Prehistoric ceramics and associated radiocarbon dating from the hinterland of South Cadbury, Somerset, England: Part 1: Chronological framework and character of the Early Neolithic to Late Bronze Age pottery.

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PREHISTORIC CERAMICS AND ASSOCIATED RADIOCARBON DATING FROM THE HINTERLAND OF SOUTH CADBURY, SOMERSET, ENGLAND. PART 1: CHRONOLOGICAL FRAMEWORK AND CHARACTER OF THE EARLY NEOLITHIC TO LATE BRONZE AGE POTTERY

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with contributions by Derek Pitman and Kerry Barrass
and illustrations of pottery by Amanda Tabor

SUMMARY

This first of three papers presenting selected prehistoric pottery and associated radiocarbon dates from the landscape surrounding Cadbury Castle, Somerset, covers periods from the Early Neolithic to the Late Bronze Age. Ceramic petrological and chemical analysis of a selection of the pottery has qualified the macroscopic fabric descriptions and given evidence for the sourcing of raw materials whilst shedding light on changing cultural influences in the region which will be explored in part 3.

INTRODUCTION

Excavations from 1994 to 2007 by the South Cadbury Environs Project (SCEP) generated rich assemblages of prehistoric pottery from secure contexts, several of which have been dated by multiple, consistent radiocarbon dates. This has enabled dating of activity in the area around South Cadbury, Somerset (Fig. 1) whilst providing a valuable comparative resource of well-dated pottery styles of regional importance. The results have enabled the refining of Leslie Alcock's assessment of the prehistoric pottery recovered during his excavations at Cadbury Castle from 1966-70 and in 1973 which identified a ceramic sequence ranging from the Early Neolithic to the Romano-British periods (Alcock 1980). It has also called into question the dating of Early and Late Iron Age pottery in the final publication of the hillfort excavations, which may necessitate significant re-interpretation of key events there (Barrett *et al*. 2000, 25; Tabor and Jones in prep.). The article is in three parts. Parts 1 and 2 cover respectively the Early Neolithic to Late Bronze Age and Late Bronze Age to the Late Iron Age, aiming to:

1) Provide a representative range of prehistoric pottery within a strong chronological framework in an area for which data were hitherto limited;
2) Explore preferred sources for the production or importation of pottery;

The aim of part 3 is to:

3) Explore changes in cultural/regional interaction and influences over time exemplified by the pottery from the Early Neolithic to the Late Iron Age.

The article supersedes earlier outlines of a ceramic type series (Tabor (ed.) 2002, 34-50; 2004, 7-16; (ed.) 2004). There is a slight overlap in the Late Bronze Age across parts 1 and 2 to retain the integrity of two long site sequences. Provisional distributions of the pottery have been published for the project's fieldwork work up to 2003 and in very summary form for the whole study area (Tabor 2004; 2008a, 74-7, figs 35, 50, 52, 56, 86).

The macroscopic analysis of the Neolithic pottery has been presented previously in this journal (Tabor 2018) so that it is treated fully only in the sections dealing with petrological and chemical analysis. The numbering of illustrated sherds runs consecutively from the earlier article.

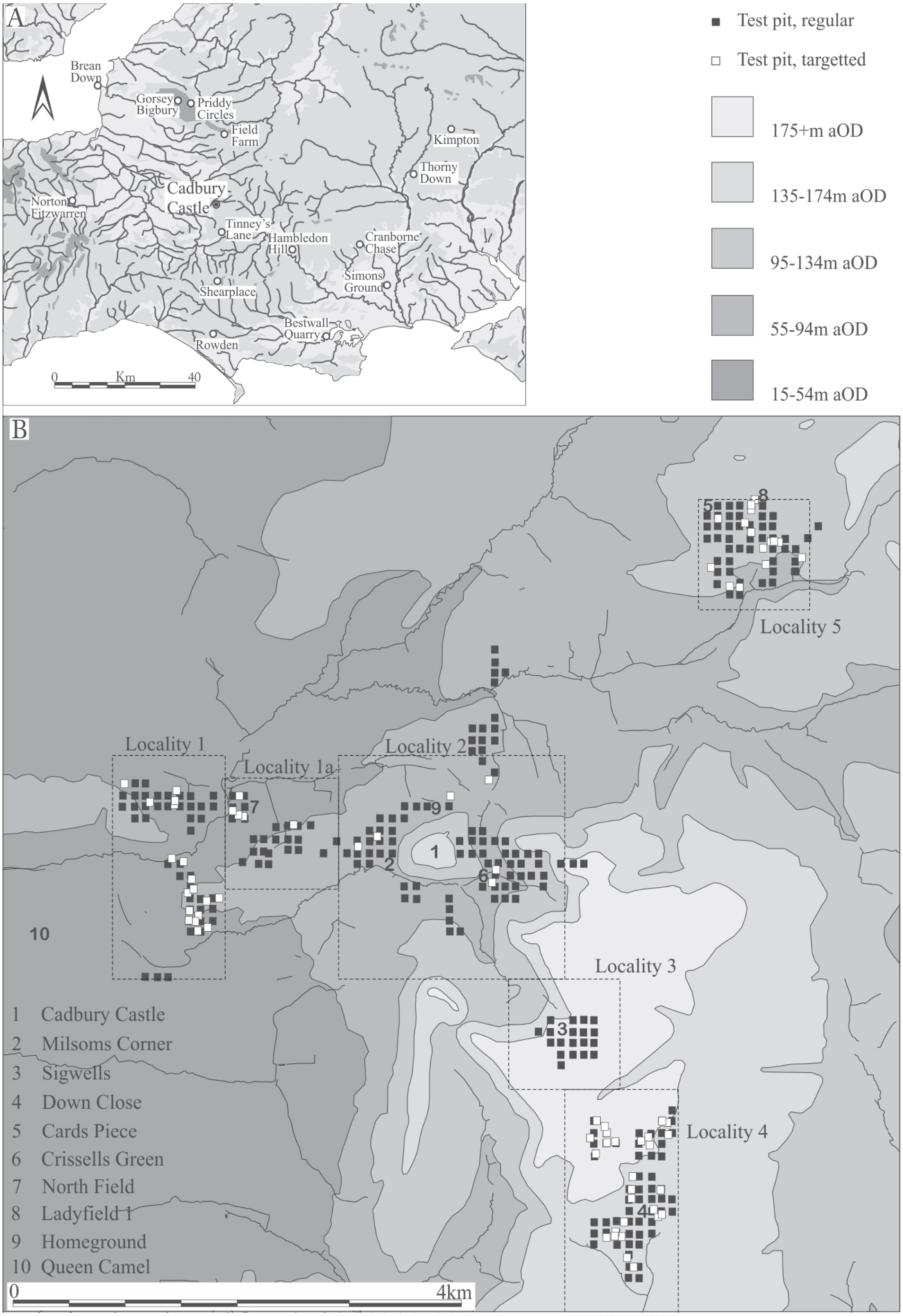

Fig. 1 (A) Location of South Cadbury Castle and key sites outside the study area; (B) SCEP study area showing topography, locations of test pits and sites from which Neolithic and Bronze Age pottery in the text was collected

NEOLITHIC TO LATE BRONZE AGE CHRONOLOGICAL FRAMEWORK

Over the course of SCEP's life a total of 45 radiocarbon assays have been carried out on material recovered from its fieldwork of which 23 cover the period from the Early Neolithic to the Late Bronze Age (Table 1). They were obtained for Milsoms Corner (Early Neolithic, Middle and Late Bronze Age), Crissells Green (earlier to later Middle Bronze Age), Sigwells (Middle to Late Bronze Age) and Ladyfield 1 (Middle Bronze Age). They are supplemented with two obtained from material in a pit on South Cadbury hilltop and by three from Queen Camel obtained by Wessex Archaeology.

None of the absolute dating derives from residues on individual sherds which would normally be regarded as the ideal association for a ceramic series. However, the material tested was either short life carbonised flora or at least moderately fresh bone. It has been possible to form meaningful groups of dates covering several periods which provide strong support for the chronology of particular excavated features from the study area whilst demonstrating that particular pottery was in circulation at a specific time. There is no claim that the dates give the starts or ends for circulation of styles. The tabulated list shows the range of probabilities for each assay at 2-sigma or 95.4% probability. The most probable dates within that range are in bold (Table 1). The Early Neolithic dates were discussed previously when they were presented simply at 1 and 2-sigma (Tabor and Randall 2018, 20). The alternative presentation of the highest probability at 95.4% has given a very tight group of four median dates from Milsoms Corner ranging from 3577.5 to 3580.5 cal BC with a near outlying median at 3563 cal BC. The deposit for a sixth date is likely to be later as it was relatively high in a pit's stratigraphic sequence. The assemblage was characteristic of the South-Western Plain Bowl style (Tabor 2018, 24).

Middle Neolithic pottery comprised a handful of probably residual small sherds in Fengate and Mortlake Peterborough ware sub-styles from Sigwells and Grooved Ware was restricted to most of a single Clacton sub-style bowl from Cadbury Castle site A (Tabor 2018, 26-7). It was considered that none of the sherds from this span of over a millennium warranted close petrological inspection and their contexts were not sufficiently secure to warrant use of radiocarbon dating. Although absent from Cadbury Castle, Beaker pottery was fairly widespread in the study area, but the sherds were small and an attempt to date a human bone from an associated inhumation failed due to insufficient collagen.

Two overlapping radiocarbon dates associated with the primary silt in Crissells Green ring ditch are the earliest from the Bronze Age for the Cadbury study area giving a *terminus post quem* for the middle fills which were cut by a grave pit including an articulated inhumation providing a *terminus ante quem*. This brackets the pottery within a broad span between 1670 to 1500 cal BC and 1410 to 1250 cal BC. However, the earlier range would be more acceptable for the biconical forms of at least two of the sherds in a group comprising by weight 96.1% grog and grog and shell mixtures. The Trevisker assemblage from Queen Camel also included grog, but with a significant number of calcite and grog and calcite tempered sherds (Jones 2018, 59-60). Bayesian modelling gave a date range of 1580 to 1425 cal BC for the opening and initial filling of the ditch which was judged to be broadly commensurate with the date of the pottery (Barclay and Wyles 2018, 84).

Superficially, the radiocarbon dates associated with the Milsoms Corner Middle Bronze Age ditch are problematic. The excavation of the ditch is given a *terminus post quem* by the fills of the Beaker burial through which it was cut. The initial and lower middle fills were erosion deposits interleaved with deposits of singular bones, typically cattle mandibles, which accumulated at least moderately rapidly, possibly episodically, prior to a stage of relative stability. Thereafter a slowly formed upper middle silt deposit cannot be distinguished from the uppermost silt. A date of 1407-1191 cal BC at 91.7% probability for a cattle mandible from immediately above the interface of the upper and lower middle deposits is acceptable but that of 1425-1285 cal BC at 95.4% for bone from a residual channel cut in the uppermost fills is much too early for what is a Late Bronze Age context. However, the two dates are broadly similar and the stratigraphically lower of the two is from a fill which starts to form over deposits containing sherds with biconical, Trevisker and Deverel-Rimbury traits tempered with grog and, in one instance, sparse calcite. The range of inclusions compares well with the assemblage from Queen Camel.

The modelled dating from Queen Camel overlaps with all of a close set of three dates from cereal grains within the Sigwells cooking pit which are themselves congruent with a single date obtained for a bone lying directly on the cut rock base of the surrounding enclosure ditch. The dates ranged from 1506-1415 cal BC to 1492-1301 cal BC with the highest probability focussed on the second half of the 15th century cal BC. Its Deverel-Rimbury style pottery weighed over 4.5kg, 98.9% of which was calcite tempered. It is likely to be a residue of a singular event. A single unstratified Trevisker sherd from Sigwells included both grog and calcite and may be broadly contemporary with the Queen Camel material.

Sherds with Deverel-Rimbury traits were associated with later dates of 1288-1056 cal BC at 95.1% probability at Lady Field 1 and, indirectly, 1222-1047 cal BC at 95.4% at Sigwells. The latter pottery was from a post hole forming part of a metal-working structure with fills including slag and casting mould fragments for

