

The excavation of two linear earthworks, one a cross-ridge dyke, in Pudding Bag Wood and Stanmer Great Wood, Brighton.

Linear earthworks in Pudding Bag Wood and Stanmer Great Wood, Stanmer, Brighton, were sectioned to seek dating evidence prior to possible scheduling. The linear earthwork in Stanmer Great Wood is a cross-ridge dyke, while the feature in Pudding Bag Wood runs parallel with the downland ridge. The flintwork and pottery suggest a Bronze Age date for construction.

THE POTTERY

by Lisa Jayne Fisher

A total of 54 sherds (350g in weight) were recovered from the Stanmer Great Wood excavation and 12 sherds (40g in weight) from Pudding Bag Wood. Context information was sparse for both excavations. The Stanmer Great Wood assemblage consisted of nine different fabrics and one other fabric that was largely unidentifiable due to a refiring of the sherds as discussed below. There were very few diagnostic pieces from Pudding Bag Wood, with just two different fabrics from the assemblage. In general, the sherds from both assemblages were much abraded, indicating secondary deposition.

METHODOLOGY

The fabrics were inspected through a binocular microscope (x10) and sorted into fabric types by way of sherd thickness and type of inclusion, as defined by the Wentworth sedimentary descriptions (Krumbein and Pettijohn 1938; Prehistoric Ceramic Research Group 1992, 35) and density charts (Prehistoric Ceramic Research Group, 1992; appendix 3).

RESIDUALITY

As both assemblages came solely from ditch fills, it is likely that they are all residual and cannot be used precisely to date the feature. Deposition may have occurred during later activity on the site, or from activity which predated the mound at Pudding Bag Wood as well as the ditch features at both sites. At Pudding Bag Wood there is some evidence in the stratigraphy to suggest agricultural activity prior to the construction of the mound in layer E, where the majority of the sherds were deposited, but this is not clear, as no finds were found under the bank itself.

FABRIC TYPES

Post Deverel-Rimbury ceramics (c. 1150–500 BC) within Sussex are defined by new methods of production which differ from the preceding Middle Bronze Age traditions. These include more controlled firings which produce more uniform oxidized, or wholly un-oxidized, vessels with flint temper being still widely used but with smaller-sized inclusions measuring between 1–6mm. Thin-walled ceramics approximately 6–10mm thick were produced, resulting in finer fabrics with a lower inclusion density and a much wider range of inclusions within the fabrics, including pisolithic iron oxides and fine, sandy fabrics (Seager Thomas 2008, 41).

The Stanmer Great Wood assemblage had nine different Late Bronze Age fabrics (*see* Table.3) which were also dominated by sherds with fine, iron oxide inclusions (IO1-5) and which accounted for 79 percent of the assemblage. In addition, 11 percent were quartz dominated fabrics (Q1 and Q2), three percent was flint fabrics (F1 and F2) and the remainder consisted of less easily identifiable refired sherds. Most of the assemblage contained

fine, medium sherds ranging from 7–13mm in thickness (except for the refired sherds which were thicker at more than 18mm) and which were fired, uniform colours throughout. The sherds were measured at their thickest extent and, as some were base sherds or rim sherds, this may have biased the overall thickness.

The Late Bronze Age ceramics from Pudding Bag Wood (*see* Table 4) contained sherds dominated by fine iron oxides (more than 30 percent) but also containing a range of other inclusions including quartz more than 1mm in size, flint more than 9mm in size and chalk more than 3mm in size. These were uniformly oxidized and up to 12mm thick.

