladelike flake | 23 | |
| Blade | 8 | |
| Bladelike, crested | 2 | |
| Core, bladelet, multi-platform | 1 | |
| Core, bladelet, single-platform | 2 | |
| Core, flake, multi-platform | 7 | |
| Flake, Platform edge rejuvenation | 10 | |
| Flake, primary | 1 | |
| Flake, retouched | 5 | |
| Microlith | 7 | |
| Microlith – burin | 2 | |
| Notch | 2 | |
| Piercer | 1 | |
| Burin | 1 | |
| Scraper, end | 1 | |
| Scraper, unclassifiable | 2 | |
| Waste, unclassifiable | 38 | |
| Chip | 196 | |
| **Grand total** | **376** | |
| **Broken** | **90** | **24%** |
| **Burnt** | **34** | **9%** |

Table 2. Pit 01. Struck flint by category, less chips.

| **Category** | **Total** | |
|---|---|---|
| Flake | 67 | |
| Bladelike flake | 23 | |
| Blade | 8 | |
| Bladelike, crested | 2 | |
| Core, bladelet, multi-platform | 1 | |
| Core, bladelet, single-platform | 2 | |
| Core, flake, multi-platform | 7 | |
| Flake, Platform edge rejuvenation | 10 | |
| Flake, primary | 1 | |
| Flake, retouched | 5 | |
| Microlith | 7 | |
| Microlith – burin | 2 | |
| Notch | 2 | |
| Piercer | 1 | |
| Burin | 1 | |
| Scraper, end | 1 | |
| Scraper, unclassifiable | 2 | |
| Waste, unclassifiable | 38 | |
| **Grand total** | **180** | |
| **Broken** | **74** | **41%** |
| **Burnt** | **22** | **12%** |

Table 3. Pit 02. Struck flint by category.

| **Category** | **Total** |
|---|---|
| Flake | 7 |
| Bladelike flake | 1 |
| Blade | 1 |
| Scraper, unclassifiable | 1 |
| Microlith | 3 |
| Debris, unclassifiable | 3 |
| Chip | 10 |
| **Grand total** | **26** |
| **Broken** | **6 (23%)** |
| **Burnt** | **0** |

Table 4. Pit 02. Struck flint by category, less chips.

| **Category** | **Total** |
|---|---|
| Flake | 7 |
| Bladelike flake | 1 |
| Blade | 1 |
| Scraper, unclassifiable | 1 |
| Microlith | 3 |
| Debris, unclassifiable | 3 |
| **Grand total** | **16** |
| **Broken** | **6 (38%)** |
| **Burnt** | **0** |

*Condition*

In general, the smaller debris (debitage) is in an exceptionally fresh condition implying little or no movement. A small number of larger pieces, including a burin, are in a rolled and worn condition. Examples such as these have probably been repeatedly re-deposited and are assumed to be residual. The majority of flints are heavily corticated, with heat alteration responsible for the rare instances of non-cortication.

*Raw material*

Both chalk and gravel flint sources appear to have been used for the production of the tools and debitage in the context. The nearest outcrop of chalk flint is the Marlborough Downs and was thus probably transported over some 56 km. However, the exceptionally large chalcedony flake found in Pit 01 must have been imported from at least as far away as the Blackdown Hills, south of Taunton, some 112 km to the south-west (Graham Lott pers. comm.), which implies a considerable local exchange network of raw material.

*Pit 01 technology and dating*

The small size of the cores, almost all of which have been discarded in a fully exhausted state with final removals <2 cm, suggests that supplies were valued economically. In addition 41 per cent of the larger pieces are either broken (mostly during knapping: Table 2) or, where whole, not workable owing to hinge fractures or irregular ventrals. Others are merely error correction or removal flakes, so are also unworkable. This implies that all the available flint was carefully utilised.

The diffuse, smooth, lipped bulbs of percussion appear to indicate soft hammer reduction, and the small platform size indicates indirect percussion. However, many of the platform adjustment flakes and smaller chips have crushed platforms or larger bulbs indicating direct percussion. Indirect, i.e. punch, technology appears to have been used for important removals, direct percussion for many of the platform adjustments and abrasions, as contemporary knappers do.

Kate Cramp reported: 'Non-cortical removals are most numerous while preparatory (wholly cortical) flakes are comparatively rare, suggesting the off-site decortication of nodules. The

assemblage contains numerous flakes of a similar flint type, which suggests that material from the same core was deposited together. Refitting potential is likely to be quite high' (unpublished report).