TABLE 1 SCEP AND CADBURY CASTLE EARLY NEOLITHIC TO LATE BRONZE AGE RADIOCARBON DATES

	Site	Cut/fill	Material	Lab ID	Radiocarbon Age (BP)	Calibrated date BC	Area under curve at 2-sigma
Early Neolithic	MC	F293/1706	hazel shell	OXA-26984	4773 ± 30	**3641 - 3517** 3396 - 3385	**93.8%** 1.6%
	MC	F652/1888	hazel shell	OXA-26985	4809 ± 31	3653 - 3624 **3602 - 3524**	25.3% **70.1%**
	MC	F652/1889	hazel shell	OXA-26986	4780 ± 31	**3643 - 3518**	**95.4%**
	MC	F652/1886	hazel shell	OXA-26987	4762 ± 30	**3640 - 3515** 3422 - 3419 3412 - 3405 3399 - 3384	**90.2%** 0.5% 1.2% 3.6%
	MC	F737/2365	hazel shell	OXA-26988	4766 ± 30	**3640 - 3516** 3409 - 3405 3399 - 3384	**92.0%** 0.5% 2.8%
	MC	F737/2362	hazel shell	OXA-26989	4709 ± 30	3631 - 3567 3536 - 3492 **3469 - 3373**	23.7% 21.2% **50.5%**
	SCP	154i	hazel shell	I5972	4705 ± 115	**3706 - 3263** 3244 - 3385	**86.3%** 9.1%
	SCP	154ii	antler	I5970	4460 ± 120	3514 - 3423 3404 - 3399 **3384 - 2882**	5.0% 0.1% **90.3%**
Earlier to later Middle Bronze Age	CG1	1/021	*Bos taurus*	SUERC-29040	3300 ± 30	**1670 - 1500**	**95.4%**
	CG1	1/021	*Homo Sapiens* mandible	SUERC-29041	3205 ± 30	**1530 - 1410**	**95.4%**
	CG2	2/	*Homo Sapiens* femur	SUERC-29042	3050 ± 30	**1410 - 1250** 1240 - 1210	**92.6%** 2.8%
	QC	349/482	barley	UBA-30458	3214 ± 36	1607 - 1583 1559 - 1553 **1546 - 1416**	4.9% 0.9% **89.6%**
	QC	426/429	wheat	UBA-30459	3119 ± 30	**1449 - 1292**	**95.4%**
	QC	349/353	wheat	UBA-30457	3084 ± 29	**1420 - 1268**	**95.4%**
	Sig8	F003/8025	*Bos taurus* mandible	OxA-23501	3141 ± 27	1496 - 1472 **1464 - 1379** 1342 - 1307	7.1% **76.0%** 12.3%
	Sig10	F013/10060	barley	OxA-23712	3128 ± 27	1492 - 1482 **1454 - 1372** 1358 - 1301	1.5% **68.1%** 25.8%
	Sig10	F013/10054	barley	OxA-23711	3190 ± 28	**1506 - 1415**	**95.4%**
	Sig10	F013/10053	barley +	OxA-23710	3145 ± 28	**1498 - 1383** 1340 - 1311	**86.0%** 9.4%
	MC	F001/1499	*Bos taurus* astralagus	OxA-23502	3094 ± 27	**1425 - 1285**	**95.4%**
	MC	F001/1068	*Bos taurus* mandible	BM-3154	3030 ± 40	**1407 - 1191** 1177 - 1163 1144 - 1131	**91.7%** 1.6% 2.0%
	Sig16	16020	barley	UBA-21918	3013 ± 45	**1398 - 1121**	**95.4%**
	Lady1	004	barley	UBA-21920	2974 ± 34	1367 - 1364 **1288 - 1056**	0.3% **95.1%**
	Sig19	F011/19048	barley, spelt	OxA-23716	2936 ± 26	**1222 - 1047**	**95.4%**
Late Bronze Age	Sig19	F043/19096	flax	UBA-21919	2842 ± 52	1193 - 1143 **1131 - 894** 873 - 851	4.1% **89.8%** 1.6%
	MC	F082/1145	wheat	OxA-23714	2835 ± 27	1083 - 1064 **1058 - 912**	2.1% **93.3%**
	MC	F001/1549	*Bos* or *Cervus* pelvis	BM-3152	2810 ± 80	1196 - 1141 **1134 - 811**	5.4% **90.0%**
	SS	F025/159	Red Deer antler	OxA-23721	2786 ± 29	**1007 - 889** 881 - 846	**85.6%** 9.8%

(MC = Milsoms Corner; SCP = South Cadbury Castle, site P; CG1 = Crissells Green trench 1; CG2 = Crissells Green trench 2; QC=Queen Camel; Sig8 = Sigwells trench 8; Sig10 = Sigwells trench 10; Sig16 = Sigwells trench 16; Sig19 = Sigwells trench 19; Lady1 = test pit ST 65730 28246; SS = Sheep Slait). All results were calibrated using Calib rev 7.0 with data from INTCAL 13 (Reimer et al. *2013) and are detailed in Table 1. All results are quoted at 2-sigma (95.4% probability). The dates from Queen Camel are included courtesy of Lee Newton and Wessex Archaeology Ltd.*

at least three different artefacts. The radiocarbon date was from a scoop on the structure's periphery which included related mould fragments probably attributable to the Wilburton metalworking tradition.

The decorated sherds associated with the later stages of the metalworking structure's life straddle the end of the Middle and the opening of the Late Bronze Age, taking in the currencies of late Deverel-Rimbury and the post Deverel-Rimbury plain ware styles. On the other hand, the residual channel cutting the upper fills of the Milsoms Corner ditch is from broadly the same event horizon as the insertion of a jar into its uppermost fill and the deposition of a bronze shield which have dates focussed on the early 10th century BC, implying a late Plain Ware date (Needham *et al*. 2012, 477).

At the outset of SCEP an undue value was attached to the chronological significance of pottery fabrics. As will be seen below some combinations of inclusions survived or were re-introduced over millennia. Thus, calcite mixtures Q, E and G of the Neolithic and P from the Middle Bronze Age are readily relatable to petrological code descriptions for Late Bronze Age and Iron Age pottery from Cadbury Castle (respectively codes a, b, b and k; Williams and Woodward 2000b, 325).

The recording and analytical methodology

All sherds were examined individually at x8 magnification using a graduated linen tester lens. Their fabrics, forms and dimensions were recorded and the information added to an Excel spreadsheet. Petrological and chemical analysis has necessitated further revision of the fabrics whilst also shedding light on the sources for raw materials.

A PETROLOGICAL STUDY OF CERAMIC FABRICS
Timothy Darvill

Introduction

Portions of 24 ceramic vessels selected as representative of the range of fabrics current in the Early Neolithic, Beaker, Early Bronze Age, Middle Bronze Age, and Late Bronze Age assemblages were presented for analysis (Table 2). These samples, numbered P1-P24 for identification purposes, derived from assemblages recovered from excavations at Milsoms Corner, Sigwells, Crissells Green, and a test pit at ST 61167 25412; no samples were examined from the broadly contemporary assemblages recovered from Cadbury Castle and no samples were examined from the Early Neolithic Southern Decorated, Middle Neolithic Peterborough, Late Neolithic Grooved Ware, or Early Bronze Age Collared Urn assemblages. Table 3 summarizes available contextual information for the samples examined.

The aim of the analysis was to correlate macroscopically defined Fabric Groups with recognizable clay types and, where possible, suggest likely sources for the clays and other raw materials used in the production of the early prehistoric pottery from the investigated sites. Accordingly, the sample sherds from the pre-defined Fabric Groups were examined and described in hand specimen before having a small portion cut off for the preparation of standard thin sections for examination under a petrological microscope. Two thin sections were prepared for each sample in order to provide a representative view of the fabric. The thin sections were prepared following normal procedures for prehistoric pottery, the sample pieces being impregnated with microcrystalline wax before being polished, affixed to a glass slide, and then ground to a target thickness of 0.03mm (Peacock 1970; Darvill 1983, 552-5). The thin sections were examined under a conventional petrological microscope. A chemical analysis of the sample sherds was undertaken using a portable X-Ray Fluorescence Spectroscopy (pXRF) in order to assist in discriminating the main clay types.

Fabrics and clay types

Appendix 1 provides descriptions of the fabrics represented by each sample sherd. On the basis of ground mass characteristics, the range of minerals represented, and the size range and density of the principal minerals present six main clay types were recognized. These are described in Appendix 2. Fig. 2 shows photomicrographs of representative sections for each clay type. The pXRF analysis, which focuses on the chemical composition of the clay matrix, broadly supports these identifications with Clay Types A, C and E forming a group, Types D and F forming a second group. Clay Type B mainly occurs within the first cluster but with some outliers. P9 and P16 lie slightly outside either main cluster and are therefore slightly anomalous. Strong chronological patterning is however present in the distribution of vessels by Chemical Group. Group C includes all of the Neolithic, Beaker, Biconical, possible Biconical and Trevisker wares together with a few samples of later ware, while Groups A and B comprise exclusively Deverel-Rimbury and post-Deverel-Rimbury wares.

Additives of various sorts were present as tempering agents in most of the samples examined, appearing under the microscope as clasts within the clay matrix. In general these additives were well crushed and evenly distributed. These inclusions provide the main basis for defining the Fabric Groups used during the analysis and quantifications of the assemblages from excavated sites. The range of materials used as additives

TABLE 2 FABRIC IDENTIFICATIONS AND SAMPLE SHERDS

Sample Number	Fabric Code	Clay Type	Chemical group	Period	Tradition	Sample Details	Illustration	Date (cal BC)
P1	S	A	C	EN	SWPB	MC Tr1, F619, C1839. Sherd 6. Rim sherd.	Fig. 3B, 3*	
P2	B	B	C	EN	SWPB	MC Tr1, F652, C1899. Sherd 1-2. Rim and body sherds.	Fig. 5, 5*	3653-3348
P3	V	B	C	EN	SWPB	MC Tr1, F652, C1888. Sherd 4. Body sherd with lug.	Fig. 5, 6*	3653-3348
P4	S	C	C	EN	SWPB	MC Tr1, F737, C2362. Sherd 8. Rim sherd.	Fig. 7, 10*	3631-3373
P5	A	B		EBA	Beaker	MC Tr1, F001, C1039. Sherd 1. Body sherd.	Fig. 5, 41	
P6	C	B	C	EBA	Beaker	MC Tr1, F350, C1545. Sherd 1. Base angle sherd.	Fig. 5, 43	
P7	A	B		EMBA	Trevisker	MC Tr1, F001, C1626. Sherd 1. Body sherd.	Fig. 5, 47	
P8	S	B	C	EMBA	Trevisker Dev-Rim?	MC Tr1, F001, C1699. Sherd 54. Rim sherd.	Fig. 5, 53	
P9	Q	B	B	MBA	Dev-Rim	Sig Tr10, F013, C060. Sherd 14. Form CW2A. Profile.	Fig. 6, 70	1508-1415
P10	E	C	A	MBA	Dev-Rim	Sig Tr10, F013, C054. Sherd 105-6. Form CW1A. Rim sherd.	Fig. 6, 74	1508-1415
P11	Q	D	A	MBA	Dev-Rim	Sig Tr10, F013, C054. Sherd 117. Rim sherd.	Fig. 6, 71	1508-1415
P12	B	E		MBA	Dev-Rim	Sig Tr10, F013, C060. Sherd 2. Rim sherd.	Fig. 6, 78	1491-1316
P13	Q	E	C	MBA	Biconical? Dev-Rim?	Sig Tr19, F022, C027. Sherds 2-3. Form CW2A or biconical. Rim sherd.	Fig. 5, 69	
P14	G	B	A	LBA	PDR	Sig Tr19, F013, C052. Sherd 4. Base angle sherd.	Fig. 7, 91	
P15	N	F	A	M-LBA	Dev-Rim	Sig Tr19, F053, C131. Sherd 1. Rim sherd.	Fig. 7, 85	
P16	M	E	B	MBA	Dev-Rim	Sig Tr19, F002, C080. Sherd 4. Form CW2A. Body sherd.	Fig. 5, 68	
P17	A	B	C	EMBA	Biconical	TP 61167 25412. C009. Sherd 2. Body sherd.	Fig. 5, 55	
P18	B	C	C	EMBA	Biconical? Dev-Rim?	CG Tr2, C010. Sherd 1. Cordoned body sherd.	Fig. 5, 60	1670-1410
P19	A	C	C	EMBA	Biconical	CG Tr2, C014. Sherd 1. Rim sherd.	Fig. 5, 57	1670-1410
P20	D	A	C	M-LBA	Mould	Sig Tr19, F011, C048. Sherd 5. Mould.	Not illust	1261-1047
P21	D	A	C	M-LBA	Mould	Sig Tr19, F064, C157. Sherd 3. Mould.	Not illust	
P22	E	F	A	LBA	PDR	MC Tr1, F082, C1150. Sherd 18. Type 3. Rim sherd.	Fig. 7, 92	1111-912
P23	E	D	A	LBA	PDR	MC Tr1, F082, C1145. Sherds 2-3. Type 10. Rim sherd.	Fig. 7, 96	1111-912
P24	E	D	A	LBA	PDR	MC Tr1, F165, C1369. Sherd 1. Form DA3. Rim sherd.	Not illust	1000-400

MC Tr1= Milsoms Corner, Trench 1; Sig Tr10= Sigwells, Trench 10; Sig Tr19= Sigwells, Trench 19; CG Tr2= Crissells Green, Trench 2.
*SWPB= Southwestern Plain Bowl / Dev-Rim= Deverel-Rimbury / PDR= Post-Deverel-Rimbury *Tabor and Randall 2018.*

TABLE 3 MACROSCOPICALLY DEFINED PREHISTORIC FABRICS BY FABRIC GROUP

Fabric Code	Fabric description	Samples examined	Clay Types
A	Medium grog	P5; P7; P17; P19	B
B	Light vesicular fabric with some grog, sandstone and fine-crushed shell.	P2; P18	B, C, E
C	Light grog	P6	B,
D	Fine micaceous	P20; P21	A
E	Medium calcite and fossil shell	P10; P22; P23; P24	C, D, F
G	Medium calcite, limestone and fossil shell	P14	B
M	Heavy calcite with limestone	P16	E
N	Medium limestone with calcite	P15	F
Q	Light calcite and occasional shell	P9, P13	B
S	Light limestone tempered / vesicular with some grog or clay pellets	P1; P4; P8	A, B, C
V	Medium grog.	P3	B
X		Not sampled	
P	Coarse calcite and grog	Not sampled	
I	Calcite, sand, and fossil shell	Not sampled	
H	Calcite and sand	Not sampled	
R	Plate shell	Not sampled	
W	Crushed shell and limestone	Not sampled	
K	Grog and shell	Not sampled	

TABLE 4 IDENTIFIED TEMPERING AGENTS AND ADDITIVES

Material	Incidence	Clay Types
Calcite	?P1, P9, P10, P11, P13, P14, P15, P16, P22, P23, P24	A, B, C, D, E, F
Grog	P3, P4, P5, P6, P7, P8, P11, P12, P14, P17, P18, P19	A, B, C, D, E
Sandstone	P2, P8, P12, P15	B, F
Limestone (fine crushed)	P2, P3, P4	B
Limestone (shelly)	P9, P14	B
Limestone (shell and micro-fossils)	P10, P13, P22, P23, P24	C, D, E, F
Limestone (ooliths)	P15, P16	E, F
Fresh shell	P10, P11	C, D
Sand	?P2, P3	B
Igneous rock	P5	B
Quartzite	P9, P12	B
No additives	P20, P21	A