Table 3. Fabrics from Stanmer Great Wood

Flint 1 (F1)	Moderate (10%), poorly sorted, sub-angular, very coarse sand-sized flint <2mm. Moderate (10%), well sorted, rounded, very fine sand-sized iron oxides<0.25mm. Rare (2%), poorly sorted, rounded coarse sand-sized quartz >1mm. Rare (2%), poorly sorted, sub-rounded, very coarse sand-sized grog <2mm. Rare (2%), poorly sorted, linear organic (burnt out) material <6mm.	Sherd thickness <10mm. Oxidized orange throughout.
Flint 2 (F2)	Common (20%), poorly sorted, sub-angular, granule-sized flint <7mm. Moderate (10%), poorly sorted, sub-rounded, coarse-sized grog <1mm. Rare (1%), poorly sorted, sub-angular, very coarse sand-sized chalk <3mm.	Sherd thickness <8mm. Oxidized orange throughout with some reduced brown patches on the exterior and coarser flint than other sherds.
Iron Oxide 1 (IO1) Consists 59% of assemblage	Very common (30%), poorly sorted, fine sand-sized black iron oxides <0.25mm. Moderate (10%), poorly sorted, sub-rounded, coarse sand-sized quartz <1mm. Sparse (5%), poorly sorted, sub-angular, very coarse sand-sized flint <2mm.	Sherd thickness <12mm. Exterior oxidized orange/brown with reduced black core and oxidized brown interior. Two pieces are decorated with incised marks.
Iron Oxide 2 (IO2)	Abundant (50%), well sorted, well rounded, fine sand-sized black iron oxides <0.25mm. Sparse (7%), poorly sorted, rounded, very coarse sand-sized quartz <3mm Rare (3%), poorly sorted, sub-angular, granule-sized flint <5mm	Sherd thickness <10mm. Reduced brown throughout sherds.
Iron Oxide 3 (IO3)	Common (20%), poorly sorted, rounded, fine sand-sized black iron oxides <0.25mm. Moderate (10%), poorly sorted, sub-rounded, coarse sand-sized quartz <1mm. Rare (2%), poorly sorted, sub-angular, coarse sand-sized flint <1mm.	Sherd thickness <7mm. Mostly oxidized orange exterior with reduced brown interiors but some are reduced black on the exteriors. A finer fabric.
Iron Oxide 4 (IO4)	Common (20%), poorly sorted, rounded, medium sand-sized brown iron oxide <0.50mm. Moderate (10%), poorly sorted, sub-rounded, very coarse sand-sized quartz <2mm Sparse (3%), poorly sorted, sub-angular, coarse sand-sized flint <1mm. Rare (2%), poorly sorted, rounded, coarse sand-sized grog <1.5mm	Sherd thickness <11mm. Oxidized orange throughout sherds.

Iron Oxide 5 (IO5)	Very common (30%), poorly sorted, medium sand-sized brown iron oxide <0.50mm. Sparse (5%), poorly sorted, sub-rounded, very coarse sand-sized quartz <2mm. Rare (2%), poorly sorted, sub-angular, very coarse sand-sized flint <2mm. Rare (2%), poorly sorted, rounded, very coarse sand-sized grog <2mm.	Sherd thickness <12mm. Exterior oxidized orange with reduced black core and brown interior. Similar to IO4 but with more IO and more reduced.
Quartz 1 (Q1)	Moderate (10%), poorly sorted, rounded, coarse sand-sized quartz <1mm. sparse (5%), poorly sorted, sub-angular, very coarse sand-sized flint <3mm. Rare (2%), poorly sorted, rounded, coarse sand-sized grog <1.5mm.	Sherd thickness <13mm. Exterior is reduced dark brown, as is the core and the interior is oxidized pink/orange. Some incised decoration.
Quartz 2 (Q2)	Common (30%), poorly sorted, sub-rounded, very coarse sand-sized quartz <3mm. Common (30%), poorly sorted, rounded, medium sand-sized brown iron oxides <0.25mm. Rare (2%), poorly sorted, sub-angular, very coarse sand-sized flint <3mm.	Sherd thickness <7mm. Reduced brown throughout but with one sherd having more orange oxidization on the interior. Likely clay source from Clay-with-flints concentrations.
Refired sherds	Difficult to categorize, as most of the inclusions have fallen out during a second firing event, but estimates have been made based on the missing inclusions. Common (25%?), well sorted, rounded, very fine sand-sized iron oxides <0.125mm. Sparse (3%?), poorly sorted, sub-rounded, coarse sand-sized quartz <1mm. Sparse (5%?), poorly sorted, rounded, coarse sand-sized grog <1mm. Rare (1%?), poorly sorted, sub-angular, very coarse sand-sized flint <2mm.	Sherd thickness <18mm. The exterior is oxidized orange with a reduced black core and interior.

