Channel Tunnel Rail Link London and Continental Railways Oxford Wessex Archaeology Joint Venture

# The late prehistoric pottery from Tutt Hill, Westwell, Kent (ARC 430 83+800-84+900 99)

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#### **1** INTRODUCTION

A total of 2235 sherds (10965 g) of later prehistoric pottery was recovered from the excavations at Tutt Hill (ARC 430 83+800+900 98-9 Table 1). Later prehistoric pottery was found in 13 features. The majority of the material came from cremation pits and other pits, but pottery was also found in ditches and a gully. Much of this assemblage is very fragmented, resulting in a mean sherd weight of only 4.9 g, varying from 1.0-27.5 g by feature. The acidic soil conditions at the site contributed to this extremely poor condition. Pottery dating from the middle Bronze Age, middle/late Bronze Age, early or early/middle Iron Age and middle/late Iron Age periods was identified.

The assemblage was recorded using the methodology designed for the route-wide scheme in accordance with the recommendations set out by the Prehistoric Ceramics Research Group (PCRG 1997).

Feature	Context	Count	Weight	MSW
pit 5	7	909	2147	2.4
	8	172	387	2.3
	9	60	233	3.9
	10	43	167	3.9
	total	1184	2934	2.5
pit 14	13	121	802	6.6
	15	2	34	17.0
	16	11	53	4.8
	total	134	889	6.6
pit 33	34	32	331	10.3
pit 42	43	1	1	1.0
cremation pit 46	47	300	747	2.5
	48	1	1	1.0
	49	16	27	1.7
	50	12	24	2.0
	total	329	799	2.4
cremation pit 53	54	1	3	3.0
	55	4	20	5.0
	total	5	23	4.6
pit 106	105	1	4	4.0
	107	1	4	4.0
	total	2	8	4.0
other 117	118	2	4	2.0
pit 142	141	8	46	5.8
ditch 153	152	4	110	27.5
ditch 176	179	2	8	4.0
	200	141	105	0.7
	total	143	113	0.8
pit 217	219	8	20	2.5
cremation pit 301	298	63	148	2.3
	300	318	5537	17.4

Table 1: Quantification of late prehistoric pottery by context

Feature	Context	Count	Weight	MSW
	total	381	5685	14.9
gully 11115	11114	2	2	1.0
	TOTAL	2235	10965	4.9

#### 2 FABRICS

A total of six fabric groups, comprising 13 different fabrics, was defined (ARC 430 83+800-84+900 98-9 Table 2). The analysis revealed that there are distinct chronological variations in the use of different clays and tempers within the later prehistoric pottery assemblage from Tutt Hill.

Fabric Type	Number	Weight
Flint-tempered group		
F1	9	72
F2	3	18
F3	149	225
F4	10	38
F5	2	25
F99	2	2
Flint-and-quartz group		
FQ1	490	1335
FQ2	26	178
Grog-tempered group		
G1	5	14
G2	297	759
Grog and flint-tempered group		
GF1	540	6577
GF2	9	40
GF99	1	1
Quartz sand group		
Q1	32	331
Quartz sand and flint-gritted group		
QF1	660	1350
TOTAL	2235	10965
	•	

Table 2: Quantification by fabric type

The middle Bronze Age pottery fabrics are flint-tempered (F2, F3, F4, F5) or grog and flint-tempered (GF1), and the clays are distinctively silty rather than fine to coarse-grained sand in texture. In hand specimen and at x10 power binocular microscopy, this results in the quartz in these clays being virtually invisible or appearing as pin-pricks of glittering reflection in direct light. Petrological identification of thin-sectioned samples of these fabrics revealed the extremely fine size range of the quartz present. In addition, none of the middle Bronze Age fabrics were also recognised at Shrubsoles Hill, Isle of Sheppey (Raymond 2003, 30). One of these middle Bronze Age Tutt Hill fabrics (F3) continued in use during the transition from the end of the middle Bronze Age into the late Bronze Age, when one new flint-tempered fabric was

created (F1), as well as one new grog-and-flint fabric (GF2). In addition, two new fabrics are simply grog-tempered (G1, G2). However, rare pieces of flint, which can be very large, do occur in the coarser of these (G2) which links all of these middle Bronze Age and late Bronze Age fabrics. All the clays are still silty, and neither sandy nor glauconitic during this transition phase. Therefore, it is possible to define the ceramic transition from the middle into the late Bronze Age at Tutt Hill as one of both continuity and change.