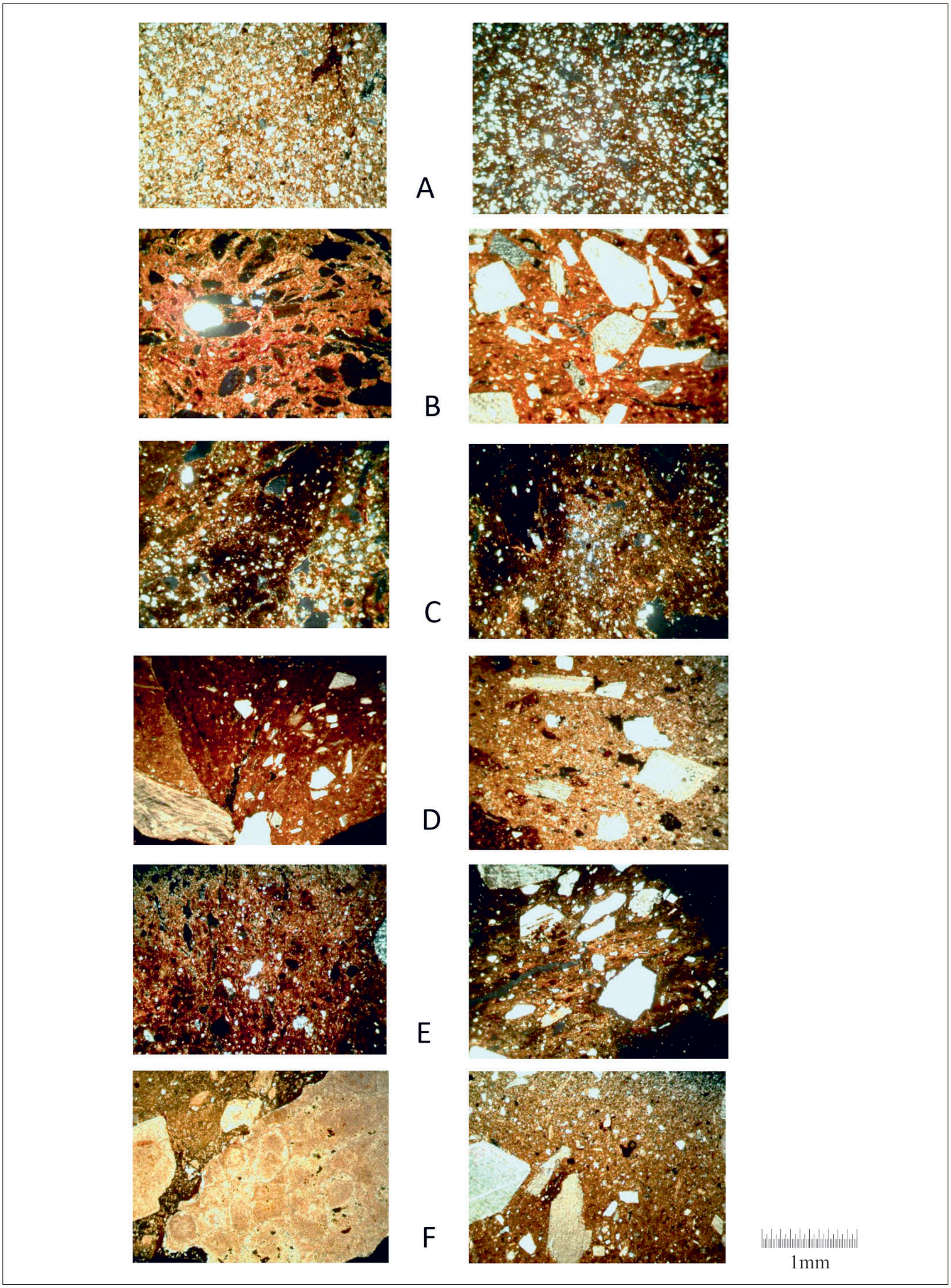

Fig. 2 Photomicrographs illustrating the identified Clay Types
A: P1 (left) and P21 (right); B: P2 (left) and P9 (right); C: P18 (left) and P19 (right); D: P10 (left) and P11 (right); E: P12 (left) and P13 (right); F: P15 (left) and P22 (right). All images taken in polarized light. Images: Timothy Darvill)

is considerable and includes soft and hard materials with a variety of thermal properties suggesting that particular fabrics were created for particular functional needs (cf. Darvill 2004). Combinations of additives are common, typically two materials, but occasionally more. Table 3 cross-tabulates the defined Fabric Groups and their main characteristics with the samples examined in this study and the identified Clay Types. Table 4 lists the main identified additives in relation to defined Clay Types.

Grog (crushed pottery) was the most commonly observed additive, being present in twelve samples of all periods and from five of the six Clay Types, only Clay Type F having no visible grog in the samples studied. In a few samples, for example P1, clay pellets not well homogenized with the rest of the matrix gave the appearance of grog. Grog in P7 and P14 was generally the same fabric as the surrounding matrix, but elsewhere the grog was generally in a contrasting fabric. In P18 the grog has the same basic characteristics of the surrounding matrix, and was of the same Clay Type, but was fired under different conditions.

Calcite was very widely represented, being observed in ten samples of all periods and from all six Clay Types. The vesicular fabric represented in P1, an early Neolithic vessel from Milsoms Corner, was also probably tempered with calcite to judge from the angular shape of the voids but the rock fragments subsequently leached out. A similar process could be seen in progress with samples P2, P3 and P4 from Milsoms Corner where voids could be seen on the surfaces but within the core of the sample fragments of limestone remained in good condition.

Limestone was represented in twelve samples, although several different kinds were represented. Three samples, P2, P3, and P4 all from Milsoms Corner, contained very fine crushed limestone in which it was impossible to see much structure within the calcareous lumps. Shelly limestone was represented by samples P9 and P14, both from Sigwells, while shell together with microfossils bound together with a thick calcareous cement were present in samples P10, P13, P22, P23, and P24 from Sigwells and Milsoms Corner. Two samples, P15 and P16 from Sigwells, contained fragments of oolitic limestone. Limestone was represented in samples of all Clay Types except Type A.

Fresh shell, possibly clam or a similar bivalve, was present in fairly large pieces in sample P10 from Sigwells in Clay Type C, and in a much more finely crushed form in P11 from the same site in Clay Type D.

Sandstone was present in four samples, P2, P8, P12 and P15 from Milsoms Corner and Sigwells, in Clay Types B and F, although only P12 could be said to be sandstone tempered as only very occasional pieces were represented in the other samples. The sandstone in P12 was coarse grained with an iron-rich silica cement – probably Old Red Sandstone. Quartzite was present in small amounts in samples P9 and P12 from Sigwells in Clay Type B, and quartz sand had probably been added to Clay Type B in the Early Neolithic vessels represented by P2 and P3 from Milsoms Corner.

Sample P5 contained one small fragment of what appears to be igneous rock, but the piece it too small to characterize in detail and may have accidentally become integrated with the fabric during clay preparation. Two samples, the Middle Bronze Age mould fragments from Sigwells represented by P20 and P21, contained no obvious additives perhaps because Clay Type A has a fairly sandy composition.

pXRF analysis

Derek Pitman and Kerry Barrass

Twenty-two sample sherds were analysed using a Thermo-Niton XL3t GOLDD+ analyser set to mining mode; P5 and P7 were not analysed as no viable sample remained after thin sectioning. All ranges were used allowing for a broad spectrum of analysis including light elements (down to Mg in the periodic table). Each analysis was run for a total of 160 seconds (20 main, 20 high, 20 low and 60 light). The analyses were then processed with major elements converted to their oxide state and then normalised (due to the limit of detection it is not possible to differentiate between calcium oxide and calcium carbonate, therefore results are expressed as the former). The results were first appraised qualitatively before being grouped statistically using cluster analysis. The final refined groups were then compared to the fabric groups.

The results of the analysis suggest three groupings on the basis of chemical composition, all primarily evident in the range of major elements. Overall, alumina and iron oxide concentrations remained broadly similar (c. 16% Al_2O_3 and c. 10% FeO) but calcium oxide and silica varied significantly (between 2% and 50% CaO and 20% and 60% SiO). Variation was initially grouped by calcium to silica ratio and was subsequently refined through cluster analysis (Fig. 3). The grouping based on chemical composition could be characterised as follows:

Chemical Group A: High concentrations of calcium with comparatively little silica. The concentrations of calcium would suggest the use of either a clay formed in a very calcareous environment or, more likely a fabric that has incorporated a calcium-based temper (such as calcium carbonate).

Chemical Group B: Medium levels of calcium and silica. This fabric falls between the other two groups in terms of composition. It is possible that it could be a variation of either of the other groups caused by fabric heterogeneity or, as suggested by the cluster analysis, form a broadly discrete group.

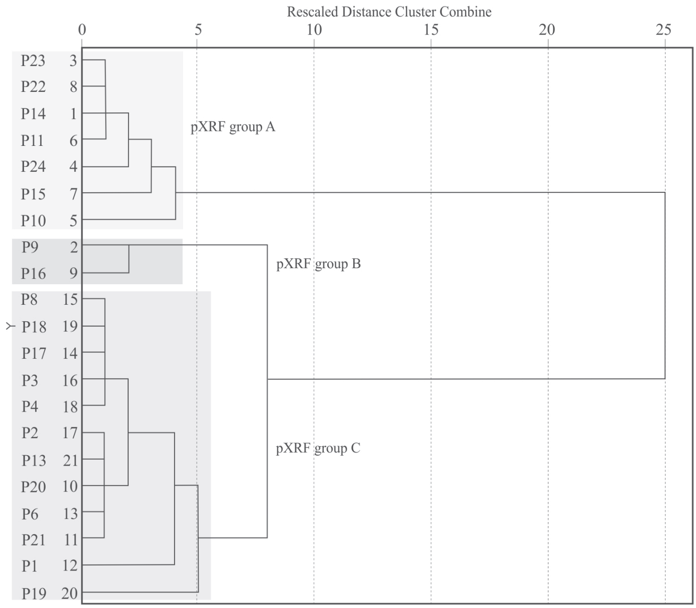

Fig. 3 Dendrogram showing the results of the cluster analysis highlighting the main Chemical Groups determined through pXRF analysis. (Chart: Derek Pitman)

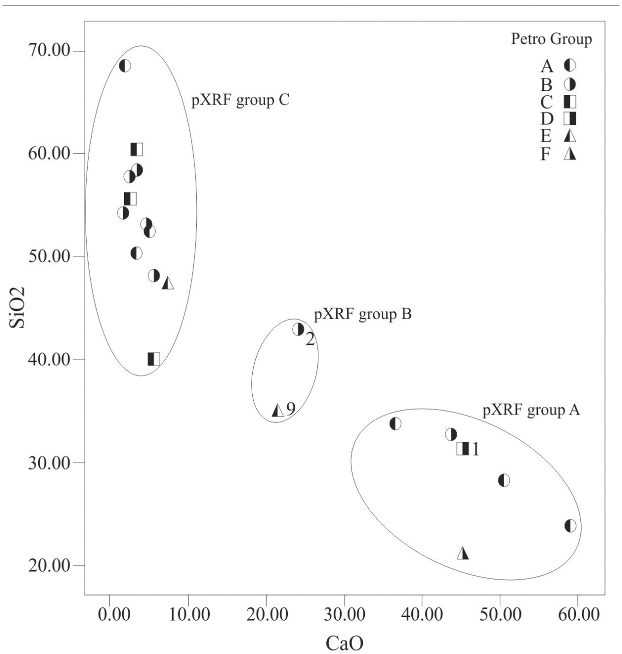

Fig. 4 Plot showing the concentrations of CaO and SiO_2 with colour representing the Clay Types identified through petrological analysis and ellipses to show the extent of pXRF-defined chemical groups. (Chart: Derek Pitman)

Chemical Group C: High levels of silica with very little calcium. This group is very different to Group A in that it is likely the product of a fabric that formed in the absence of calcium and is either tempered with a silica-rich component (such as sand/flint etc.) or relatively high in silica based incursions.

One sherd, P12, did not match any the above groups. A review of the data suggested that the location of the analysis may have either been focused on an iron-rich inclusion or an uneven, and highly porous section of the fabric causing an error in the light element range. Therefore it was excluded from the analysis. However, this sample is unusual in having a distinct sandstone and quartzite tempering as may derive from a source not represented elsewhere in the assemblage (see below).

The results of the chemical analysis were compared with the results of the petrological analysis (Fig. 4). For the most part the petrological groups fell within the range of the chemical groups. However, two sherds of Middle Bronze Age Deverel-Rimbury Ware failed to fall into the expected chemical groups (P9 and P16). This is not necessarily an issue when crossovers involve Chemical Group B (due to potential heterogeneity issues), however, one petrological group, Clay Type B, falls into both the high silica and the high calcium groups on the basis of the chemical composition of the sampled sherds.

Overall, the chemical analysis of the pottery suggests clear variation in either clay sources or fabric compositions or both. Reviewed independently, this analysis suggests that the six petrological groups fall within three broad chemical groups, one high in silica and one high in calcium. The one problematic sample needs some review but it is possible that the fabric has a high heterogeneity. As discussed above, however, Chemical Group C comprises all the Neolithic, Beaker, Biconical, possible Biconical and Trevisker wares analysed together with samples from a few later wares while Groups A and B contain only Deverel-Rimbury and post Deverel-Rimbury wares.

Clay sources

Six main Clay Types were recognized through the examination of the available thin sections under the petrological microscope. These need not equate with six separate sources as most outcrops exhibit a degree of lateral and vertical variation, while the use of different preparation methods can also create visible differences. The pXRF analysis suggests a minimum of two main sources, most likely three or perhaps four. The presence of distinctive clastic inclusions directs attention to possible source areas over or around appropriate outcrops.