Nine of the ten cores (two broken) were worked out and one abandoned while still cortical with only primary flakes removed, implying good quality cores worked to exhaustion. One of the three bladelet cores had even been reworked sideways to produce more flakes. Two exceptionally small single platform bladelet cores (5 and 6 gm) were also recovered. Most of the cores were finely worked. Although two flake cores were irregular, this was most probably owing to their small size. In accordance with the debitage component, the cores have been carefully reduced and most have abraded platform edges.

The blades themselves are all small, <5 cm. The majority show careful platform preparation and, with small platforms and careful removal are straight and well made. Platform edge abrasion was used to regularise the edge for the controlled removal of blades and flakes. A reduction strategy involving the periodic adjustment or renewal of the platform is indicated by the presence of nine rejuvenation flakes. The bladelike flakes are also carefully produced, and several display the scars of previous blade removals implying a blade production industry with flakes as secondary products for occasional use as tool blanks.

The tools that are chronologically distinctive are the microliths, microburins and burin all of which date from the Mesolithic. The microliths are all small and apart from the two microburins are retouched triangles, most closely compared to Jacobi's class 3c (Jacobi 1979: 16, Fig. 6). The burin consists of a thick tertiary flake with several burin removals taken bifacially on the distal left-hand corner; its rolled condition confirms its residuality. Blade production itself dates from the Upper Paleolithic onwards, so is not diagnostic, although the two crested bladelets could also date from the Mesolithic period.

Of the other retouched pieces, flakes, including a rejuvenation flake, are most common (five pieces). Three scrapers, one of which has been retouched across a break surface, and one which appears to have been heated, were also recovered. Two notched flakes and one piercer, used for modifying or boring hides and other fibrous materials, were also found. In many cases, edges were preferred for use in an unmodified state, with macroscopic use-wear recorded on eight unretouched flakes.

In addition there were 270 spalls <10 mm, the very small waste produced by knapping, which had not been altered or used in any way.

*Pit 02 technology and dating*

As the number of pieces is quite small (only 13 pieces larger than 1 cm) there is little that can be said definitively about the activities that formed this assemblage. Once again, almost 40 per cent of the larger pieces are broken (38%). All of the pieces are less than 5 cm in length, the two bladelike pieces being by far the largest (4 and 5 cm).

The diffuse, smooth, lipped bulbs of percussion again indicate soft hammer reduction, and the small platform size indicates indirect percussion. Many of the smaller chips have crushed platforms or larger bulbs indicating direct percussion, similar to the material from Pit 01.

The blade and bladelike flake have careful platform preparation and, with small platforms, were carefully removed. Both display the scars of previous blade removals. Both platform edge abrasion and adjustment flakes occur, suggesting a similar careful reduction strategy to Pit 01.

In Pit 02, however, the most frequent tools are the microliths. These microliths would all appear to have been <2.5 cm when complete but as broken their size is hard to determine. Two bladelets could be compared to Jacobi's class 4 (Jacobi 1979) while the third appears to be a small triangle

(class 3c). The scraper is severely broken and could in fact be mistaken for a microlith. It is the distal end of a possible end scraper with light retouch on the left and right sides, and it appears to have been heated though not burnt.

*Discussion and conclusion*

As would be expected in a Neolithic industry, blades and bladelike flakes are relatively common in both assemblages. The percentages of blades, flakes and bladelike flakes are similar (Table 5). This implies a blade production technology in both contexts.

Table 5. Blades, flakes and blade-like flakes in pits as percentage of total struck flint.

| | **Pit 01** | **Pit 02** |
|---|---|---|
| Blades | 4.5 | 6.2 |
| Flakes | 37.2 | 43.7 |
| Blade-like flakes | 12.7 | 6.2 |

The range of tools represented in Pit 01 suggests that the flints were put to a variety of tasks, including piercing, cutting, whittling and scraping activities.