There is a gap in ceramic deposition at this site between the end of the middle/late Bronze Age phase and the early to early/middle Iron Age phase. It is during this gap between the late Bronze Age and the early Iron Age that a major change must have occurred in the nature of fabric preparation in the first half of the first millennium BC in the Tutt Hill area. By the early/middle Iron Age period, flint was still used as temper, but the clays selected for pottery manufacture consistently contain medium to coarse-grained quartz and glauconite, ranging from sparse amounts of quartz and glauconite (F1, FQ2) up to 40% glauconite (FQ1, QF1). This change to distinctively sandy clay matrices also heralded a change in the sources of the clays for pottery manufacture with at least one source which was the same for both coarse ware and fine ware fabrics (FQ1, QF1), and the selection of raw material sources with variations between sparse (F1, FQ2) quartz/glauconite and abundant (FQ1, QF1) quartz/glauconite.

The final ceramic phase during the later prehistoric period is represented by a single middle to late Iron Age bowl made from a fabric rich with only medium-grained glauconite and quartz (Q1).

All the flint described as temper in the following fabric descriptions is crushed and burnt (calcined) unless otherwise stated. A programme of thin-sectioning and petrological examination was undertaken for eleven fabrics where indicated (\*) to clarify the characterisation of the fabrics as required. ARC 430 83+800+900 98-9 Table \*3 presents the quantification of pottery by fabric type for each context and feature by weight only due to the degree of fragmentation as a result of soil conditions.

The terms 'very coarse', 'coarse', 'intermediate' and 'fine' used in the fabric definitions below are subjective impressions by the author rather than standardised terminology established by the Prehistoric Ceramics Research Group.

										FAE	BRIG	C TYP	ES			
			Mide	lle B	ronze A	1ge	Middle/Late Bronze					rly/Mid	ldle Iro	M/L Iron	LPRE	
							Age							Age		
Feature	Context	F2	F4	F5	GF1	GF99	F3	G1	G2	GF2	F1	FQ1	FQ2	QF1	Q1	F99
MIDDLE BROI	NZE AGE															
pit 42	43					1										

*Table 3: Quantification of pottery by fabric type, by period and by context* 

5

										FAE	BRIG	C TYP	ES			
			FABRIC TYPES         Middle Bronze Age       Middle/Late Bronze Age       Early/Middle Iron Age         72       F4       F5       GF1       GF99       F3       G1       G2       GF2       F1       FQ1       FQ2       QF1         3       20       1 <th>M/L Iron</th> <th>LPRE</th>										M/L Iron	LPRE		
Footuro	Context	F2	F/	F5	CF1	CF00	F3	A	ge	CF2	F1	FO1	FO2	OF1	Age 01	F00
aromation nit	54	F 2 2	1.4	F3	GFI	GF <i>33</i>	гэ	01	62	GF2	r 1	ryı	rų2	QFI	U I	Г 77
53	54	3														
	55				20											
other 117	118		3													1
cremation pit 301	298				148											
	300				5537											
pit 142	141		33				13									
ditch 153	152			25			85									
pit 217	219		2		5		13									
MIDDLE AND	LATE BRO	ONZE	E AGI	E							1					
pit 14	13				754			10	38							
	15				34											
	16	11			2					40						
pit 46	47				51				696							
	48								1							
	49				27											
	50								24							
pit 106	105						4									
	107	4														
ditch 176	179						8									
-	200						102	3								
EARLY-EARLY	/MIDDLE	IRO	VAG	Ε												
pit 5	7											1335	116	696		
	8													387		
	9										48		48	137		
	10										24		14	129		
gully 11115	11114													1		1
MIDDLE-LATH	E IRON AG	E														
pit 33	34														331	

#### 2.1 Bronze Age fabrics

# 2.1.1 Flint-tempered fabric group

#### F1. Not used

F2. Intermediate fabric; moderate to common (10-20%), moderately-sorted, angular flint,  $\leq 5$  mm with the majority  $\leq 2$  mm; very rare (1%), rounded quartz, 0.5-0.8 mm; rare fine quartz  $\leq 0.1$  mm; rare iron oxides, red near oxidised surfaces; clay matrix dense and slightly sandy; fracture harsh.

F3. Coarse fabric; moderate to common (15-25%), poorly-sorted, angular flint,  $\leq 6$  mm but mostly  $\leq 3$  mm; very rare (<1%), sub-angular to sub-rounded quartz, red-stained,  $\leq 0.5$  mm; clay matrix fine, dense and silty; fracture hackly (\*).

F4. Coarse fabric; common to very common (25-30%), moderately-sorted, angular flint,  $\leq$ 3 mm; sparse (5%), rounded clay pellets,  $\leq$ 2 mm; clay matrix dense, silty and micaceous; fracture harsh to hackly.