Table 4. Fabrics from Pudding Bag Wood

PUDDING BAG WOOD Fabric 1	Grog (G); Abundant (40%-50%), poorly sorted, rounded, very coarse sand-sized grog >2mm.	Sherd thickness <6mm. The majority of these sherds were reduced brown with some exterior surface almost black. Probably Romano-British East Sussex ware.
PUDDING BAG WOOD Fabric 2	Iron oxide (IO); Very Common (30%), well sorted, well rounded fine sand-sized iron oxides >0.25mm. Moderate (10%), poorly sorted, rounded coarse sand-sized quartz <1mm. Sparse (3%), poorly sorted, angular, granule sized calcined flint <9mm. Rare (1%), poorly sorted, rounded very coarse sand-sized chalk <3mm.	These sherds are both oxidized orange on the exterior and reduced brown in both the core and the interior surface and measure > 12mm. The most likely date for these sherds is Late Bronze Age, between 1150 –700 BC.

CLAY AND TEMPER SOURCES

There are pockets of Clay-with-flints Tertiary geology within close proximity to the cross-ridge dyke. This was potentially exploited, with the clay being utilized for one of the fabrics, Q2, as discussed above. The Late Bronze Age period heralds the use of new clays with iron oxide inclusions quite often associated with different areas, such as Wadhurst, more than 15km distant. It is also likely that the coastal plains, containing brickearth, were

perhaps utilized for the other quartz fabric, Q1, which contains smaller, rounded quartz, indicative of waterborne sources.

Flint

The flint temper is likely to have come from nearby nodules or the Clay-with-flints. These are all calcined and would have been burnt in fires to aid the grinding process. The 'crazy paving' affect can clearly be seen under a hand lens.

Iron Oxides

The iron oxides are pisolithic iron oxides from places further afield, such as Wadhurst, as found in other Late Bronze Age assemblages in Sussex and typical of this period.

Quartz

There are two very different types of quartz present in these assemblages. The majority are very worn and rounded, mostly clear in colour and probably derived from local sources including beach sand or brickearth from the coastal plain. Just four sherds from Stanmer Great Wood consist of larger quartz granules, possibly from the Clay-with-flints sources, which compare favourably with results from laboratory thin-sectioning and testing of local clay sources (Fisher 2009), as well as some excavated downslope at Varley Halls in Coldean, Brighton (Fisher 2008).

Grog

The grog-tempered ware from Pudding Bag Wood is unusual in that it consists of up to 50 percent grog which would make for a very weak fabric. The sherds are quite fine, so it is very likely that these pots would have been small and possibly used for tableware. They would certainly not have been used for heavy-duty functions such as cooking, as there were no traces of burnt food residues or sooting on the exterior. This fabric has been defined by Green (1977) as a soapy fabric. The sherds are not as soapy as most Roman East Sussex wares, but they are most likely from this period (David Rudling, pers.comm).

Chalk

Only one sherd, in one fabric, had chalk in it and only one percent inclusions, so it is very likely that this made its way into the pot accidentally, rather than being a natural inclusion in the clay or deliberately added.

POTTERY FORMS

The majority of the sherds are too small to allow vessel shape or estimated vessel equivalent sizes to be determined. They represent small body sherds, with just one small sherd from the basal deposits of the Pudding Bag Wood ditch suggesting a small, Late Bronze Age, shouldered jar form (type 12, Ellison 1978). Another Late Bronze Age sherd is 12mm thick and may be from a large pot, but no form is discernable.

The Stanmer Great Wood sherds give few form identifications apart from one incomplete rim sherd (IO1 fabric), similar in form to a hemispherical bowl from Thundersbarrow (Cunliffe 1966). This fabric also contained four base sherds.

DECORATION

The majority of both assemblages consists of plain wares with little decoration, smearing or wiping on the surface. The Roman-British sherds from Pudding Bag Wood have a much smoother exterior surface which has been deliberately reduced in the kiln during firing, a common method in local Roman production centres in South-East England. In comparison, the interior of these sherds appears to have been left in the rough.

The majority of the Stanmer Great Wood assemblage consists of post Deverel-Rimbury plain wares with little decoration, evidence of smearing (excepting one sherd from fabric IO1) or wiping on the surface. A couple of sherds from fabric IO1 have some incised marks on them, typical of decorated wares and comparable with some of the Caburn sherds (Curwen and Curwen 1927) and Thundersbarrow ceramics (*ibid.*). Two sherds from fabric Q1 are burnished and are probable intrusive Iron Age sherds.