The high proportion of fabrics containing calcite and/or limestone is interesting and spread through all six petrologically defined Clay Types. It may be noted that while all three Chemical Groups include samples with limestone and/or calcite; all except one (P16) in Chemical Group A includes calcite, all but one (P15) in Chemical Group A includes limestone. About half the samples in Chemical Group B and C include calcite and/or limestone although mainly one rock type or the other. Calcite dominated South Cadbury hillfort's Late Bronze Age Ceramic Assemblage 4 and often occurred with shelly limestone in the Early Iron Age CA5. Shelly limestone inclusions dominated the Middle Iron Age assemblages (Williams and Woodward 2000a, 259). Calcite is available within limestone formations on the Mendips approximately 20km to the north and limestone rich in fossil shell and oolitic limestone is widely available 2-3km east of Cadbury Castle. Sandstone is present in Clay Types B and F, and in Chemical Groups A and C. The type of sandstone represented broadly matches the Old Red Sandstone present in Peacock's Group 2 Glastonbury Wares (Peacock 1969, 46-8 and a source in the Mendip Hills) some 20+km to the north may be suggested.

Three broad types of clay are present in the landscape immediately west of Cadbury Castle: Rhaetic clay, Lower Lias clay, and Middle Lias clay. About 5km to the east are Oxford Clays, and a little further still in the same direction Gault Clays. A petrological comparison of available samples of Lower Lias, Middle Lias, and Oxford clays suggests no direct comparisons with the Clay Types represented in the early prehistoric pottery fabrics, but a sample of Gault Clay from Blackland near Calne in south-west Wiltshire compares favourably with Clay Type A defined here and suggests that this provided one of the sources of raw material used in the Cadbury environs for pottery making or that ceramic vessels were brought to the area from perhaps 10-20km away to the east. In due course it would be useful to sample the Rhaetic clay west of Cadbury and perhaps also some of the clay outcrops around the Mendips to the north.

Discussion

Table 5 summarizes the incidence of clay types in relation to the main assemblages. The Early Neolithic is represented by four samples (P1-4; Tabor and Randall 2018, figs 3B, 5 and 7, 1, 5, 6 and 10), all from Milsoms Corner, in the South-Western Bowl tradition. Clay types A, B and C are represented and with a range of calcite, limestone, sandstone and grog present as additives. All four samples lie within Chemical Group C. The sources of these vessels are most likely to the east and/or north-east of Cadbury. Clay Type B, represented in the Neolithic assemblage by P2 and P3, compares favourably with samples from Fabric Group 6 at Hambledon Hill which was characterized by a wide range of tempering agents but of indeterminate source (Darvill

TABLE 5 INCIDENCE OF RECOGNIZED CLAY TYPES BY ASSEMBLAGE

<table>
<tr><th>Clay Type</th><th>Fabric Codes</th><th>EN
(South-western)</th><th>EN
(Southern Decorated)</th><th>MN
(Peterborough Ware)</th><th>LN
(Grooved Ware)</th><th>EBA
(Beaker)</th><th>EBA
(Biconical Urn)</th><th>MBA
(Trevisker)</th><th>MBA
(Dev-Rim)</th><th>LBA
(PPDR)</th></tr>
<tr><td>A</td><td>D, S</td><td>✓</td><td rowspan="6">Not sampled</td><td rowspan="6">Not sampled</td><td rowspan="6">Not sampled</td><td></td><td></td><td></td><td></td><td>✓*</td></tr>
<tr><td>B</td><td>A, B, C, Q, S, V</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td></td></tr>
<tr><td>C</td><td>A, B, E</td><td>✓</td><td></td><td>✓</td><td></td><td>✓</td><td></td></tr>
<tr><td>D</td><td>E, Q</td><td></td><td></td><td></td><td></td><td>✓</td><td>✓</td></tr>
<tr><td>E</td><td>B, M, Q</td><td></td><td></td><td></td><td></td><td>✓</td><td></td></tr>
<tr><td>F</td><td>E</td><td></td><td></td><td></td><td></td><td>✓</td><td>✓</td></tr>
</table>

**moulds*

2008, 619). None of the Neolithic pottery from the South Cadbury Environs Project includes oolitic limestone, although crushed limestone is present in P2, P3 and P4.

No Early Neolithic Southern Decorated pottery, Middle Neolithic Peterborough Ware, or Late Neolithic Grooved Ware was included within this study. Beaker wares are represented by two samples (P5 and P6) from Milsoms Corner. Both are of Clay Type B and P6 lies firmly within Chemical Group C perhaps suggesting a degree of continuity in source from Neolithic times. Both are predominantly grog tempered, something typical of the Beaker fabrics from south-western Britain, but little help in determining sources. However, the fragment of igneous rock in P5 may suggest a source in south-western Britain, perhaps as far away as Devon or Cornwall (cf. Parker-Pearson 1990, 11-12).

No Collared urns were sampled but from the end of the Early or beginning of the Middle Bronze Age there are one Biconical Urn sherd from ST 61167 25412 and two from Crissells Green, as well as two sherds from Milsoms Corner representing the distinctive south-western tradition of Trevisker Wares (samples P17-19, P7 and P8). All fall squarely within Chemical Group C with the exception of P7, for which the sample was insufficient after thin sectioning. Both Trevisker sherds and one of the Biconical sherds were of Clay Type B, whilst the two Biconical sherds from Crissells Green were of Clay Type C. Again, these characteristics may well suggest continuity in the use of traditional sources of raw material from earlier times. No source can be suggested for Clay Type B, but the presence of sandstone in P8 may suggest derivation from areas to the north, although links to the south-west cannot be ruled out as sandstone has been noted in Trevisker Ware from West Dart Head in Devon (Parker-Pearson 1990, 17).

Seven samples of Deverel-Rimbury ware (P9-P13 and P15-16) from Sigwells, provide a wide cross-section of wares. All but Type A of six Clay Types are represented. The samples are also widely distributed across all three Chemical Groups: three samples in Group A, both of the samples in Group B, and one sample in Group C. Such a diversity of fabrics, Clay Types, clastic inclusions (calcite, grog, sandstone, shelly limestone, oolitic limestone, and quartzite) and chemical characteristics suggests a range of production sources. The evidence of the chemical analysis suggests some continuity from earlier times through continued use of deposits exploited within Group C, but a range of new sources brought into play within Groups A and B. The heavy and exclusive presence of sandstone and quartzite tempering in P12 suggests that this vessel is from a different source; it is notable that the chemical signature was unusual to the point that it was excluded from the analysis (see above). It can tentatively be suggested that this vessel is an early product of the sources responsible in later times for the manufacture of Glastonbury Group 2 vessels somewhere on the Mendip Hills (cf. Peacock 1969, 46-8).

Radiocarbon dates for material associated with two casting moulds (P20-21) from which samples taken lie in the period during which the currencies of Deverel-Rimbury and Post-Deverel-Rimbury plain ware may overlap. Both were of chemical group C and clay type A, implying a return to an earlier source for specialised usage.

Three samples relate to Late Bronze Age post-Deverel-Rimbury style vessels from Milsoms Corner (P22-24). They belong to Clay Types D and F and all fall within Chemical Group A suggesting continuity in the use of particular sources from Middle Bronze Age times. The presence of calcite combined with fossiliferous limestone as tempering agents in all three samples also shows a strong parallel with Ceramic Assemblage 4 within the Early Cadbury phases at Cadbury Castle (Williams and Woodward 2000a, 259).

Looking across all the fabrics, Clay Types and Chemical Groups identified through these samples from the early prehistoric assemblages three main points emerge. First, that a wide range of sources can be suggested for the ceramics produced at different times, but that the focus shifts over time with the greatest diversity being present during the Middle Bronze Age. Second that there is a subtle shift in the disposition of sources used, most marked in the evidence provided by the chemical analysis, from a fairly consistent set of sources in the Early Neolithic, Beaker, Biconical, possible Biconical and Trevisker assemblages (Clay Types A, B and C; Chemical Group C), to a wider spectrum in the Deverel-Rimbury assemblages (all Clay Types excepting A; Chemical Groups A, B and C), to a more narrow focus in the post-Deverel-Rimbury assemblages which show no connections with the early phases (Clay Types D and F; Chemical Group A). Third, although little can be said about specific clay sources and the origins of these fabrics it can tentatively be suggested that amongst the Neolithic and Early Bronze Age assemblages areas to the east, south and south-west were significant while in the Middle and later Bronze Age it was areas to the east and north that were probably more important.

NEOLITHIC

The four Early Neolithic sherds which were objects of petrological examination were in a group comprising a minimum of twelve vessels from pits at Milsoms Corner. This group, together with sherds from a minimum of 18 vessels from Cadbury Castle, has been presented in detail based on macroscopic analysis in a previously published article on the Neolithic in South Cadbury (Tabor 2018, figs 3B, 5 and 7; 1, 5, 6, 10). It was found that whilst there are significant differences in form and fabric between the two sites both assemblages fit well into the South-Western Bowl style (Tabor 2018, 26). The article also presented sherds of Middle and Late Neolithic pottery from Sigwells and Cadbury Castle which are rare in the study area (Tabor 2018, 26-7). The Neolithic fabrics are listed below.

Early Neolithic fabrics

Three general ware groups were identified based on inclusions of grog or clay pellets, calcite and limestone mixtures, although it was often necessary to rely on the shape and size of voids for the Milsoms Corner assemblage in particular. The groups were subdivided according to the presence of other inclusions.

Grog/clay pellet and mixtures

B — Fine, including ovoid to multi-lobed iron-rich clay pellets, usually rounded (<1 to 3mm) with sparse sub-angular grains of quartz (<2mm). Red to buff brown exterior surfaces, dark grey interior surfaces. Poorly fired. Often soft.

V — Coarse to moderate with abundant rounded or slitted voids and including sparse to moderate clay pellets. The voids may indicate where fine crushed shelly limestone has dissolved. Surfaces are usually buff to grey. Poor to moderate firing.

Calcite and mixtures

Q — Moderately coarse, including calcite rhombs, from <1 to 4mm. Buff brown to dark grey exterior, buff to light grey core and buff to dark grey interior. Moderately well fired.

E — Coarse, friable, including calcite rhombs, from <1.0 to 4.0mm and variable proportions of fossil plate and crushed shell. Buff to patchily oxidised red, exterior, buff to light grey core and buff to dark grey interior. Moderately well fired.

Fossiliferous limestone and mixtures

K — Coarse to moderate, friable, including sparse to moderate plate and/or moderate to abundant crushed fossil shell and sparse grog pellets. Exterior surface colour ranges from buff pink to black. Interior surface ranges from buff, through light grey to dark grey. Moderately well fired.

R — Coarse to moderate, friable, including sparse to moderate plate and/or moderate to abundant crushed fossiliferous limestone. Exterior surface colour ranges from reddish brown to black. Interior surface ranges from buff, through light grey to dark grey. Moderately fired.

S — Fine, including common angular and sub-angular voids and usually grog as well as sparse to moderate mica and rare to sparse iron. The voids may result from the dissolving of limestone/calcite. Typically, where vessels are thin-walled, the exterior shows traces of burnishing. The fabric is usually grey to black throughout, although occasionally buff. Often poor firing.

T Coarse to moderate, including sparse to moderate crushed fossiliferous limestone and sparse to moderate quartz (up to 1 mm). Surfaces are usually buff to grey. Moderate firing.

Z Coarse to moderate, including abundant rounded or narrow slitted voids. Voids probably due to loss of fossiliferous limestone. Surfaces are usually buff to grey. Moderate firing. Equivalent to Fabric R.

Middle to Late Neolithic fabrics

Fabric continued from previous phase: V

Flint and mixtures

AB1 Moderately hard, grey brown, including sparse to moderate flint and rare coarse rounded quartz.

AB2 Moderately hard, dark brown to grey, with buff reddish exterior surface. Sometimes with pink exterior margin and including sparse to moderate angular flint (<6mm), sparse grog and rarely red iron oxides.

Grog

A Soft, crumbly or corky, dark grey, with buff brown to grey surfaces including ovoid multi-lobed pellets of grog or clay, usually rounded, from <1.0 to 3.0 mm. Often poorly fired.

BEAKER POTTERY

No Beaker pottery had been recovered within the study area prior to SCEP which has recovered small amounts dispersed widely. A few varied sherds were obtained from a Middle Bronze Age enclosure ditch at Milsoms Corner, almost certainly displaced from a beaker burial which it cut. They have been supplemented by sherds from Down Close, Seven Wells Down, and Card's Piece, Woolston Manor Farm, which are associated respectively with a ring ditch and a small rectangular enclosure (Tabor 2008b, 87). The Beaker sherd forms are described using the terminology proposed by Stuart Needham (2005).

Fabrics

Fabric retained from previous phase: V, A

Grog dominates the Beaker assemblage, sometimes in a micaceous matrix or in mixtures including limestone or sand (Table 6). Flint mixtures are absent.

Grog/clay pellet mixtures

C Fine, including ovoid to multi-lobed pellets of grog, usually rounded (<1.0 to 3.0 mm) with moderate flecks of mica and occasionally sparse to moderate pale brown rounded iron oxides, possibly limonite grains. Oxidised red to buff brown exterior surfaces, pale to moderate grey interior surfaces. Moderately fired. Soapy to touch.

J Fairly soft, including grog and sparse limestone.

L Moderately hard, including sand and sparse grog.

Although small and few in number, from a minimum of four different vessels, the Milsoms Corner Beaker sherds display a good representative range of decorative motifs. Rows of small, sharp, cylindrically toothed, impressions applied to the gentle concave curve of a neck sherd (fabric A; Fig. 5, 40) are consistent with All-Over Comb decoration applied to Low- and Tall Mid-Carinated Beakers, the former current from around 2500-2100 cal BC, the latter during the final quarter of the 3rd millennium BC (Needham 2005, 183, 188).