F5. Fine fabric; common (20-25%), very well-sorted, angular flint,  $\leq 2$  mm; clay matrix dense and silty; fracture harsh

# 2.1.2 Grog-tempered fabric group

G1. Intermediate fabric; common to abundant (25-40%), well-sorted, angular grog,  $\leq 1$  mm; rare (1-2%), rounded iron oxides; clay matrix dense and silty; 'soapy' feel; fracture smooth.

G2. Intermediate fabric; common (20-25%), moderately-sorted, angular grog,  $\leq 2$ mm; rare to sparse (1-3%), poorly-sorted, angular flint <10 mm but usually  $\leq 2$  mm; sparse (1-2%) fine quartz,  $\leq 0.2$  mm; clay matrix dense; fracture hackly.

# 2.1.3 Grog and flint-tempered fabric group

GF1. Coarse fabric; common (20%), moderately-sorted, angular grog,  $\leq 3$  mm; moderate (10-15%), poorly-sorted angular flint,  $\leq 8$  mm, majority  $\leq 5$  mm; rare to sparse (1-3%), rounded iron oxides,  $\leq 1$  mm; very rare (1%), rounded quartz, < 0.3 mm; clay matrix dense and silty; fracture hackly. Silt-sized quartz visible in thin section and grog fabric is the same iron oxide bearing, silty clay matrix as main fabric.

GF2. Intermediate fabric; moderate (10-15%), moderately-sorted, angular grog,  $\leq 2$  mm; sparse to moderate (7-10%), moderately-sorted angular flint,  $\leq 2$  mm; sparse (5-7%), rounded iron oxides,  $\leq 2$  mm; clay matrix dense and silty; fracture hackly.

# 2.2 Iron Age fabrics

# 2.2.1 Flint-tempered, quartz-gritted fabric group

FQ1. Coarse fabric; moderate (10-15%), moderately-sorted, angular flint,  $\leq 5$  mm, some of which is red; sparse (3-7%), well-sorted, rounded quartz,  $\leq 0.5$  mm, and abundant (40%), well-sorted, rounded glauconite,  $\leq 0.5$  mm, on the surfaces but difficult to detect in the unoxidised body; clay matrix dense and silty; fracture fairly smooth (\*).

FQ2. Coarse fabric; sparse to moderate (7-10%), poorly-sorted, angular flint,  $\leq 4$  mm; moderate (10%), well-sorted, sub-rounded to rounded quartz,  $\leq 1.2$  mm; sparse (3-5%) glauconite,  $\leq 0.3$  mm; rare (1-2%), rounded, iron oxides; rare (1%) linear vesicles; clay matrix dense, finely sandy and micaceous; fracture hackly (\*).

FQ3. Very coarse fabric; very common to abundant (30-40%), poorly-sorted, angular flint,  $\leq 6$  mm; sparse (5-7%), well-sorted, sub-rounded to rounded, very coarse quartz,  $\leq 1.5$  mm and sparse, finer (3-5%) glauconite,  $\leq 0.5$  mm, which together represent a sparse to moderate amount of the fabric; clay matrix dense; fracture very hackly (\*).

# 2.2.2 Quartz-gritted fabric group

Q1. Intermediate fabric; abundant (40%), very well-sorted, well-rounded glauconite,  $\leq 0.3$  mm; sparse (3-5%), well-rounded quartz,  $\leq 0.6$  mm; clay matrix dense and sandy; fracture harsh (\*).

# 2.2.3 Quartz-gritted, flint-tempered fabric group

QF1. Intermediate fabric; abundant (40%), very well-sorted, well-rounded glauconite, <0.3 mm, and sparse (5-7%), moderately-sorted, rounded quartz, mostly  $\leq$ 1.0 mm, but rare 2 mm pieces; sparse (3-7%) moderately-sorted angular flint,  $\leq$ 5 mm; rare (1%) iron oxides; rare (1%) linear vesicles; clay matrix dense and sandy; fracture harsh; larger flint may not always be visible on surfaces. In thin section, naturally occurring clay matrix components of glauconite and quartz are very similar, if not identical, to Q1 above (\*).

#### **3 RESOURCES**

An ethnographic model for interpreting the likely location of resources used for pottery manufacture was developed by Professor Dean Arnold, who recommended its use by archaeologists in determining whether pottery could have been made from local resources or was likely to have been acquired through exchange or trade (Arnold 1985). Arnold's model indicates that the vast majority of potters in non-industrialised, agricultural communities obtain the clays for pottery production from within 7 km radius of their settlements and any necessary temper from within 10 km. Therefore, the geology of an archaeological site and its surrounding landscape are the key to determining whether clays and tempers were locally available to prehistoric potters. This model has been utilised frequently to assist in the interpretation of production and distribution of pottery during the later prehistoric period in southern Britain (Knight 1992, 43; Morris 1994a; 1994b).