The number of small spalls in Pit 01 implies this assemblage contains the debris from an *in situ* knapping area. However, their relative absence in Pit 02 (only three chips were <1 cm) implies the knapping area was not *in situ.* Roughly 10 to 20 more spalls would be expected for an assemblage this size, assuming similar taphonomy to Pit 01 (Schick 1986). The assemblage in Pit 01 appears have been the debris from an *in situ* knapping area, used since the Mesolithic to the Neolithic so containing residual Mesolithic material. It can reasonably be dated to the middle Neolithic on technological grounds and by its association, in a cut feature, with quantities of middle and late Neolithic pottery. No distinctively Neolithic tool types were recovered to confirm this, however, and it is not therefore ruled out that some (or all) of the material belongs to the same industry as the burin and microliths.

The assemblage in Pit 02 if examined in isolation would be determined as Mesolithic. This is essentially a *terminus post quem*. However, the lack of tiny spalls and of cores indicates that this is a selection from a knapping site and not *in situ.* Qualitatively, the debitage from Pit 02 is similar in character to that from Pit 01 (e.g. the size of the broken pieces and blades, and the fact that the flint has been worked economically until exhausted). Owing to this association it seems probable that Pit 02 is a subset of Pit 01, extracted from it.

[During excavations 1961–73, a total of 629 non-stratified residual pieces of struck flint were recovered. These were examined by Alan Saville in 1988. The assemblage showed a late Mesolithic presence in the form of three microliths, eleven micro-blade cores and a truncated blade.

The Neolithic and Bronze Age periods were represented by three arrowheads (one leaf-shaped, one transverse (chisel) and one barbed-and-tanged) a scale-flaked knife fragment and four characteristic scrapers. Neolithic finds included fragments from the butt-end of a polished stone axe-head of greenstone (probably Cornish) type (in Heighway 2007:35).]

**Animal Bone** based on reports by Emma-Jayne Evans and Nigel Gregory

The animal bone assemblage is too small to give a reliable indication of the percentage of species

represented. None of the bone showed evidence of burning but they may have been boiled. The bone was randomly scattered throughout the pits.

*Pit 01*

The identifiable bone, 390 gm, comprise cattle (287 gm); pig (94 gm); sheep/goat (9 gm); and one bird bone.

A further 136 gm were not identifiable with certainty being fragments of longbone shafts, ribs etc., but can be divided into large mammal (probably cattle) 64 gm and medium mammal (probably pig, sheep/goat) 72 gm. One of the medium longbones, a tibia, which could well be sheep/goat, had been chopped for marrow extraction as had another medium longbone.

*Cattle*

Aurochs metatarsal fragment. Epiphysis diameter 85 mm. Fragment length 90 mm, 111 gm.
Smaller species

Mandible fragment containing two molars 97 gm, teeth including one molar, two incisors plus fragments 53 gm.

Vertebra fragment 26 gm.

*Pig*

Skull fragment 7 gm, teeth and jaw fragments including four incisors and three molars 36 gm.

Right humerus fragment 3 gm, femur fragment 22 gm, fibula fragment 2 gm. Astragalus with dismemberment cut marks 24 gm.

*Sheep/goat*

Humerus fragment 2 gm, thoracic vertebra fragment 2 gm, femoral head unfused 3 gm, metatarsal fragment 2 gm.

*Bird bone*

Radius fragment; crow or smaller.

The cattle mandible was of a beast estimated to have been one year old at death and the size of the modern Dexter.

The pig teeth suggest an age at death of 6–9 months.

The bird bone was a possible tool for pottery decoration with an epiphysis impression diameter of 4 mm, although no birdbone impressed pottery was found.

*Pit 02*

All of the 193 gm of bone recovered is large mammal, probably cattle.

2 fragments of vertebra (1 juvenile) 37 gm.

Longbone fragments 156 gm. At least five chopped probably for marrow extraction and one showed cut marks.

**Clay Fill from Pit 01** by Alan Vince

A sample of the clay fill has a high quartz sand content. It also contains tabular iron ore, which outcrops in the Middle Lias of central Gloucestershire, silty iron-rich mudstone (also probably Middle Lias) (Kellaway and Welch 1948: 52–5) and rounded detrital limestone fragments. It is similar to the subsoil which develops on top of the Lower Lias clay in the Vale of Gloucester as a result of the mixture of overlying terrace sand with the underlying clay.

**Environmental Assessment of Fill from Pit 01** by Elizabeth Huckerby

*Introduction*

A single sample of the clay fill from Pit 01 was assessed for both pollen and charred and waterlogged plant remains. Botanical nomenclature follows Stace (1991). The components of the matrix were also noted.