FEATURES AND FABRIC

Table 5. Fabric count from Stanmer Great Wood and ditch in Pudding Bag

STANMER GREAT WOOD				Sherd thickness and attributes
Fabric type ;	Date	Total	%	
F1	LBA	1	1.8	10mm
F2	MBA	1	1.8	8mm fine ware
IO1	LBA	30	55	12mm
IO2	LBA	3	5.5	10mm
IO3	EIA?	6	11	7mm fine ware
IO4	LBA	2	3.7	11mm thick
IO5	LBA	2	3.7	12mm thick
Q1	IA?	2	3.7	15mm burnished ware
Q2	LBA	4	7.4	7mm fine ware Clay-with-flint quartz
Re-fired sherds	LBA?	3	5.5	18mm thick
PUDDING BAG WOOD				Sherd thickness and context
Fabric type	Date	Total	%	
G	RB	10	83	<6mm. Primary ditch fill E
IO	LBA	2	17	<12mm. Base of ditch

DATING

Later Bronze Age

The majority of the Stanmer Great Wood assemblage fits nicely within the Sussex framework of post Deverel-Rimbury plain wares (1150–950 BC), with some developed plain wares and decorated wares (950–800BC) and a small quantity of earlier Deverel-Rimbury Middle Bronze Age ceramics (1700–1150 BC). When looking at the ceramics in association with the flint assemblage, we can certainly suggest a construction date placed within the Bronze Age period.

The Pudding Bag Wood excavation produced just two sherds (17 percent of the assemblage) which can be dated to the Late Bronze Age, but these came from the very base of the ditch and could be residual, falling from the upturned spoil from the bank of the mound. With such a small number, it is difficult to use these sherds as direct dating evidence. However, looking at associated finds, we can start to draw together a likely date for the site. Field walking in the same fields in 1990 found pottery and flintwork from the neolithic and Roman periods (Funnell 2002) but no Bronze Age finds. An earlier excavation produced no finds (SMR TQ 30 NW 55). The flint finds from the latest excavation are Late Bronze Age in date, which corresponds well to the two Late Bronze Age sherds found at the base of the ditch.

Iron Age

Some later fabrics from the Stanmer Great Wood excavation were assigned to the Iron Age but were so few in number (14 percent) that they have been regarded as residual. They help to extend the timeline for activity on the site, but do not necessarily help date the feature.

Romano-British

The bulk of the Pudding Bag Wood assemblage can be assigned to the Romano-British period, with 83 percent of the sherds being East Sussex Ware. This may date the feature but could also be residual, since it was contained in the secondary fill of the ditch (layer E) and therefore not *in-situ*. No Romano-British features were found during excavation and few exist within a 2km radius, so it is unlikely that there was much activity of this period on site apart, perhaps, from agricultural endeavours. The assemblage could be consistent with activity such as that of the manuring of fields, with consequent deposition in the ditch fills.

CONCLUSION

At Stanmer Great Wood the assemblage fits a typical profile of Late Bronze Age everyday wares, with a majority of medium wares and fewer fine and highly decorated wares. A lack of complicated forms makes it difficult to identify estimated vessel equivalents or to examine the percentage of forms in specific deposits. The flint distribution was also Bronze Age in date and was concentrated throughout the bank as well as the ditch and so is unlikely to result from post-construction deposition which would occur in the ditch (which had no evidence of re-cutting).

The most common fabric was IO1, which accounted for 55 percent of the assemblage and represents a typical Post Deverel-Rimbury, Late Bronze Age fabric, with the use of different pisolithic clays being used. There is a lack of very coarse wares of substantial girth, apart from the refired sherds which are very thick at 18mm in width. These are curious; they have been refired, perhaps by the simple action of a cooking pot which exploded on the fire and was left to burn, thus reducing the integrity of the sherds and effectively firing out the inclusions, making them slightly more difficult to identify.

The majority of the Pudding Bag Wood sherds are of the Romano-British period, with a couple of Late Bronze Age sherds at the very base of the ditch. However, it should be noted that the stratigraphy shows signs of earlier agricultural activity prior to the creation of the mound and, possibly, the ditch. If such activity was Bronze Age in date, it is possible that this layer contained residual Bronze Age sherds which may have been thrown up onto the bank when it was constructed: over time, the residual material from the top of the bank would have fallen into the ditch, thus confusing the date of the ditch fills. The assemblage most likely fits the profile of simple domestic functions, with a lack of fine wares and highly decorated wares. Form and decoration are discussed above. A lack of complicated forms makes it difficult to identify estimated vessel equivalents or to examine the percentage of forms in specific deposits.

Suggested dates for both sites have been assigned to fabrics as discussed above and are abbreviated in tables 4 and 5.

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