Tutt Hill is located on the northern edge of the Folkestone Beds, where they join with the Gault Clay (Geological Survey Sheets 289). The Folkestone Beds 'consist predominantly of loosely consolidated quartzose sand' (Gallois 1965; Smart, *et al.* 1966; Worssam 1963, 50). These sands are mostly fine to medium-grained and pale grey or yellowish in colour. The coarser sands are found in more localised pockets and tend to be reddish brown from their contact with iron. There are also thin bands of clay intermixed with the sands. Lower parts of the formation are rich in glauconite, giving the sand a greenish grey colour (Gallois 1965; Smart, *et al* 1966; Worssam 1963, 51). In addition, Gault Clay outcrops occur in a continuous line along the foot of the chalk downs and vary in colour from dark blue to pale grey. The junction of Gault with the Folkestone Beds is characterised by bands of clayey sand. Within a 7 km radius of the site lie the Lower Chalk, Middle Chalk (flint-bearing), and Sandgate Beds of silty clays and the Weald Clay, with silty and sandy beds.

Therefore, suitable resources for making the pottery found at Tutt Hill were available nearby and all of the pottery in this assemblage could have been made locally. However, many of these resources are available over a wide area in Kent, so more distant production centres could also have been the sources for these vessels.

#### **4 FORMS AND DECORATION**

Several different form types were defined for this assemblage, with more types for the Iron Age than for the Bronze Age phases. The correlation of fabric types to form types is presented in ARC 430 83+800+900 98-9 Table \*4 and the frequency of form types per feature in ARC 430 83+800+900 98-9 Table \*5.

Table 4: Correlation of fabric types to form types

	Fabric Types													
Form	Mida	lle Bron	ze Age		Midd	le/Late I	Bronze .	Age		Early/Mi	ddle Iron	Age	M/L Iron Age	
Types	F3	F4	F5	GF1	F1	F3	G1	G2	GF2	FQ1	FQ2	QF1	Q1	
R1		1		5										
R2								1						
R3										2				
R4							1							
R5										2				
R6												1		
R7								1	1					
R8						1				1				
R9											1			
R10												2		
R11											1			
R12							1							
B1	1			1				1		2		2		
B2				1										
B3					1									
B4													1	
B99		1		1					1	3		2		
A1										1	1			
A3							1				1			
D	1		1	2					1			2	1	

# Table 5: Frequency of form types per feature

								FORM	1 TYPI	ES													
	Middle	Bronze 2	4ge		Mida	lle/Late	e Bron	ze Age				Early/Middle Iron Age											M/L Iron Age
Feature	R1	<b>B</b> 1	B2	R2	R4	<b>R</b> 7	<b>R8</b>	R12	B1	B3	A3	R3	R5	R6	<b>R8</b>	R9	R10	R11	B1	B3	A1	A3	B4
MIDDLE BRONZE AGE	Ε																						
cremation pit 53	1																						
	1	1																					
cremation pit 301	1	1																					
pit 142																							
ditch 153		1																					
pit 217	1																						
		~-																					
MIDDLE AND LATE B	RONZE A	GE	1																				
pit 14	2		1		1	2					1												
pit 46	1			1					1														
ditch 176							1	1															
diten 170							1	1															
EARLY-EARLY/MIDDL	E IRON A	1GE																					
pit 5												2	2	1	1	1	2	1	2	1	2	2	
MIDDLE-LATE IRON A	1GE				1	1																	
pit 33																							1

The most commonly found rim form is the middle Bronze Age Deverel-Rimbury style bucket urn (R1) with six different vessels in the assemblage. One of these is made from a coarse flint-tempered fabric (not illustrated) and five are made from grog and flint-tempered fabrics (Fig. 1, Nos 1-2, 5-6 and 8). Four of them are decorated with finger-tip impressions on the top of the rim and two were perforated prior to firing with a row of through-wall small holes below the rim. At least one of the bucket urns, from a cremation deposit, is decorated with an applied cordon which was also decorated with finger-tip impressions, and there are two other GF1 fabric vessels which are likely to have been bucket urns due to the presence of similar decoration (Fig. 1, Nos 3 and 7). There was at least one globular urn/vessel in the assemblage but this is represented only by burnished sherds decorated with incised horizontal and diagonal, convergent parallel lines (Fig. 1, No. 4). Bucket urn/jars are a very common middle Bronze Age vessel form which is most often found to be an urn used to contain a cremation burial as found at Bridge, Barrow 2 with a radiocarbon date of 1246-1066 cal BC (one sigma) and 1380-930 cal BC (two sigma) (Macpherson-Grant 1980, footnote 73, figs 25, 146 and 26, 147). These vessels are also found on settlements such as at Christchurch College, Canterbury (Macpherson-Grant 1992, fig. 1), Coldharbour Road, Gravesend (Barclay 1994, fig. 9, 6-7) and Shrubsoles Hill, Isle of Sheppey (Raymond 2003). Globular urn/jars are increasingly being found in Kent, with fragments of one from Coldharbour Road (Barclay 1994, fig. 9, 5) and three complete or nearly complete examples from Shrubsoles Hill (Raymond 2003, fig. 1.15, 6, 7 and 16), with others from CTRL sites which will be discussed in the scheme-wide ceramics review.