*Results and discussion*

*Charred and waterlogged plant remains*

Abundant charcoal was recorded in the sample together with a few fragments of charred hazel nut fragments (*Corylus avellana*). Some waterlogged plant remains were also present and included fat-hen (*Chenopodium album*) and dock/sorrel (*Rumex* sp.) seeds. No cereal grains were recorded in the sample. The charred and waterlogged plant remains were uninformative although this may in part be related to the small sample size (*c.* 800 gm dry weight).

*Pollen*

The assessment (Table 6) demonstrated that pollen was preserved in the fill of the Neolithic pit. The amount was small and included a little tree and shrub pollen but that from herbaceous plants was more abundant with cereal-type and some arable or waste ground weeds, for example black bindweed (*Fallopia convolvulus*) and knotgrass (*Polygonum aviculare*). Cereal-type pollen may also come from native aquatic species such as sweet-grass (*Glyceria*), which could be found growing alongside a ditch, as well as that from cereals (Andersen 1979). Further, more detailed, examination is needed to confirm whether it is pollen from cereals. The assemblage from the sample suggests that there was only a little woodland near the site when the pit was filled and that clearance of the landscape had already taken place. The identification of possible cereal-type pollen together with that of arable or waste ground weeds suggests possible cultivation or waste ground nearby.

Although the number of indeterminate pollen grains was quite high it was not considered that it would prohibit the interpretation of the data. Interpretation of pollen data from archaeological features must be cautious as the pollen may originate from a number of different sources. It may be present naturally in the atmosphere but it may also become incorporated in the fills by deliberate deposition or be from plants brought onto the site from elsewhere (Faegri and Iversen 1989).

*Conclusions*

The assessment of pollen and charred and waterlogged plant remains from the Neolithic pit fill has demonstrated the potential for the preservation of these types of plant remains in the fill. The

Table 6. Pollen recorded in sample.

| Taxa | | No of pollen grains |
|---|---|---|
| **Trees and shrubs** | | |
| Alnus | Alder | 5 |
| Betula | Birch | 2 |
| Quercus | Oak | 3 |
| *Corylus avellana/Myrica gale* | Hazel/bog-myrtle | 3 |
| **Dwarf shrubs** | | |
| Calluna | Heather | 1 |
| *Ericales* | Heaths | 3 |
| **Herbs** | | |
| Apiaceae | Cow parsley family | 1 |
| Asteraceae | Daisy-type | 3 |
| Brassicceae | Cabbage family | 5 |
| Chenopodiaceae | Fat-hen family | 2 |
| Cirsium-type | Thistle | 2 |
| Cyperaceae | Sedges | 1 |
| Fallopia convovulus | Black bindweed | 1 |
| Fllpendula | Meadowsweet | 1 |
| Plantago lanceolata | Ribwort plantain | 1 |
| Poaceae | Grasses | 14 |
| Polygonum aviculare | Knotweed | 1 |
| Ranuncualceae | Buttercup-type | 1 |
| Roscaeae | Rose family | 1 |
| Taraxacum-type | Dandelion-type | 3 |
| Undifferentiated herbs | | 4 |
| **Ferns** | | |
| Polypodium | Polyploid ferns | 2 |
| Pteridium | Bracken | 2 |
| Undifferentiated ferns | | 8 |
| **Moss spores** | | |
| Sphagnum | Bog moss | 1 |
| **Total pollen identified** | | **71** |
| **Indeterminates** | | **23** |

very limited pollen dataset suggests that the landscape was already partially cleared and arable cultivation may have been taking place.

### Snail analysis

The flot sample obtained by Elizabeth Huckerby was examined by Lucy Cramp for the presence of snails. Cramp reported the presence of *Cediioldes*, burrowing snails, therefore non-diagnostic and a single sample of *Vertigo pygmaeum*, an open country species (pers. comm.).

**Discussion**

The shape of the pits is not typical of those of the Neolithic period. Such isolated features are usually small, circular or oval in form, with shallow, bowl-shaped forms (e.g. Thomas 1999: 64–5).

Both pits are essentially rectangular and asymmetric in cross-section. Why the profile of Pit 01 was adopted it is impossible to say. After it had been fully excavated an attempt was made to stand in its base and wield an imaginary antler pick to form the lower south face and base: it was far from comfortable even to stand let alone to 'dig'. The similarity of its outline with that of Pit 02 may have been of significance. Both were sharp and there was no gravel slip or silt accumulation in the base. This, together with the lack of stratigraphy, suggests rapid refilling in a single operation. Such sharp profiles have been noted before (Thomas 1999: 65).