The other Beakers have decoration present on Beaker types current over a longer span extending from the mid-3rd millennium BC to the early centuries of the 2nd millennium

TABLE 6 NUMBER OF BEAKER SHERDS PER FABRIC

	Grog wares				
Beaker	V	A	C	J	L
Lick Hills, Sparkford			1		
Lower Mead, Weston Bampfylde		1			1
Lower Leaze, Weston Bampfylde		2			
Milsoms Corner, South Cadbury	1	1	2	1	
Sigwells, Charlton Horethorne		3			
Down Close, Seven Wells	1	11			
Card's Piece, Woolston					2
Ladyfield 2, Woolston		5			

BC. The incised horizontal ladder pattern bounded by horizontal cord impressions of a straight-neck sherd (fabric J; Fig. 5, 41) features in Maritime Derived decoration, in particular on Low-Carinated Beakers but occasionally on other styles, including Weak-Carinated (Needham 2005, 183; table 3). Horizontal rectangular-toothed comb impressions filling interlocking incised triangles, diamonds or zigzags, or a mixture of them, set on a straight long neck (fabric V; Fig. 5, 42) are features of Needham's Long-Necked earlier and later series (Needham 2005, 195-6; table 5; fig. 9, 2, 13). Deeply formed fingertip impressions on a small wall sherd are probably All Over rustication (fabric C; Fig. 5, 44) which is a poor chronological indicator as it features variously on Low-Carinated, Weak-Carinated, later series Long-Necked and Low-Bellied Beakers (Needham 2005, 182, 189, 196 and 200 and 182). The base-angle sherd from within Milsoms Corner grave pit itself (fabric C; Fig. 5, 43) is of a very similar fabric and firing and may be from the same vessel.

EARLY TO MIDDLE BRONZE AGE POTTERY

Early and Middle Bronze Age pottery was very poorly represented on Cadbury Castle and had not been detected at all in the surrounding landscape prior to SCEP. The handful of Early to Middle Bronze Age sherds from Milsoms Corner, Crissells Green ring ditch, a Sigwells linear ditch and a waterlogged deposit at North field, Weston Bampfylde, are useful additions to the Somerset record but the close dating of a pit from an enclosure at Sigwells associated with a Deverel-Rimbury assemblage is of regional significance. This group has been supplemented by an important Trevisker assemblage found during work by Wessex Archaeology at Queen Camel (Jones 2018).

Where sufficient illustrative examples of particular styles or forms occur they have been treated in the following groups: biconical, Trevisker, ovoid, globular, barrel and bucket. In the discussion of forms below some of the terminology is at odds with that used elsewhere. The terms 'barrel' and 'bucket' are applied according to common language usage, much as they were at the Simons Ground cemeteries and at Milldown School, Blandford in east Dorset (Watling and White 1982, fig. 18; McSloy 2016, 226, table 1), and the words 'form' and 'jar' replace 'urn'. Thus, a barrel form has a rounded girth which exceeds the diameter of both rim and base whilst a bucket form is straight-sided, sometimes curving gently inwards in the lower half, and has a rim diameter equal to or exceeding that at any point below it. According to this scheme certain vessels from Kimpton cemetery, Hampshire, described as 'barrel urns', including an example of South Lodge type, are described as bucket form jars and conversely Trevisker Styles 3 and 4 buckets are barrel or ovoid forms (Ellison 1981, 174, C10, C13; figs 10 and 11; Quinnell 2012, 150, fig. 5).

Early to Middle Bronze Age fabrics

Continued from previous phase: V, A, C. Re-occurrence of: B, S, Q, E

Grog and mixtures

K Grey brown, crumbly, slightly micaceous, including moderate plate and crushed shell, grey grog and sparse sub-angular voids.

Calcite and mixtures

Q Moderately fine, including calcite rhombs, from <1.0 to 4.0mm. Buff to patchily oxidised red, exterior, buff to light grey core and buff to dark grey interior. Moderately well fired. Biscuity texture.

E Coarse, friable, including calcite rhombs, from <1.0 to 4.0mm and variable proportions of fossil plate and crushed shell. Buff to patchily oxidised red, exterior, buff to light grey core and buff to dark grey interior. Moderately well fired. Biscuity texture.

G Coarse, friable, including calcite rhombs, from <1.0 to 4.0mm and variable proportions of grey limestone, fossil plate and crushed shell. Buff to patchily oxidised red, exterior, buff to light grey core and buff to dark grey interior. Moderately well fired. Biscuity texture.

P Coarse, friable, including calcite rhombs, from <1.0 to 4.0mm and sparse grog pellets. Buff to patchily oxidised red, exterior, buff to light grey core and buff to dark grey interior. Moderately well fired. Biscuity texture.

M Coarse, friable, including calcite rhombs, from <1.0 to 4.0mm and sparse to moderate fragments of grey limestone of up to 4.0mm maximum. Buff to patchily oxidised red, exterior, buff to light grey core and buff to dark grey interior. Moderately well fired. Biscuity texture.

I Coarse, friable, including calcite rhombs, from <1.0 to 4.0mm, moderate quartz grains of up to 1mm and variable proportions of fossil plate and crushed shell. Buff to patchily oxidised red, exterior, buff to light grey core and buff to dark grey interior. Moderately well fired. Biscuity texture. Occurred only at Milsoms Corner.

H Coarse, friable, including calcite rhombs, from <1.0 to 4.0mm and poorly sorted sparse to moderate quartz grains of up to 1mm. Buff to patchily oxidised red, exterior, buff to light grey core and buff to dark grey interior. Moderately well fired. Biscuity texture. Occurred only at Milsoms Corner.

Description of the assemblage

The earliest characteristically Bronze Age sherds from the study area may well be broadly contemporary with some of the preceding section's Beaker sherds. However, knobbed accessory vessels such as an example in fabric C found during commercial archaeological work at Home Close, South Cadbury, tend not to occur in direct association with Beakers (ACW348 102/1; courtesy of Peter Cox, AC Archaeology Ltd). Straight sided and with a flattened rim, its slightly curved base is unusual (Fig. 5, 45). It would appear to have had no more than a single row of probably four knobs.

A collar or rim sherd with slanting twisted cord impressions above a pronounced concave neck (Fig. 5, 46) may derive from a Peterborough Ware vessel but has a stronger resemblance to Collared Urns, notably examples from Dorset (Longworth 1984, 181, pl. 11b; Calkin 1964, 7-9; fig. 2, M1, M2, M4). Stylistically it is the earliest example of calcite-tempered pottery in the area following a hiatus after the Early Neolithic. The association of decorative techniques with fabrics is shown in Table 7 and with vessel form and style in Table 8.

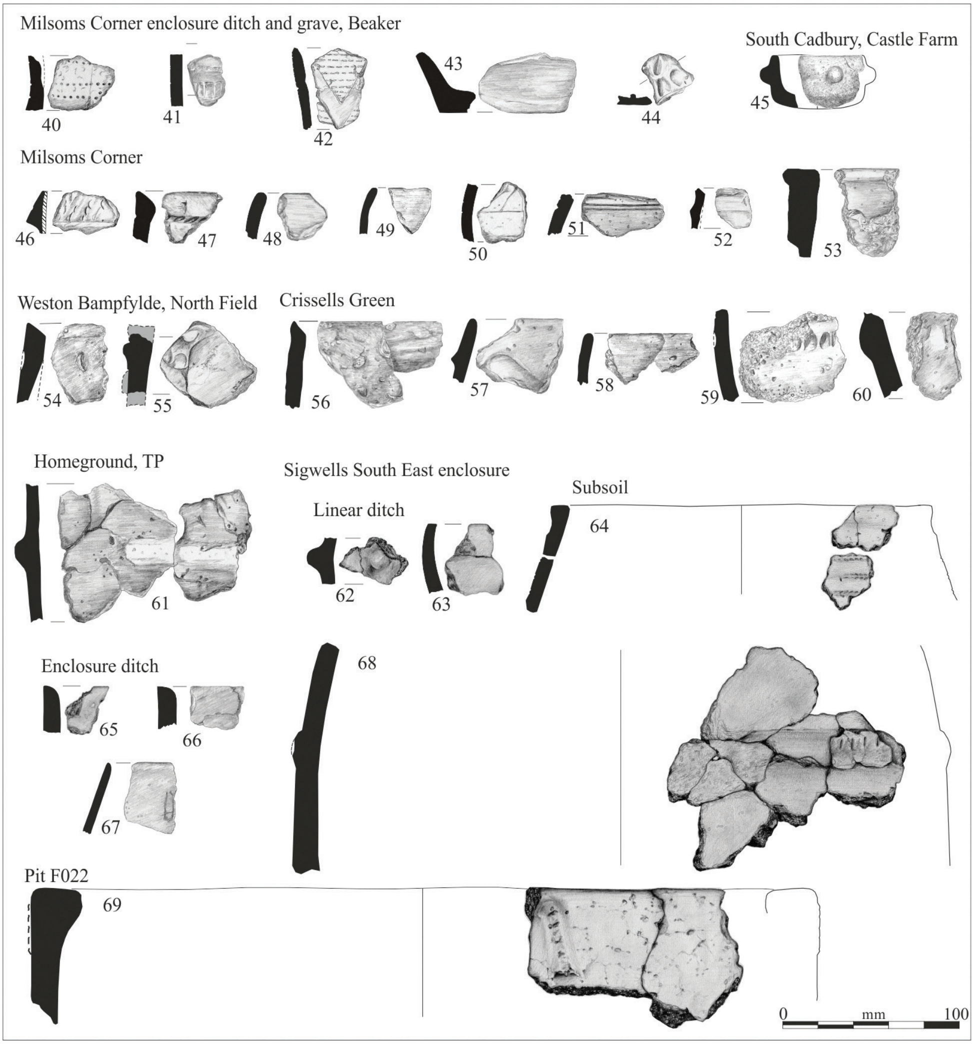

Fig. 5 Beaker pottery from Milsoms Corner and Early to Middle Bronze Age pottery from the wider study area

TABLE 7 DISTRIBUTION OF DECORATIVE TECHNIQUES IN THE BRONZE AGE BY FABRIC

		Grog wares			Grog & limestone	Grog & shell		Grog & calcite	Calcite & shell		Calcite & limestone	Calcite	
Motif /technique	Fabric	B	A	C	J	V	K	P	E	G	M	q	Q
Cord, twisted*			1			1		1	1				
Cord plaited											1		
Cordon, swag		1											
Knob													1
Incised lines, light		1											
Incised lines, rounded*												1	1
Incised lines, sharp*				3	1							1	
Furrowed		1							2				
Cordon, horseshoe, fingertipped			1										1
Cordon, horizontal, plain						1							
Cordon, horizontal, fingertipped			1								1		1
Fingertipped, below rim*			1	2							1		2
Fingertipped, row on wall							1				1		
Fingertipped, all over?									1				
Fingertipped, outer rim									1	1			
Fingertipped, neck*				1					1		1		
Lug/strip, imperforate, vertical								1	1		1		

(= Includes illustrated sherds from Queen Camel. ** = Exclusively illustrated sherds from Queen Camel. Queen Camel fabric descriptions interpreted as nearest SCEP equivalent. Jones 2018, figs 7 and 8)*

Biconical

Rim sherds from probable biconical jars are all inturned, although some only slightly so. They are: straight, slanting, internally bevelled (Weston Bampfylde and Crissells Green; Fig. 5, 54, 56); simple rounded (Crissells Green; Fig. 5, 57); tapered rounded (Sigwells South East enclosure ditch; Fig. 5, 67); and flattened, from a small high-shouldered vessel (Sigwells linear ditch; Fig. 5, 63). A damaged flattened rim from a larger, thicker-walled, grog-tempered vessel (not illustrated) was found in a test pit in Homeground on the lower northern slopes of Cadbury Castle in association with sherds from a bucket form jar (Fig. 5, 61). Decorative motifs on the upper wall include a row of vertical slashes 16mm below the rim and, probably from the same vessel, a fingertip impressed horseshoe cordon (Fig. 5, 54, 55); a V-profiled swag cordon (Fig. 5, 57); and a vertical clay strip of which only the scar remains (Fig. 5, 67). The inclusion of grog in the sherds from Weston Bampfylde and Crissells Green (Fig. 5, 54-7), may indicate that that they are earlier than those from Sigwells, which included calcite (Fig. 5, 63, 67). A thick, straight-walled, grog-tempered sherd with a substantial, deeply impressed cordon from Crissells Green (Fig. 5, 60) and single rims from low in the Milsoms Corner ditch and a Sigwells South East enclosure pit pre-dating metalworking on the site are all most probably from biconical jars but bucket or barrel forms cannot be excluded. The flattened, inwardly expanded, calcite-tempered rim from Sigwells has an applied horseshoe cordon stabbed with an indeterminate tool (Fig. 5, 69).