Later Bronze Age vessels, representing not only the late Bronze Age but also the middle/late Bronze Age transition, include two which are closed-form jars, a neutral/open profile form and two unique bowls - one a necked bowl and the other a long-necked bowl or cup. Type R8 is a devolved version of the bucket urn/jar resulting in a very simple, convexprofile, ovoid form with no neck (Fig. 1, No. 13), and this example is made from middle Bronze Age fabric F3. Ovoid, convex-profile jars are common in the late Bronze Age (Elsdon 1982, fig. 5, 11-24; Russel 1989, figs 11, 1, and 12, 9; Longley 1991, figs 78, P26 and 91, P251). Related to this is a hooked rim version of the ovoid jar (R12; Fig. 1, No. 14), which here is made from a grog-tempered fabric. Hooked rim jars are becoming more common in the archaeological record of Kent with examples from Coldharbour Lane, Gravesend (Barclay 1994, fig. 10, 8) and Shrubsoles Hill, Isle of Sheppey (Raymond 2003, fig. 1.15, 14-15), and this distinctive variation of ovoid, neckless jar is a well-known late Bronze Age 'plain ware' type in southern England (Russel 1989, fig. 11, 2; Hall 1992, figs 41 and 42, type 8). It is possible that this form may have devolved from bucket urns. The simple, open form, type R7, is a common late Bronze Age type in southern England (Elsdon 1982, fig. 7, 39 and 43; Hall 1992, fig. 41, type 1; Wymer and Brown 1996, fig. 64, 66), while the more restricted-profile

bowl, type R2, is unusually thick-walled and had been made from a rather coarse fabric (G2) for a vessel burnished on both surfaces. This vessel, for the time being, is quite unique amongst the few 'plain ware' late Bronze Age assemblages in Kent. However, it is possible to see that the profile is a variation derived from middle Bronze Age globular urns. The very small bowl or possible cup (R4) is the only vessel form for this period range which has a shouldered profile, a truly late Bronze Age characteristic. Both of these vessels are described as bowls because they were burnished on both internal and external surfaces.

The early Iron Age tripartite bowl, type R10 (Fig. 2, Nos 21-2), is extremely rare in Kent but here at Tutt Hill two were found in the same feature. One other example was recovered from another CTRL intervention, Little Stock Farm, and will be discussed as part of the route-wide ceramics review. This dramatic profile, however, is found in several late Bronze Age-early Iron Age assemblages from Essex (Brown 1988, fig 16, 57, 60-61; 1996, fig. 28, 23-4; Wymer and Brown 1995, fig. 65, 81, 99; fig. 66, 105 and 107). The decoration is reminiscent of examples from various eastern Kent sites such as Folkestone and Highstead (Macpherson-Grant 1994, fig. 20, Folkestone F1, Highstead 33 and Monkton M24) but the profiles of these examples are much softer in outline. Associated with the tripartite bowls in pit 5 were a variety of fragmented jar forms broken at the neck. One (Fig. 2, No. 24) is reminiscent of an extremely common round-shouldered jar with upright rim, usually decorated with finger-pinched cabling or smearing along the top edge, found at White Horse Stone, which will be discussed in the scheme-wide review of later prehistoric ceramics. Finger-pinched cable decoration is common on late Bronze Age/early Iron Age jars in Kent (Macpherson-Grant 1994, fig. 1478-82). Type R3 (Fig. 2, No. 17) is similar to an Iron Age example from the Deal area (Parfitt 1985, fig.4, 9) but the Tutt Hill example is lacking the vessel profile. The other jars are too fragmented to suggest parallels with any confidence, but are not likely to differ widely from simple, round-profile, barrel-shaped or slack-shouldered jars of the early/middle Iron Age.