There are two possible reasons why the pits were dug: gravel extraction or ritual deposition. Although both exploit the total depth of the natural gravel, the shape of Pit 01 would have made gravel extraction extremely inefficient although Pit 02 would have produced gravel efficiently. This suggests that Pit 01, if not both, was dug for the formal deposition of assemblages of domestic debris, principally flints, pottery and animal bone in a clay matrix. Vince states above that this material develops on top of the Lower Lias clay in the Vale of Gloucester but is not naturally present on the site. Pit 01 contained some 2.8 cu m of the clay. Why it was brought on to the site and came to incorporate the assemblages remains unknown.

This is the seventh site in lowland Gloucestershire that has yielded evidence of Peterborough Ware (Darvill 1987: 69) with the closest parallel the site at Cam 8 km to the south-west (Smith 1968), and the fifth in Gloucestershire to yield Grooved Ware (Longworth and Cleal 1999).

Although more Grooved Ware than Mortlake vessels are represented, 83 per cent by weight of sherds recovered represent the Mortlake style. The Grooved Ware sherds were scattered and mostly in the bottom 35 cm of Pit 01 with a concentration towards the pit's ends, while the Mortlake sherds were closely associated around the centre but above the Grooved Ware at 50–60 cm from the pit base. The Grooved Ware sherds are generally smaller and more abraded than the Mortlake sherds, but those of vessels 4 and 5 appear to be from quite large vessels. This suggests that the Grooved Ware sherds were a random scatter in a midden which was incorporated into the pit fill. The radiocarbon date is after that accepted for Peterborough Ware, an episode lasting from *c.* 3400–2500 cal BC (Gibson and Kinnes 1997). It suggests deposition towards the end of the Grooved Ware tradition and is paralleled by material from Marden henge, Woodhenge, Roughground Farm and Radley (Garwood 1999: 15.2–15.6).

Perhaps the Mortlake vessel, so far unique in decoration, was a special item of considerable age before it was buried as a final act before pit closure. It had been made very close to the site but the Grooved Ware was imported from some distance.

With no charcoal or pottery present in Pit 02 its relationship in date to Pit 01 could only be inferred by the flint content. The pits could be contemporary, but the absence in Pit 02 of both large and very small fragments suggests a degree of selection in the flint deposited. The similarity of the clay matrix supports a similar date.

This late Neolithic site, situated on an area of well-drained gravel with ready access to water, was in a landscape probably partially cleared for arable cultivation, where small cattle, pigs and sheep were husbanded and aurochs were hunted. Flint knapping took place on the site but it is unusual for there to be such a shortage of tools represented.

It should be emphasised that on this area of gravel spread the orchard occupies a small area compared with that covered by the church and graveyard, which from the topography is the most attractive area for settlement. With the intensity of Roman, Medieval and ecclesiastical activity, it is indeed fortunate that the pits have survived at all.

The complete archive has been deposited at Stroud Museum. Accession no. 2009.36. For further information on the Roman and Medieval presence see Heighway 2007.

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**Bibliography**

Alexander, J. and Ozanne, C.P., 1960. 'Report on the investigation of a round barrow on Arreton Down, Isle of Wight', *Proc. Prehistoric Soc.* 26, pp. 263–302.

Andersen, S.T., 1979. 'Identification of wild grass and cereal pollen', *Danm. Geol. Unders. Arbog.* 1978, pp. 69–92.

Barclay, A., Lambrick, G., Moore, J. and Robinson, M., 2003. *Lines in the Landscape. Cursus Monuments in the Upper Thames Valley.* Thames Valley Landscapes Monograph 15. Oxford: Oxford Archaeology.

Bronk Ramsay, C., 2005. OxCal v3 .10, *A Radiocarbon Calibration and Analysis Program.* Oxford: Oxford Radiocarbon Accelerator Unit.

Buckley, D., Hedges, J. and Brown, N., 2001. 'Excavations at a Neolithic cursus, Springfield, Essex, 1979–85'. *Proc. Prehistoric Soc.* 67, pp. 101–62.

Darvill, T., 1987. *Prehistoric Gloucestershire.* County Library Series, p. 69.

Dawson, M., 2005. 'An Iron Age settlement at Salford, Bedfordshire', *Bedfordshire Archaeol.* Monograph 6.