Trevisker

Sherds from only three vessels with Trevisker style characteristics were recovered during the work of the South Cadbury Environs Project. Since then excavation by Wessex Archaeology in advance of development at West Camel Road, Queen Camel, has produced an assemblage in the style which is no less significant than the Somerset assemblages from Brean Down and Norton Fitzwarren. The examples from the project's fieldwork were confined to two rims and an upper body sherd. The rims were: grog-tempered, straight, slanting, internally bevelled with a horizontal line of twisted cord below the rim (Milsoms Corner; Fig. 5, 47); and a calcite, limestone and grog-tempered biconical form

TABLE 8 APPLICATION OF DECORATIVE TECHNIQUES IN THE BRONZE AGE BY VESSEL FORM/STYLE

	Impressed									Incised				Applied					
Decorative technique	Cord, twisted or plaited			fingertip/slash row					fingertip	furrow	linear			lug	cordon				
Decoration position and style	collar	below rim	neck	outer rim	below rim	neck	above & below cordon	wall	all over	neck	horizontal / slanting	geometric	diaper	plain knob	horizontal plain	horizontal fingertip	vertical strip plain	horseshoe fingertip	swag plain
Form/style																			
Accessory cup														1					
Collared or Peterborough	1																		
Biconical jar, closed*					1	1											1	1	1
Biconical jar, upright**						1													
Bucket or biconical jar																1			
Trevisker style 1**		1																	
Trevisker style 2		2	3																
Trevisker style 3/4*											2	3							
Trevisker style 3/4 / 6A**						1					1								
Globular type Ia												1							
Globular type IIa										4									
Globular, other						1											1		
Barrel form jar				1			1						1			1		1	
Bucket form jar								2							1				
Other									1					1					
Type 13				1		1													

(= Includes illustrated sherds from Queen Camel. ** = Exclusively illustrated sherds from Queen Camel. Queen Camel fabric descriptions interpreted as nearest SCEP equivalent. Jones 2018, figs 7 and 8)*

with moulding emphasising modest outward expansion, flattened with three evenly spaced rows of horizontal plaited cord impressions at a minimum of 8mm below the rim (Sigwells South East enclosure, subsoil; Fig. 5, 64). A slightly micaceous, sparse calcite and rare fossil shell tempered upper wall sherd from a rounded jar has a deep, sharp horizontal groove and traces of a second groove (Milsoms Corner; Fig. 5, 51). Both rims can be accommodated in Parker-Pearson's Trevisker style 2 and the deep, sharp execution of the lines on the wall sherd is typical of Trevisker style 3/4 (Quinnell 2012, 150, figs 4 and 5). A heavy, flattened, outwardly expanded, grog-tempered rim from Milsoms Corner enclosure ditch (Fig. 5, 53) might also be included based on the similarity of its profile to a rim sherd from Brean Down (Woodward 1990, 129, fig. 91, 39).

Grog, calcite and grog, and grog and limestone tempered fabrics all featured at Queen Camel (Jones 2018, 59-60). The range of Trevisker forms includes types 1 (Jones 2018, fig. 7, 1), 1A (Jones 2018, fig. 8, 5) and hybrids as well as further examples of types 2 (Jones 2018, fig. 8, 2, 14) and 3/4 (Jones 2018, fig. 8, 7, 10, 11, 16). A small rim with type 3/4 slanting linear incisions below the rim has a diameter of 100mm hence is from a vessel which might otherwise be described as type 6A (Quinnell 2012, table 1; Jones 2018, fig. 8, 3). Conversely, the classically Trevisker upper profile from an ovoid jar with a row of fingertip impressions 40mm below an everted, internally bevelled rim would fit type 6A but is of a scale fitting the smaller range of type 3/4 (Jones 2018, fig. 8, 12).

Ovoid

Generally fairly plain ovoid jars feature throughout the Bronze Age and much of the Iron Age but, at the risk of circularity, this section has excluded those which have characteristics which fit within the classification of Late Bronze Age pottery from Tinney's Lane, Sherborne, Dorset (see below). This limits the sample to rims tempered with grog from Milsoms Corner and one with shell from Crissells Green (Fig. 5, 48-9, 58).

Globular urns

Only two Globular urns have been identified with certainty (Fig. 6, 74; Fig. 7, 85) but the ornamentation of several other sherds is highly characteristic and several rims with rounded internal bevels (not tabulated) from the Sigwells South East enclosure ditch and the cooking pit (Fig. 5, 65-6; Fig. 6, 76) are also likely candidates. The group is made up of: a grog tempered, rounded mid-body sherd with single, very shallow, narrow incised, converging horizontal and diagonal lines (Fig. 5, 50); two calcite-tempered, straight-sided, inturned rims, one with five and the other with an indeterminate number of shallow horizontal furrows (Fig. 6, 74, 77); slightly deeper, broad horizontal furrows on grog-tempered sherds (Fig. 5, 52; Fig. 7, 83); and a rim decorated unusually with a row of fingertip impressions immediately below a short neck and an applied vertical strip (Fig. 7, 85).

Necked jars

Two everted and two upright, flattened rims, three from the cooking pit (Fig. 6, 71-3) and one from close to Sigwells North Barrow (Fig. 7, 84) may all be sherds from globular jars but lack profile enough for confident determination. All are fine and well-fired with thin walls.

Barrel form jar

There are few clear-cut examples of barrel-form vessels from the study area. Possible examples are: calcite tempered ovoid wall sherds with a fingernail impressed, applied D-profiled cordon from the Sigwells enclosure ditch (Fig. 5, 68); and a similarly ovoid upper profile which is unusual in the degree to which its girth exceeds its rim diameter (Fig. 6, 70). The latter was a large vessel accounting for the majority of sherds forming the rich cooking pit group. It had an inturned, club-profiled rim with slightly slanting fingernail impressions immediately below it giving way to a lightly incised diaper pattern. A row of similarly slanting fingernail impressions marked the upper and lower facets of a V-profiled cordon forming the lower boundary of the diaper pattern. No other ornamented zones were detected on any of the large number of other sherds from the vessel and it is highly likely that the refitted sherds represent the vertical extent of decoration.

Bucket form jar

Bucket form jars are represented sparsely by three wall sherds, two in various grog-tempered fabrics from Crissells Green and Homeground (Fig. 5, 59, 61) and a well-fired, thin-walled calcite and shell-tempered sherd from a post hole forming part of the Sigwells metalworking structure (Fig. 7, 87). Two sherds have single, roughly horizontal, rows of fingertip impressions made directly into the vessel wall, one from a jar with a slightly curved lower wall, the other from a straight-sided jar (Fig. 5, 59; Fig. 7, 87). The Homeground sherds were from a straight-walled jar with a plain, three-facetted applied horizontal cordon.

Bowl

A crudely fashioned neutral bowl with tapering,

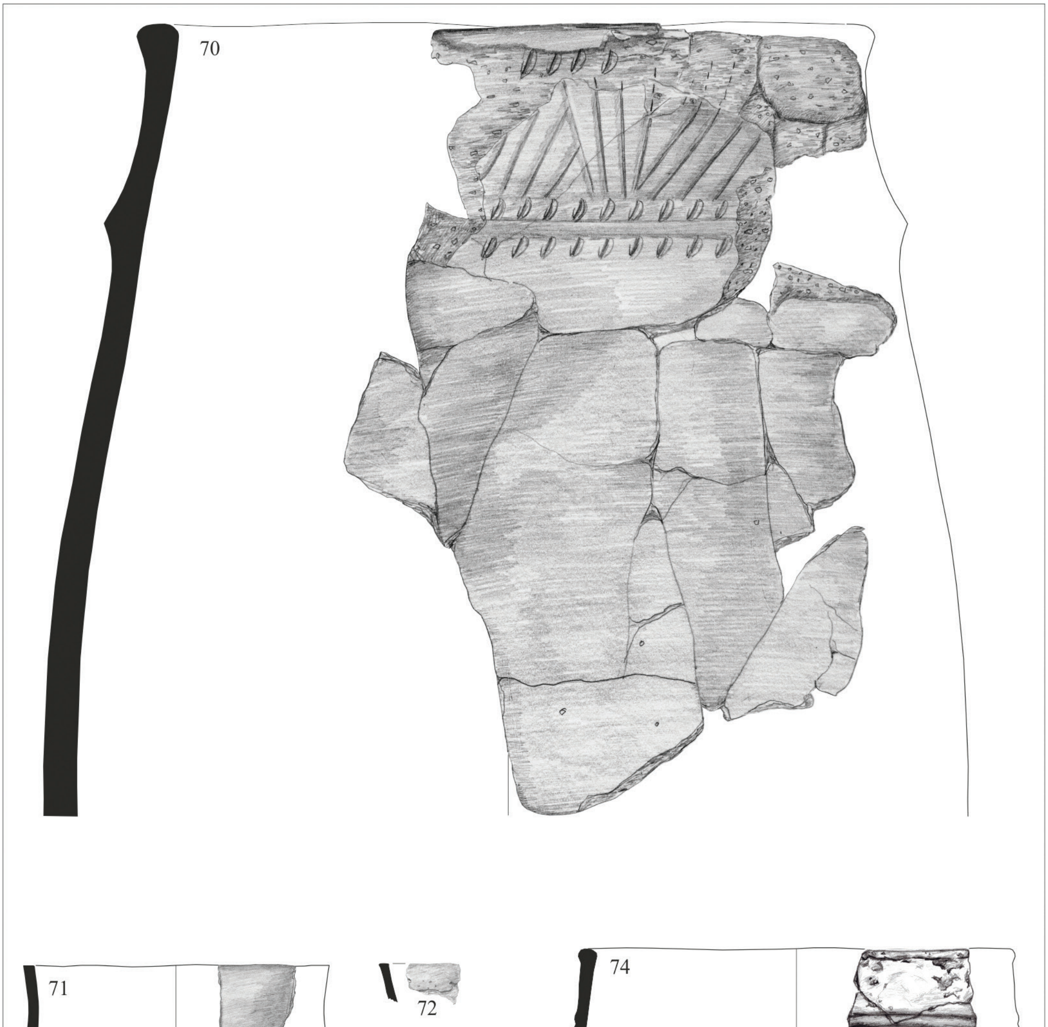

Fig. 6 Middle Bronze Age pottery from Sigwells South East enclosure cooking pit

rounded, upright rim (Fig. 6, 78) was the only grog-tempered vessel from the cooking pit.

Base angles

All the reconstructable base angles from the cooking pit were from steep-sided vessels although two have angles wide enough to allow them to be from globular jars (Fig. 6, 80-1). One of the latter sherds was unusual for its inclusions of crushed shell and limestone but the others were tempered with coarse calcite. The shelly sherd was from the pit's uppermost fill and may be intrusive. Other base angles of the phase included either calcite or had sub-angular voids providing indirect evidence for its use. In one instance grog was also included (Fig. 7, 88) and another included limestone or both (Fig. 7, 86).

LATER BRONZE AGE POTTERY

On the hillfort pottery of the Late Bronze Age classed as Cadbury 4 by Leslie Alcock and Ceramic Assemblage 4 by Ann Woodward formed the earliest significant group after a gap of over a millennium following the Late Neolithic (Alcock 1980, 687-9; Woodward 2000, 28). It was characterised by the dominance of calcite tempering often mixed with plate shell and comprised plain jars for which Alcock preferred a 12th-century BC inception, with the reintroduction of simple decorative motifs over time (Alcock 1980, 706). Some vessels have upward drag marks on their exterior and sometimes interior surfaces and finger moulding impressions occur routinely on the exterior immediately above bases. In recent terminology this distinctive pottery represents the currency of Post-Deverel-Rimbury Plain and Developed ware (Seager Thomas 2008, 38).

Later Bronze Age fabrics

Retained from previous phase: Q, E, M, G

The range appears to have been pared down from the diversity of the Middle Bronze Age. In general, the pottery of the later Bronze Age was thinner-walled and better fired. The only new addition to the range of fabrics was used exclusively for bronze casting moulds.

Sand and mixtures

D3 A fine sandy, sometimes with a micaceous sparkle. Yellowish brown, buff and orangey red exterior or outer wrap, grey interior.

Description of the forms

The bulk of the Late Bronze Age pottery presented here is restricted to material associated with radiocarbon dates. A much larger sample will be presented in future site reports. Most of the pottery is typical of Post Deverel-Rimbury Plain ware and has a strong resemblance to the large assemblage from Tinney's Lane, Sherborne, upon which the vessel typology is based (Best and Woodward 2012).

Jars	
Type 3	High round-shouldered with hook rim
Type 4	Ovoid, incurved rim
Type 5	High round-shouldered
Type 13	S-profiled, shouldered
Bowls	
Type 8	Simple open, everted or near upright rim
Type 10	Hemispherical, neutral or closed
Rims	
R3	Incurved round, possibly tapered
R4	Inturned, hook, possibly tapered
R7	Flared/everted, externally expanded
R14	Everted, flat
R15	Inturned, flat
R16	Inwardly inclined T-shape
R24	Incurved, rounded, inward roll
R32	Upright or near upright, outward roll
Bases	
B5.1	Simple, straight-sided, rising steeply
B5.5a	Expanded, round
B5.5b	Expanded, sharply tapering

The fabrics of illustrated vessel and rim forms are summarised in Table 9.

A discrete group in a scoop associated with bronze casting detritus on the south-western edge of the Sigwells metalworking structure included rim sherds from type 3 and type 4 jars and a B5.1 base angle, possibly from the former (Fig. 7, 89-91). Two R7 rims from one or two type 13 jars were from different post holes but may be from a single vessel despite appearing to be of differing fabrics (Fig. 7, 103-4). Both have a row of short, sharp, irregularly spaced, vertical incisions on the rim exteriors and on the longer sherd there is a similar row on the neck.

Four bases from Milsoms Corner were all expanded, B5.5 (Fig. 7, 92, 97, 100, 102). A finger dragmarked type 5 jar inserted into the upper deposit of the Middle Bronze Age ditch at Milsoms Corner contained a minimum of four other vessels of jar types 4 and 6 and bowl types 8 and 10, as well as a base, possibly part of the type 4 or another jar (Fig. 7, 92-7). There is a considerable number of sherds from comparable vessels on the site but only a small selection is given here to demonstrate the range of the plain ware assemblage (Fig. 7, 98-101).