Only four base types were found in the assemblage. Of these, B1, B2 and B3 were all flat bases with various subtle differences. The only vessel in the entire assemblage not to have a flat base is the middle to late Iron Age vessel in pit 33, which had a slightly recessed base (B4; Fig. 2, No. 27b). This bowl with curvilinear tooling of a wavy line and a possible large dimple (Fig. 2, No. 27a) may be unique in Kent at present; the reconstructed profile is not obviously globular in shape. The combination of curvilinear, tooled decoration and a possible dimple (but without ring-and-dot or lozenge motif) was named the Mucking-Oldbury style by Brown (1991), in contrast to the Mucking-Crayford style which is a strongly restricted profile container with ring-and-dot impressions and lozenges (Cunliffe 1991, fig. A: 26, 1-5). More recent discoveries include two Mucking-Oldbury style vessels from Shoeburyness (Stamataki 2000, PRNs 1017 and 1053). There are other decorative styles such as that found on a fine

shell-tempered vessel from Farningham Hill in the Darent valley in north-west Kent (Couldrey 1984, fig. 19, 125) which could be a variation of middle to late Iron Age decorative style. All of these highly decorated and very distinctive vessels apparently have different fabrics, whether flint-tempered, shell-tempered or sandy, and some are dominated by glauconite as is the case for the Tutt Hill example, indicating that there is no single source for the 'Mucking-style' of the lower Thames estuary region. This is a topic which needs much further research.

### 4.1 Rims

R1. Neutral-profile vessel with a slightly inward curving, but broadly upright rim; bucket urn/jar; may have fingertip impressions on the top of the rim and a row of pre-firing perforations just below the rim (Fig. 1, Nos 1-2, 5, 8-9).

R2. Necked bowl with a short, upright to slightly everted, rounded rim and slightly rounded profile; possibly an unusual globular urn (Fig. 1, No. 6).

R3. Uncertain profile, strongly necked jar with slightly flared, rolled rim (Fig. 2, No. 17).

R4. Small bowl/cup with outward turned, flat rim and shouldered profile (Fig. 1, No. 12).

R5. Uncertain profile, softly necked jar with upright to slightly flaring rim (Fig. 2, Nos 18-19).

R6. Barrel-shaped, slack-profile, necked jar with short, flared, rounded rim and flat base (Fig. 2, No. 20).

R7. Necked neutral to open vessel with an outward curving rim and convex or barrel-shaped profile; may have finger-nail impressions on the interior rim Fig. 1, Nos 10-11).

R8. Ovoid or convex-profile, neckless jar with rounded rim (Fig. 1, No. 14, Fig. 2, No. 16).

R9. Upright to flaring rim on necked, shouldered jar; a well-known Kent vessel form (Fig. 2, No. 24).

R10. Tripartite-profile bowl with a flared, tapered rim and sharply angled shoulder (Fig. 2, Nos 21-22).

R11. Bowl/jar with an upright, rounded rim springing straight from a slightly rounded shoulder creating a neck junction (Fig. 2, No. 23).

R12. Hooked rim variant of ovoid or convex-profile, neckless jar (Fig. 1, No. 15).

#### 4.2 Bases

B1. Flat base (Fig. 1, No. 1, Fig. 2, No. 20).

B2. Expanded or flared, flat base (Fig. 1, No. 13).

B3. Rounded exterior, flat base (Fig. 2, No. 25).

B4. Indented or recessed base (Fig. 2, No. 27).

#### 4.3 Others

- A1. Obtuse angled shoulder.
- A2. (not used).
- A3. Rounded shoulder.
- D. Decorated body sherd.
- P. Plain body sherd.

#### 4.4 Signatures

In addition to the various types of marks which would traditionally be classified as decoration found on the Tutt Hill vessels, there is one occurrence of a possible 'signature', or mark made by the potter which was not uniformly or repeatedly applied to the pot circumference. On the cremation urn from pit 301, there is a short stretch of twisted cord impression above the applied and finger-tip impressed girth cordon (Fig. 1, No. 1). Tomalin has collated examples of impressions which are not likely to be decorations on early Bronze Age pottery from Britain (1995, plate 10.1, fig. 10.3). He has interpreted these as personal marks added to a limited array of decorative motifs.

Tomalin's work raises the question of why there is such a limited repertoire amongst the decorations allowed on early Bronze Age vessels and the same could be asked of middle Bronze Age vessels, not only the coarse ware bucket and barrel urns but also the finer globular urns with incised linear motifs. He interprets pottery decoration as a limited range of allowed expression, motifs which are recognised and repeated with strong cultural identity or expected conformity on vessels made by women – but suggests that signatures are a personal expression outside the boundaries of that restrictive range.

The variation in different types of finger decoration, however, could also be seen as another way of individual potters maintaining their identity within middle Bronze Age conformity. Close examination of finger-tip decoration on bucket urn rims and cordons demonstrates that individual potters are easily recognisable. This observation can be taken further by the presence of finger-nail lines applied to the interior rim edge of the late Bronze Age open vessel or bowl from pit 14 (Fig. 1, No. 11). Again, close inspection reveals that these are finger-nail lines and not simply short slashed cuts made with a knife or stone tool.