Dickson, J.A.D., 1965. 'A modified staining technique for carbonates in thin section', *Nature* 205, p. 587.

Faegri, K. and Iversen., J., 1989. *Textbook of Modern Pollen Analysis*, 4th edn. (revised by K. Faegri, P.E. Kaaland and K. Krzywinski). Chichester: John Wiley.

Fitzpatrick, A. 2004/5. 'A sacred circle on Boscombe Down', *Current Archaeol.* 195, pp. 106–7.

Garwood, P., 1999. 'Grooved Ware in southern Britain. Chronology and interpretation', in R. Deal and A. MacSween (eds.) *Grooved Ware in Britain and Ireland*, pp. 145–76. Oxford: Oxbow Books.

Gibson, A.M. and Kinnes, I., 1997. 'On the urns of a dilemma: C14 and the Peterborough problem', *Oxford Jnl. Archaeol.* 16 (1), pp. 65–72.

Gibson, A.M., 1999. *The Walton Basin Project: Excavation and Survey in a Prehistoric Landscape 1993–97.* Research Report 118. York: Council for British Archaeology.

Grimes, W.F., 1960. *Excavations on Defence Sites, 1939–45. I: Mainly Neolithic – Bronze Age.* London: HMSO.

Heighway, C., 2007. *Excavations at King's Stanley 1961–1981.* Stroud: Past Historic.

Jacobi, R., 1978. 'The Mesolithic of Sussex', in P. Drewett (ed.) *Archaeology in Sussex to AD 1500.* C.B.A. Res. Rep. 29, pp. 15–22.

Johnston, D.A., 1997. 'Biggar Common 1987–93: an early prehistoric funerary and domestic landscape in Clydesdale, South Lanarkshire', *Proc. Soc. Antiq. Scotland* 127, pp. 185–254.

Keiller, A. and Piggott, S., 1939. *A Survey of the Prehistory of the Farnham District.* Guildford: Surrey Archaeological Society.

Kellaway, G.A. and Welch, F.B.A., 1948. *Bristol and Gloucester District. British Regional Geology.* London: HMSO, pp. 52–5.

Kinnes, I.A. and Longworth, I.H., 1985. *Catalogue of the Excavated Prehistoric and Romano-Brftish Material in the Greenwell Collection.* London: British Museum Press.

Longworth, I.H., 1969. 'Five sherds from Ford, Northumberland, and their relative dating', *Yorks. Archaeol. Jnl.* 42, pp. 25–31.

Longworth, I.H. and Cleal, R., 1999. 'Grooved Ware Gazetteer', in R. Cleal and A. MacSween (eds.) *Grooved Ware in Britain and Ireland.* Oxford: Oxbow Books, pp. 177–206.
Philp, B.J., 1973. 'A Neolithic site near Baston Manor, Hayes, Kent', in B.J. Philp (ed.) *Excavations in West Kent 1960–70. Second Report in the Kent Series.* Dover: Kent Archaeological Rescue Unit, pp. 5–20.
Piggott, S., 1962. *The West Kennet Long Barrow: Excavations 1955–56.* London: HMSO.
Pryor, F., 1998. *Excavations at a Neolithic Causewayed Enclosure near Maxey, Cambridgeshire, 1982–7.* Archaeological Report 18. London: English Heritage.
Reimer *et. al.*, 2004. *Radiocarbon* 46 (3).
Schick, K.D., 1986. *Stone Age Sites in the Making.* Oxford: B.A.R. S314.
Shennan, S.J., Healy, F.M. and Smith, I.F., 1985. 'The excavation of a ring-ditch at Tye Field, Lawford, Essex', *Archaeol. Jnl.* 142, pp. 150–215.
Smith, I.F., 1968. Report on Neolithic pits at Cam, Glos. *Trans. Bristol & Glos. Archaeol. Soc.* 87, pp. 14–28.
Stace, C., 1991. *The New Flora of the British Isles.* Cambridge: Cambridge University Press.
Thomas, J., 1999. *Understanding the Neolithic.* London: Routledge.
Vatcher, F. de M., 1969. 'Two incised chalk plaques near Stonehenge Bottom', *Antiq.* 43, pp. 310–11.
Wainwright, G.J. and Longworth, I.H., 1971. *Durrington Walls: Excavations 1966–68.* Research Report 29. London: Society of Antiquaries.