As noted, this paper will proceed to cover the Late

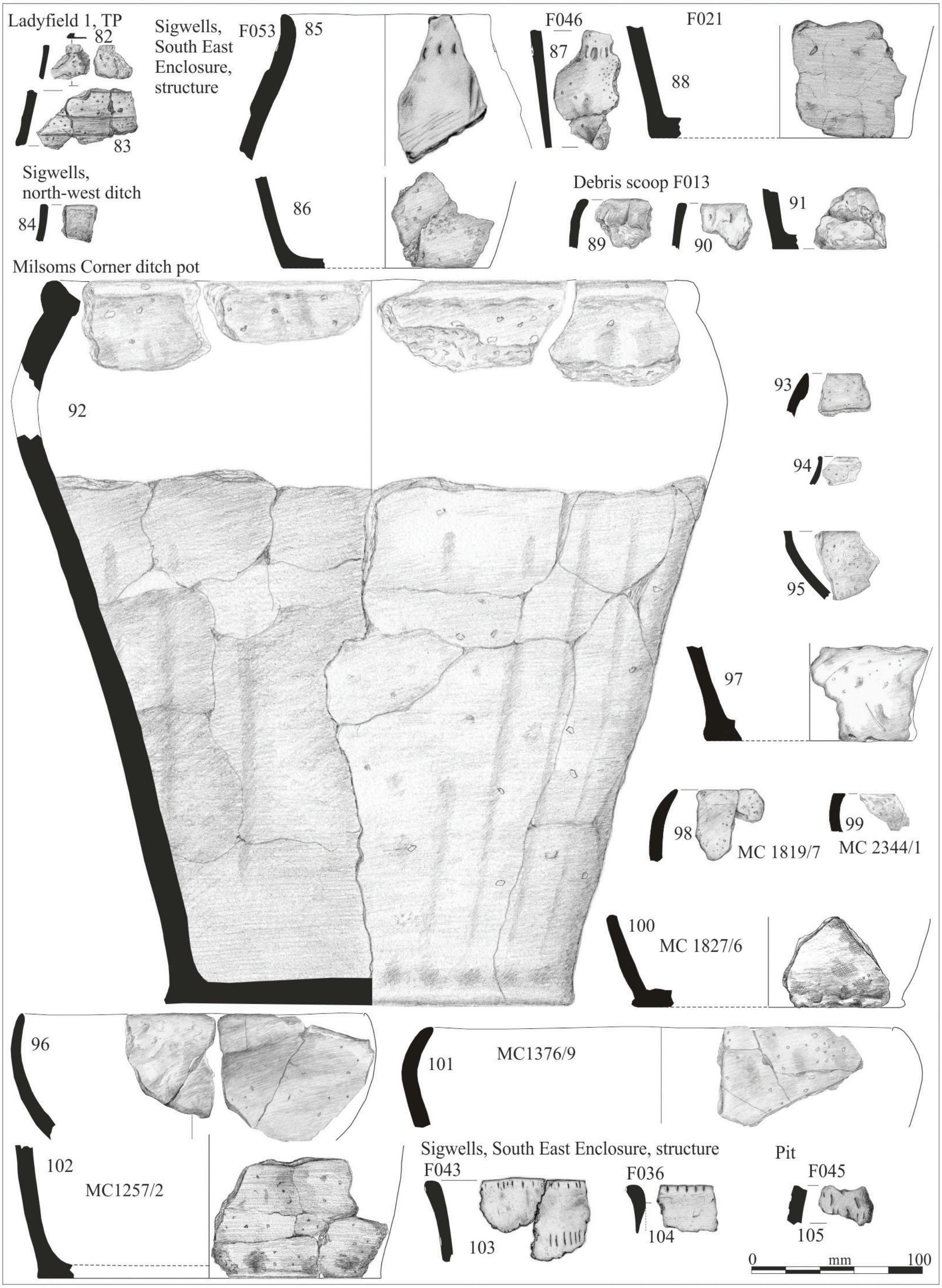

Fig. 7 Middle to Late and Late Bronze Age pottery from the wider study area

TABLE 9 LATE BRONZE AGE VESSEL TYPES, RIMS AND BASES BY FABRIC WITH ILLUSTRATION NUMBERS

Type	Rim form	E	G	Total
Type 3	R4, R15	98, 99, 101	89	3
Type 4	R3, R24	93	90	2
Type 5	R16	92		1
Type 8	R14	95		1
Type 10	R3	96		1
Type 13	R7	104	103	2
?	R32	94		1
B5.1			91	1
B5.5a		97, 102		2
B5.5b		92, 100		2

Bronze Age to Late Iron Age material in part 2 (Tabor and Jones in prep.).

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APPENDIX 1 – DESCRIPTIONS OF INVESTIGATED SAMPLES*

P1 Fabric: S Style: South Western Period: EN	Clay Type A with fine calcareous (?limestone) tempering. Grey-buff colour. Macroscopically, a soft, soapy fabric containing a moderate amount (15%) of a soft, degraded white inclusion, presumed to be calcareous but does not react with acid, 0.25-2.0mm, sub-rounded, well-sorted, in a silty micaceous clay matrix. In thin section the fabric shows a strongly micaceous groundmass dominated by laths of muscovite mica up to 0.4mm long. Moderate scatter of fine angular and sub-angular quartz up to 0.2mm across. Clay pellets up to 0.4mm across visible in both sections. Occasional plagioclase feldspar up to 0.15mm across. Sparse scatter of well-rounded iron oxide fragments up to 0.1mm across. The clastic inclusions are represented under the microscope as angular and sub-angular voids up to 2.0mm across. No remaining traces of tempering agent were visible in the voids and while this fabric may have contained organic matter the form and shape of the voids is better explained as the remains of soft-rock tempering, probably calcite.

P2 Fabric: B Style: South Western Period: EN	Clay Type B with sand, sandstone, and fine crushed limestone tempering. Exterior red-brown; interior grey. Macroscopically, a soft, soapy fabric with numerous plate-like voids, 0.25-1.0mm across, in the vessel surface, moderate to well sorted. There are also occasional visible coarse-sized quartz grains, iron pellets, and occasional small well-rounded rock fragments in the core of the vessel wall. In thin section the fabric shows a very fine-grained, dense, iron-rich and slightly micaceous groundmass in which very few individual mineral grains are visible. There is heavy and widespread iron staining and iron-rich clay pellets up to 0.3mm across could be confused with grog. Visible clasts include a moderate scatter of large angular and sub-angular quartz whose size range up to 0.5mm across may indicate that some at least was added as a sand tempering. A light scatter of rounded and sub-rounded fragments of iron-rich fine grained sandstone ranging from 0.1mm to occasional pieces around 3mm across can be considered a deliberate additive of crushed rock fragments. Likewise, in the core of the vessel is a light scatter of finely crushed limestone with fragments rarely exceeding 0.2mm across; this material accounts for the voids on the vessel surface.
P3 Fabric: V Style: South Western Period: EN	Clay Type B with sand, grog and fine crushed limestone. Exterior surface red-brown with grey areas; interior grey. Macroscopically, a soft, soapy fabric containing a common amount (25%) of grog, 0.25-2.5mm, moderately sorted, sub- rounded to sub-angular. Some plate-like voids, 0.25-1.0mm across, in the vessel surface. There are also occasional visible coarse-sized quartz grains, iron pellets, and occasional small well-rounded rock fragments in the core of the vessel wall. In thin section the fabric shows a very fine-grained, dense, iron-rich and slightly micaceous groundmass in which very few individual mineral grains are visible. There is heavy and widespread iron staining and iron-rich clay pellets up to 0.3mm across. Visible clasts include a moderate scatter of large angular and sub-angular quartz whose size range up to 0.5mm across may indicate that some at least was added as a sand tempering. A light scatter of rounded and sub-rounded grog fragments up to 2.5mm across can be considered a deliberate additive. Likewise, in the core of the vessel is a light scatter of finely crushed limestone with fragments rarely exceeding 0.2mm across; this material accounts for the voids on the vessel surface.
P4 Fabric: S Style: South Western Period: EN	Clay Type C with grog and limestone. Internal and external surfaces predominantly grey-black in colour but slight evidence for a pink-red internal coating or slip. Macroscopically, a soft, soapy fabric containing a moderate amount (15%) of voids mainly on the surfaces, 0.25-3mm, sub-rounded, poorly sorted, in a fine sandy matrix. In thin section the fabric shows a slightly micaceous dense groundmass with a moderate scatter of fine well-sorted angular and sub-angular quartz up to 0.15mm across. Occasional plagioclase feldspar up to 0.15mm across. Sparse scatter of well-rounded iron oxide fragments up to 0.1mm across. In the sample sherds the clay was not especially well mixed. Clastic inclusions comprised angular and sub-angular fragments of grog represented in a contrasting quartz-rich fabric which also included crushed limestone. Angular and sub-angular voids up to 3mm across throughout the fabric show remnants of calcareous material around the edges and probably represent the voids left by lost pieces of crushed limestone.
P5 Fabric: A Style: Beaker Period: LN-EBA	Clay Type B with grog. External surface red-orange, internal surface and core grey-black. Macroscopically, a soft, very soapy fabric containing a common amount (20%) of grog, 0.5-1.5mm, moderately sorted, sub-rounded to sub-angular. In thin section the fabric shows a very fine-grained, dense, iron-rich and slightly micaceous groundmass in which very few individual mineral grains are visible. There is heavy and widespread iron staining and iron-rich clay pellets up to 0.3mm across. Clasts are dominated by angular and sub-angular fragments of grog typically 1.5-3.0mm across. Two kinds seem to be represented, one similar to the matrix of the host fabric, the other more micaceous and generally similar to Clay type A. In slide B there is a small (<0.1mm across) sub-angular rock fragment containing feldspar and mica, perhaps a piece of igneous rock.

P6 Fabric: C Style: Beaker Period: LN-EBA	Clay Type B with grog. External surface red-orange, internal surface and core grey-black. Macroscopically, a soft, soapy fabric containing a moderate amount (15%) of grog, 0.5-2mm, sub-angular, moderately sorted. In thin section the fabric shows a very fine-grained, dense, iron-rich and slightly micaceous groundmass in which very few individual mineral grains are visible. There is heavy and widespread iron staining and iron-rich clay pellets up to 0.3mm across. Clasts are dominated by angular and sub-angular fragments of grog typically 1.5-3.0mm across. Two kinds seems to be represented, one similar to the matrix of the host fabric, the other more micaceous and generally similar to Clay type A. In some cases the firing conditions of the grog varies from that of the surrounding matrix.
P7 Fabric: A Style: Trevisker Period: MBA	Clay Type B with grog. Internal and external faces and core grey-black. Macroscopically, a soft, soapy fabric containing a common amount of grog (20%), 0.5-3mm, sub-angular to angular, moderately sorted, in a very fine sandy clay matrix, grog looks like the same fabric and is the same dark grey colour. In thin section the fabric shows a very fine-grained, dense, iron-rich and slightly micaceous groundmass in which very few individual mineral grains are visible. Very sparse scatter of fine quartz mainly less than 0.2mm across. There is heavy and widespread iron staining and iron-rich clay pellets up to 0.3mm across. Clasts are dominated by angular and sub-angular fragments of grog typically, 1.5-3.0mm across, mostly in a similar fabric to the surrounding matrix.
P8 Fabric: S Style: Trevisker Period: MBA	Clay Type B with grog. Internal and external faces and core grey-black. Macroscopically, a soft, soapy fabric containing a common (25%) amount of light grey grog, 0.25-3mm, sub-rounded, poorly sorted. In thin section the fabric shows a very fine-grained, dense, iron-rich and slightly micaceous groundmass in which very few individual mineral grains are visible. Very sparse scatter of fine quartz mainly less than 0.25mm across. There is heavy and widespread iron staining and iron-rich clay pellets up to 0.3mm across. Clasts are dominated by angular and sub-angular fragments of grog typically, 1.5-3.0mm across, mostly in a similar fabric to the surrounding matrix although a few in a contrasting, more micaceous, fabric. One small angular fragment of sandstone c.0.6mm across noted in section B.
P9 Fabric: Q Style: Deverel-Rimbury Form: CW2A Period: MBA	Clay Type B with calcite and fossil shell. Red-pink outer surface with black core and inner surface. Macroscopically, a soft, rough fabric containing a common amount (25%) of calcite, 0.25-3mm, angular, moderately sorted and lesser amounts of fossil shell. In thin section the fabric shows a very fine-grained, dense, iron-rich and slightly micaceous groundmass in which very few individual mineral grains are visible. Very sparse scatter of fine quartz mainly less than 0.2mm across. There is heavy and widespread iron staining and iron-rich clay pellets up to 0.3mm across. Clasts are dominated by a heavy scatter of angular fresh-looking fragments of calcite up to 3.0mm across together with a light scatter of small pieces of fossil shell (some with multiple shell fragments bound together with calcareous cement) typically 0.5-1.0mm across. Section B contains one small piece of quartzite c.0.3mm across.
P10 Fabric: E Style: Deverel-Rimbury Form: CW1A Period: MBA	Clay Type C with calcite, shell, and limestone. Grey-black exterior with signs of sooting; grey-buff interior and core. Macroscopically, a soft, slightly soapy fabric containing a common amount (20%) of calcite, 0.25-2mm, angular, moderately sorted; sparse (7%) shell, including a piece of possible clam shell, 7mm in size, other pieces appear platy and up to 7mm, well sorted. In thin section the fabric has a micaceous groundmass with abundant visible laths up to 0.5mm long but more typically less than 0.1mm. Moderate scatter of well-sorted quartz generally sub-angular to rounded in form and up to 0.1mm across. Scatter of clay pellets and iron-rich clay. The clasts include abundant finely crushed fresh-looking calcite, generally angular and up to 1.5mm across. Sparse rounded fragments of limestone with visible micro-fossils set within a calcareous cement. And sparse fragments of what appear to be freshly crushed shell, angular in form, ranging in size from 0.1mm up to the large piece 7mm long visible in the hand specimen (the largest piece in thin section was 5mm long).