#### 5 EVIDENCE OF USE

Due to the condition of the assemblage, it is unwise to comment about the absence of evidence of use and more appropriate to indicate presence. There is internal abrasion on the lower interior of the R2 burnished late Bronze Age bowl (Fig. 1, No. 6) and burnt residue on the interior of one middle/late Bronze Age body sherd made from fabric F3. At least 5% of

the early/middle Iron Age sherds from pit 5 were found to have burnt food residue or soot which is discussed further below.

#### 6 **DISCUSSION**

Later prehistoric activity at Tutt Hill occurred in distinctively separated phases. The first was during the middle Bronze Age and the early part of the late Bronze Age. Pottery containers comprised large decorated and perforated bucket jars or funerary urns which had been used to contain cremated bones in pits, and fragments of similar jars were recovered from other pits and field boundary ditches. Associated with these typical middle Bronze Age vessels, examples of late Bronze Age bowls and a cup in similar fabrics to the earlier wares were recovered, as well as a bowl and a jar in related fabrics. At least two bowls, two bucket jars and the cup were recovered from one relatively rich deposit, pit 14, with two jars from boundary ditch 176. One feature, pit 46, also had a combination of bucket urn and a bowl but this feature was vandalised during the excavation and the association may not be reliable. There are no classic examples of late Bronze Age shouldered jars in this assemblage. This may prove to be chronologically significant in future work, but the assemblage is very small. There is every likelihood, however, that the middle Bronze Age and late Bronze Age vessels were contemporary, or very close, in date of manufacture and deposition because of the similarities in fabric tempers (flint, grog and flint, grog), and therefore it may well be that this phase of activity could be described as the late-middle Bronze Age to the early-late Bronze Age (LMBA-ELBA), a very important transition period which needs much more research. What will be most interesting to consider in the scheme-wide later prehistoric pottery review will be the use of different tempering agents in different periods and the transitions from one period to the next. The common use of grog temper in late Bronze Age pottery production and its use in conjunction with flint temper in the middle Bronze Age are particularly distinctive phenomena for some areas in Kent.

Several centuries passed before activity at Tutt Hill was signified by the deposition of a large quantity of pottery (nearly 3 kg) into one feature in particular, pit 5, during the early or early/middle Iron Age. Fragments from a minimum of 12 vessels and a maximum of 20, including one plain and two decorated bowls and one decorated and six plain jars, were recovered. No examples of middle/late Bronze Age fabrics or forms were redeposited in this feature. The absence of finger-tip impressed shouldered jars, so common in the Monkton Court Farm assemblage (Macpherson-Grant 1994, figs 8-9 and 16), must be chronologically significant. If such jars had been recovered at Tutt Hill, this pit could have been dated to the decorated phase of the late Bronze Age. However, these tripartite bowls were found in close association with simple plain jars apparently with less distinct profiles. Therefore, this pit, and by fabric association gully 1115, is best dated to within the end of the early Iron Age through

to the early/middle Iron Age until further examples are recovered elsewhere. Approximately 5% of the sherds from this feature show either exterior sooting or burnt food residue on the interior of vessels, evidence of their use as cooking pots.

The vessels in early/middle Iron Age pit 5 are mostly small to medium in size, with four measuring between 120-180 mm and only two between 220-260 mm. This is a similar range of sizes to that recorded for settlement pottery of middle/late Bronze Age date with two small bowls and two medium-sized bucket jars in pit 14. The cup from this feature measures only 60 mm in diameter.

#### 7 SUMMARY: CHRONOLOGY

Only middle Bronze Age pottery was found in cremation pits 301 (Fig. 1, No. 1) and 53 (Fig. 1, No. 2), settlement pits 142 (Fig. 1, No. 3) and 217, and ditch 153 (Fig. 1, No. 4). Pottery representing a transitional period from the middle to late Bronze Age period was found in cremation pit 46 (Fig. 1, Nos 5-7), settlement pit 14 (Fig. 1, Nos 8-13), and ditch 176 (Fig. 1, Nos 14-15). The absence of diagnostic late Bronze Age pottery in features 53, 301, 142, 217 and 153 is what separates these two groups of features on the pottery evidence alone. The features may well have been contemporary or near contemporary in actual date of activity because of the similarity in fabrics amongst all of them. This activity is likely to have taken place in the 12th-11th centuries BC.

A significant gap in occupation occurred at Tutt Hill between the late Bronze Age (10th century BC) and early Iron Age (7th century BC). A single feature, pit 5, contained a large quantity of pottery which is typical of the end of the early Iron Age decorated phase and the beginning of the early/middle Iron Age period (6th-4th centuries BC) (Fig. 2, Nos 16-26).