P11 Fabric: Q Style: Deverel-Rimbury Period: MBA	Clay Type D with calcite, shell and grog. Grey and pink exterior, grey-black core and interior surface. Macroscopically, a soft, slightly rough fabric containing a moderate amount (15%) of calcite, 0.5-3mm, sub-angular, moderately sorted; sparse (5%) grog (?), 1-2mm, sub-rounded and occasional shell flecks. In thin section the fabric has a micaceous groundmass with abundant visible laths up to 0.5mm long but more typically less than 0.1mm. Moderate scatter of well-sorted quartz generally sub-angular to rounded in form and up to 0.1mm across. Scatter of clay pellets and iron-rich clay. The clasts include abundant finely crushed fresh-looking calcite, generally angular and up to 1.5mm across. Sparse fragments of what appear to be freshly crushed shell, angular in form, ranging in size from 0.1mm up to the large piece 2mm long. Occasional angular and sub-angular fragments of grog up to 2mm across in a contrasting more iron-rich fabric with no obvious clasts in the visible fragments.
P12 Fabric: B Style: Deverel-Rimbury Period: MBA	Clay Type E with sandstone/quartzite and grog. Grey-black exterior surface, core and interior surface. Macroscopically, a soft, silty textured fabric containing a common amount (20%) of sandstone, 1-3.5mm across, sub-angular to angular, moderately sorted; sparse (7%) sub-rounded dark grey grog inclusions up to 2mm across. In thin section the fabric has a dense finely micaceous groundmass with abundant visible laths up to 0.1mm long. Light scatter of well-sorted quartz generally sub-angular to rounded in form and up to 0.1mm across. Sparse scatter of clay pellets and iron staining. The clay is not well mixed in the sections examined. The clasts include abundant sub-angular to rounded fragments of sandstone up to 3.5mm across. The stone is dense with iron staining, fine angular quartz with very little evidence of cement binding the fragments together, and larger fragments of quartzite. There are also small angular pieces of quartzite typically up to 0.3mm across which may be detached fragments of sandstone. Sparse fragments of sub-rounded grog up to 2mm across in a contrasting more iron-rich fabric with no obvious clasts in the visible fragments. In the hand specimen some of the grog is pink-red colour.
P13 Fabric: Q Style: Biconical or Deverel-Rimbury Period: E-MBA	Clay Type E with calcite and limestone. Pink-red exterior and interior surfaces, grey-black core. Macroscopically, a soft, slightly soapy fabric containing a very common amount of calcite and shelly limestone, varying in size from flecks of <0.25mm to pieces of 5mm, sub-rounded to angular, poorly sorted. The surfaces are heavily pitted from the erosion of clastic inclusions. In thin section the fabric has a dense finely micaceous groundmass with abundant visible laths up to 0.1mm long. Light scatter of well-sorted quartz generally sub-angular to rounded in form and up to 0.1mm across. Sparse scatter of clay pellets and iron staining. The clasts include abundant angular and sub-angular fragments of calcite up to 0.3mm across, but much of it much finer and well-sorted in terms of the size distribution. Rounded fragments of limestone up to 3.5mm across (but larger pieces in hand-specimen) with some visible fossils but mostly fine textured with abundant calcareous cement. The erosion of the calcite (?and limestone) is mainly confined to the vessel surfaces.
P14 Fabric: G Style: Deverel-Rimbury Period: MBA	Clay Type B with calcite and limestone. Red-brown outer and inner surfaces with grey-black core. Macroscopically, a soft, slightly soapy fabric containing a common amount (20%) of calcite, up to 10mm, some starting to decompose, sub-angular to angular, poorly sorted and sparse (5-7%) fossiliferous limestone and shell, <2.5mm, sub-angular and platy. In thin section the fabric shows a very fine-grained, dense, iron-rich and slightly micaceous groundmass in which very few individual mineral grains are visible. Very sparse scatter of fine quartz mainly less than 0.2mm across. There is heavy and widespread iron staining and iron-rich clay pellets up to 0.3mm across. Clasts are dominated by a heavy scatter of angular fresh-looking fragments of calcite up to 10.0mm across together with a heavy scatter of small pieces of fossil shell (some with multiple shell fragments bound together with a calcareous cement) up to 3.0m across. This fabric is heavily rock-tempered. Two small pieces of grog in a similar fabric noted in slide A.

P15 Fabric: N Style: Deverel-Rimbury Period: MBA	Clay Type F with limestone and calcite. Buff coloured inner and outer surfaces and core. Macroscopically, a soft, silty fabric containing a common amount (20%) of white limestone, 0.25-9mm, sub-rounded and sparse (5%) calcite, sub-angular, up to 1.5mm. In thin section this fabric has a dense and very fine grained groundmass with little visible mica, a heavy scatter of mostly fine angular-to sub-angular quartz and a sparse scatter of larger quartz fragments up to 0.1mm across. Abundant small rounded iron-rich clay pellets. The clasts comprise poorly sorted sub-angular to rounded fragments of limestone up to 2mm across in thin section but larger pieces visible in the hand-specimen. Smaller pieces are common. Ooliths can be seen in most of the fragments within the sections examined. A medium scatter of poorly sorted angular fragments of calcite up to 3mm across, although again with numerous small pieces. One small fragment of sandstone c.0.2mm across was noted in Section A.
P16 Fabric: M Style: Deverel-Rimbury Form: CW2A Period: MBA	Clay Type E with limestone and calcite. Red-pink outer surface black-grey core and inner surface. Macroscopically, a soft, slightly soapy fabric containing a common amount (25%) of calcite, <0.25-6mm, angular, poorly sorted. With lesser amounts (5%) or limestone <0.5mm across, rounded and poorly sorted. In thin section. In thin section the fabric has a dense finely micaceous groundmass with abundant visible laths up to 0.1mm long. Light scatter of well-sorted quartz generally sub-angular to rounded in form and up to 0.1mm across. Sparse scatter of clay pellets and iron staining. The clasts include abundant angular and sub-angular fragments of calcite up to 3mm across (larger in hand-specimen), but much of it much finer and well-sorted in terms of the size distribution. Rounded fragments of limestone up to 0.5mm across some with some visible fossils that include ooliths. Sparse scatter of round grog fragments up to 0.4mm across in a more micaceous fabric and occasional pieces of rounded sandstone up to 0.3mm across.
P17 Fabric: A Style: Deverel-Rimbury Period: MBA	Clay Type B with grog. Grey surfaces and core. Macroscopically, a soft, soapy fabric containing a common amount (25%) of grog, light grey in colour and appears quite vesicular (like a mould?), 0.5-2.5mm, sub-rounded, moderately sorted. Difficult to see in the fresh fracture as iron has leached through the sherd. In thin section this fabric shows a very fine-grained, dense, iron-rich and slightly micaceous groundmass in which very few individual mineral grains are visible. There is heavy and widespread iron staining and iron-rich clay pellets up to 0.3mm across. Heavy scatter of angular-sub-angular grog fragments in a generally similar fabric but with different firing conditions up to 1mm across but larger in hand-specimen. Some voids on the surface of the specimen sherd may result from the erosion of small pieces of grog.
P18 Fabric: B Style: Deverel-Rimbury Period: MBA	Clay Type C with grog. Red outer surface, grey core and inner surface. Macroscopically, a soft, slightly soapy fabric containing a common amount (20-25%) of grog (light orange or light grey, depending if in oxidised or unoxidised area), 0.5-4mm, sub-rounded, moderately sorted. In thin section this fabric shows a slightly micaceous dense groundmass with a moderate scatter of fine well-sorted angular and sub-angular quartz up to 0.15mm across. Occasional plagioclase feldspar up to 0.15mm across. Sparse scatter of well-rounded iron oxide fragments up to 0.1mm across. Clasts comprise abundant angular to sub-angular fragments of grog up to 2mm across (but larger in hand specimen). Most are in the same fabric as the surrounding matrix, although different firing conditions are visible in some cases. A few are of Clay Type B.
P19 Fabric: A Style: Deverel-Rimbury Period: MBA	Clay Type C with grog. Grey-black surfaces and core. Macroscopically, a soft, soapy fabric containing a common amount (20%) of grog, 0.5-2mm, sub-rounded to sub-angular, well sorted. Rare (1%) red iron oxides, sub-rounded, 1mm. In thin section this fabric shows a slightly micaceous dense groundmass with a moderate scatter of fine well-sorted angular and sub-angular quartz up to 0.15mm across. Sparse scatter of well-rounded iron oxide fragments up to 0.1mm across. Clasts are dominated by rounded and sub-rounded fragments of grog, well sorted and typically in the range 0.5mm to 2mm. Mainly the same fabric as the host matrix, but occasionally Clay Type B. Pitting on the outer surface of the specimen sherd is probably from the erosion of grog fragments.

P20 Fabric: D Style: Wilburton mould Period: M-LBA	Clay Type A. Grey surfaces with occasional pink clouding with a grey-black core. Macroscopically, a very fine/silty, micaceous fabric. No visible inclusions under low-powered (x20) magnification. In thin section this fabric has a strongly micaceous groundmass dominated by laths of muscovite mica up to 0.4mm long. Moderate to heavy scatter of fine angular and sub-angular quartz up to 0.2mm across. Clay pellets up to 0.4mm across visible in both sections. Occasional plagioclase feldspar up to 0.15mm across. Sparse scatter of well-rounded iron oxide fragments up to 0.1mm across.
P21 Fabric: D Style: Wilburton mould Period: M-LBA	Clay Type A. Orange-red surfaces and core. Macroscopically, a very fine/silty, micaceous fabric. No visible inclusions under low-powered (x20) magnification. In thin section this fabric has a strongly micaceous groundmass dominated by laths of muscovite mica up to 0.4mm long. Moderate to heavy scatter of fine angular and sub-angular quartz up to 0.2mm across. Clay pellets up to 0.4mm across visible in both sections. Occasional plagioclase feldspar up to 0.15mm across. Sparse scatter of well-rounded iron oxide fragments up to 0.1mm across.
P22 Fabric: E Style: Post-Dev-Rim Type 3 Period: LBA	Clay Type F with calcite and limestone. Pink-orange inner and outer surfaces with light grey core. Macroscopically, a soft, slightly soapy fabric containing a common amount (20%) of calcite, 0.5-2.5mm, sub-angular to angular, moderately sorted and sparse (7%) fossiliferous limestone and shell, <2mm. In thin section this fabric has a dense and very fine grained slightly calcareous groundmass with little visible mica, a heavy scatter of mostly fine angular-to sub-angular quartz and a sparse scatter of larger quartz fragments up to 0.1mm across. Abundant small rounded iron-rich clay pellets. Clasts comprise calcite and fossiliferous limestone. The heavy scatter of calcite includes large angular fragments with a well-sorted size range from 0.2mm up to >3.0mm across. The limestone fragments are far less common (sparse), rounded and sub-rounded in form and include visible small fossils and pieces of shell.
P23 Fabric: E Style: Post-Dev-Rim Type 8 Period: LBA	Clay Type D with calcite and limestone. Brown-red outer surface with grey-brown inner surface and core. Macroscopically, a soft, slightly soapy fabric containing a common amount (20%) of calcite, 0.5-2.5mm, sub-angular to angular, moderately sorted and sparse (7%) fossiliferous limestone and shell, <2mm. In thin section this fabric has a micaceous groundmass with abundant visible laths up to 0.5mm long but more typically less than 0.1mm. Moderate scatter of well-sorted quartz generally sub-angular to rounded in form and up to 0.1mm across. Scatter of clay pellets and iron-rich clay. Clasts comprise calcite and fossiliferous limestone. The heavy scatter of calcite includes large angular fragments with a well-sorted size range from 0.2mm up to >3.0mm across. The medium scatter of limestone fragments are rounded and sub-rounded in form and include visible small fossils and pieces of shell.
P24 Fabric: E Style: Post-Dev-Rim Form DA3 Period: LBA-EIA	Clay Type D with calcite and limestone. Brown-grey outer surface with grey-black inner surface and core. Macroscopically, a soft, soapy fabric containing a common amount (20%) of calcite, 0.25-3mm, sub-angular to angular, poorly sorted; sparse (7%) fossiliferous limestone and shell, <3.5mm, sub-rounded and platy. In thin section this fabric has a micaceous groundmass with abundant visible laths up to 0.5mm long but more typically less than 0.1mm. Moderate scatter of well-sorted quartz generally sub-angular to rounded in form and up to 0.1mm across. Scatter of clay pellets and iron-rich clay. Clasts comprise calcite and fossiliferous limestone. The heavy scatter of calcite includes large angular fragments with a well-sorted size range from 0.2mm up to >3.0mm across. The medium scatter of limestone fragments are rounded and sub-rounded in form and include visible small fossils and pieces of shell.

*See Table 2 for details of site, context and find number.

Appendix 2 – Descriptions of recognized clay types

Clay Type A. In thin section this clay type has a strongly micaceous groundmass dominated by laths of muscovite mica up to 0.4mm long. Moderate to heavy scatter of fine angular and sub-angular quartz up to 0.2mm across. Clay pellets up to 0.4mm across visible in both sections. Occasional plagioclase feldspar up to 0.15mm across. Sparse scatter of well-rounded iron oxide fragments up to 0.1mm across.

Clay Type B. In thin section this clay type shows a very fine-grained, dense, iron-rich and slightly micaceous groundmass in which very few individual mineral grains are visible. There is heavy and widespread iron staining and iron-rich clay pellets up to 0.3mm across could be confused with grog.

Clay Type C. In thin section this clay type shows a slightly micaceous dense groundmass with a moderate scatter of fine well-sorted angular and sub-angular quartz up to 0.15mm across. Occasional plagioclase feldspar up to 0.15mm across. Sparse scatter of well-rounded iron oxide fragments up to 0.1mm across.

Clay Type D. In thin section this clay type has a micaceous groundmass with abundant visible laths up to 0.5mm long but more typically less than 0.1mm. Moderate scatter of well-sorted quartz generally sub-angular to rounded in form and up to 0.1mm across. Scatter of clay pellets and iron-rich clay.

Clay Type E. In thin section this clay type has a dense finely micaceous groundmass with abundant visible laths up to 0.1mm long. Light scatter of well-sorted quartz generally sub-angular to rounded in form and up to 0.1mm across. Sparse scatter of clay pellets and iron staining.

Clay Type F. In thin sections this clay type has a dense and very fine grained slightly calcareous groundmass with little visible mica, a heavy scatter of mostly fine angular-to sub-angular quartz and a sparse scatter of larger quartz fragments up to 0.1mm across. Abundant small rounded iron-rich clay pellets.