It is likely that there was a second gap in activity from the 4th-2nd centuries BC prior to the deposition of a highly burnished, globular bowl decorated with La Tène-style, curvilinear tooling into pit 33 (Fig. 2, No. 27).

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# 9 LIST OF ILLUSTRATED VESSELS

(PRN, Pottery Record Number in database)

# Figure 1

1. Bucket urn; R1, B1; GF1; fingertip impressed rim; single horizontal row of pre-firing perforations 24 mm below rim at intervals of 24-36 mm; pinched and fingertip impressed cordon at widest point of girth, 135 mm below rim; two rows of possible twisted cord marks above cordon; PRNs 1000-1004, 1053 and 1054, context 300, cremation pit 301.

2. Bucket urn; R1; GF1; fingertip impressed rim; row of pre-firing perforations below rim; PRNs 1036-1039, context 55, cremation pit 53.

3. Decorated body sherds; F3; fingertip impressed cordon from widest girth of probable urnshaped vessel; PRN 1040, context 141, pit 142.

4. Decorated body sherds; F5; horizontal and diagonal, parallel incised lines on upper shoulder of globular urn; burnished on both surfaces; PRN 1042, context 152, ditch 153.

5. Bucket urn; R1; GF1; neutral profile; fingertip impressed rim; PRN 1033, context 49, cremation pit 46.

6. Slightly round-profile bowl with upright rim and flat base; R2, B1; G2; burnished on both surfaces; abraded on interior but not on base interior; PRNs 1147, 1148 and 1149, context 47 and 1150, context 50, cremation pit 46.

7. Decorated sherd; GF1; finger-smeared cordon at widest point of girth; may be same vessel as PRN 1033 (No. 5 above); PRN 1030, context 47, cremation pit 46.

8. Neutral-profile jar/urn; R1; GF1; PRN 1119, context 13, pit 14.

9. Neutral-profile jar/urn; R1; GF2; fingertip impressions on rim interior bevel; pre-firing perforation below rim; wiped exterior; unusual conditions possibly due to refiring/reburning or unusual original fabric; PRNs 1123-1129, 1131-2, context 13, PRN 1142, context 15, and PRN 1143, context 16, pit 14.

10. Restricted or necked, neutral vessel; R7; G2; wiped exterior, smoothed interior; burnt residue on rim interior; PRN 1139, context 13, pit 14.

11. Restricted or slightly necked, neutral vessel; R7; GF3; finger-nail impressions on rim; wiped on exterior; burnt residue on interior; PRNs1144-1145, context 16, pit 14.

12. Small bowl or cup; R4; G1; burnished on both surfaces; PRNs 1120-1122, context 13, pit 14.

13. Base; B2; FG1; wiped on exterior; PRN 1118, context 13, pit 14.

14. Ovoid jar; R8; F3; PRN 1113, context 200, ditch 176.

15. Hooked rim, ovoid jar; G1; PRN 1114, context 200, ditch 176.

## Figure 2

16. Ovoid jar; R8; FQ1; PRN1076, context 7, pit 5.

17. Necked jar; R3; FQ1; burnt residue on interior; PRNs 1071-1072, context 7, pit 5.

18. Jar; R5; FQ1; PRN 1073, context 7, pit 5.

19. Jar; R5; FQ1; PRN 1074, context 7, pit 5.

20. Slack-profile jar; R6; QF1; PRNs 1092-1094, context 9, pit 5.

21. Tripartite bowl; R10; QF1; burnished on both surfaces; parallel incised lines forming cordon on neck; PRNs 1008, context 8 and 1010 and 1014, context 7, pit 5.

22. Tripartite bowl; R10; QF1; burnished on both surfaces; incised diagonal and horizontal lines between shoulder and neck; PRNs 1011, context 8, 1013, 1015, 1016 and 1069, context 7, and 1103-1105, context 10, pit 5.

23. Slightly Round-shouldered jar/bowl; R11; FQ2; burnt residue on interior of rim; PRN 1075, context 7, pit 5.

24. Rim of necked (shouldered) jar; R9; FQ2; fingertip impressions on top of rim; PRN 1077, context 7, pit 5.

25. Base; B3; F1; PRNs 1090, context 9 and 1109, context 10, pit 5.

26. Shouldered bowl; A1/A3; QF1; burnished on both surfaces; PRN 1063, context 7, pit 5.

27. Decorated bowl; B2; Q1; burnished on both surfaces; flared base with shallow recess; curvilinear tooled lines and impressed dimple on body of vessel; PRNs 1005-1007, context 34, pit 33.

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