Chapter 7
Overview of the Finds Assemblages

POTTERY

Prehistoric Pottery *by Lisa Brown*

A total of 105 sherds (1462 g) of later prehistoric pottery were recovered from the Northgate House (NH) and Discovery Centre (CC) sites (Fig. 7.1). Of this total, 94 sherds (1293 g) came from NH and 10 sherds (131 g) from the CC site. The pottery possibly dates from as early as the late Bronze Age/early Iron Age transition (*c* 8th century BC) to the late Iron Age. This report is derived from a more detailed digital report (see *Digital Section 1.1*).

Six fabric groups incorporating 13 varieties were identified (Table 7.1), all previously recorded at other sites in the vicinity.

Fabric A: Sandy fabric with variety of coarse inclusions, flint, shell, chalk. (1 variety)

Fabric B: Predominantly flint-tempered (4 varieties)

Fabric C: Predominantly shell-tempered (2 varieties)

Fabric D: Predominantly sand-tempered (3 varieties)

Fabric E: Smooth fine clay (2 varieties)

Fabric H: Oolitic limestone-tempered (1 variety)

Fabrics A and B and one of the D varieties are likely to be of relatively local origin, manufactured using raw materials of the chalk downs. The shell-tempered and oolitic limestone fabrics have a Jurassic source. One of the sandy fabrics (D15), which has a high glauconite content, has been sourced to clay outcrops of the Nadder Valley near Salisbury (Williams and Wandibba 1984). Both varieties of fabric E, a brickearth, also have a Wiltshire source in the Salisbury area. A single sherd in a fine sandy fabric with quartzite, chalk and shell inclusions (fabric E) recovered from a posthole in a Phase 4 tenement may be early Iron Age.

Fabric B1 is a common and well-documented fabric utilised in the manufacture of middle Iron Age pottery of the 'St. Catherine's Hill – Worthy Down' type in Hampshire (Cunliffe 1991). Fabric B12 is a smooth clay with rare flint inclusions, somewhat underfired and highly abraded. It corresponds to early Iron Age fabrics from other sites in the region. Fabric B4 has a notable mica content and is very hard fired, possibly a late Iron Age type.

Only nine sherds were classifiable by vessel form and none was decorated (Table 7.2). Three are early Iron Age situlate jar forms in sandy wares—JB2, JB2/3 and JB3.1 (Fig. 7.1, nos. 1–2). A flattened pedestal base in fine shell-tempered ware may belong to a variety of globular jar form with out-curving rim dated to the early-middle Iron Age at Danebury (Cunliffe 1984, 281 and fig. 4.46), but the latter tend to have a raised rather than flat pedestal base.

The remaining five vessels are middle Iron Age types. Two are ovoid jars with incipient bead-rims (JC2), both in flint-tempered ware B1 (Fig. 7.1, no.

Table 7.1: Prehistoric pottery: quantification of fabrics

Fabric group	*CC No.*	*CC Wt*	*NH No.*	*NH Wt*	*Total No.*	*Total Wt.*
A			1	12g	1	12g
B	10	131g	53	688g	63	819g
C			18	223g	18	223g
D			14	180g	14	142g
E			7	72g	7	72g
H			1	35	1	35g

Table 7.2: Prehistoric pottery: forms

Form	*Description*	*Cxt/phase*	*Ceramic Date*	*Vessels*	*Fabric*
JB2	Shouldered jar, upstanding rim	NH1613 PR1: Structure NH8505	EIA	1	D15/18
JB2/3	See JB2/JB3	NH4217 MED	EIA	1	D15/18
JB3.1	Large rounded jar, squared upstanding rim	6200 PR1: Structure NH8502	EIA	1	D0
JC2.3	Ovoid jar with proto bead-rim	NH6169 PR1: Structure NH8503	MIA	1	B1
BS3	Flat pedestal base	NH3186	EMIA	1	C01
PB1.1	Straight-walled 'saucepan pot'	NH7607 PR2 : Structure NH8506			
		NH6165 PR2 : Structure NH8505	MIA	3	B1
JC2	Ovoid jar with proto bead rim	CC1701	MIA	1	B1

4). The others are straight-walled vessels commonly referred to as 'saucepan' pots (Fig. 7.1, nos 5, 6). These are also in fabric B1 and finished with a high burnish.

It is possible that some of the earliest pottery belongs to a late Bronze Age/early Iron transitional period but, in the absence of diagnostic sherds of late Bronze Age type, this remains uncertain. Only just over half of all prehistoric sherds were judged to be contemporary with the deposits from which they were recovered, mostly relating to postholes or gullies associated with roundhouses. The remainder of the prehistoric assemblage was residual in Roman and later contexts. Nonetheless, sufficient numbers of distinctive sherds with early or middle Iron Age characteristics were identified to confirm that the structures represented at least two phases of Iron Age occupation on the site.

Although the prehistoric pottery assemblage from the site and from Cunliffe's excavations in the same area (Cunliffe 1964) is small and fragmentary, it clearly corresponds to larger, well-preserved groups recovered from elsewhere in Winchester, and from the wider Hampshire region, including St. Catherine's Hill (Hawkes 1976), Winnall Down (Fasham 1985), Old Down Farm (Davies 1981) and Danebury and its Environs (Cunliffe 1984; Cunliffe and Poole 1991).

Catalogue of illustrated pottery (Fig. 7.1)

1. Jar with upright rim. Fabric D15. Posthole NH1615 (NH1613), Structure NH8508.
2. Jar with lightly thumbed, upstanding rim. Fabric D0. Posthole NH6199 (NH6200), Structure NH8502
3. Ovoid jar. Fabric B1, burnished. Posthole NH6168 (NH6169), possibly relating to Structure NH8504
4. Saucepan pot or ovoid jar. Fabric B1, burnished. Gully NH6163 (NH6165), Structure NH8505
5. Saucepan pot. Fabric B1, burnished. Pit NH7500 (NH7501). Residual in Property J pit, Phase 5
6. Saucepan pot. Fabric B1, burnished. Gully NH7610 (NH7607), Structure NH8506

Roman Pottery *by Edward Biddulph and Paul Booth*

Just over 10,000 sherds weighing 176 kg were collected from deposits phased to the Roman period. A total of 109 fabrics were identified. Fabric quantifications are provided in Table 7.3. Full fabric descriptions, summarised below, can be found in Matthews and Holmes (forthcoming). Descriptions of traded wares can be found in Tomber and Dore (1998), whose fabric codes are shown against the fabric list below in parentheses. This report is an edited version of a more detailed digital report (see *Digital Section 1.2*).

Fabrics

Samian ware

TCA	Central Gaulish samian ware (LEZ SA 2)
TCB	Central Gaulish samian ware, Les Martres de Veyre (LMV SA)
TCC	Central Gaulish samian ware, 1st-century Lezoux (LEZ SA 1)
TSA	South Gaulish samian ware, La Graufesenque (LGF SA)
TUS	Miscellaneous samian ware
TUS(EG)	East Gaulish samian ware, all sources

Fine wares

RF	Orange fabric with dense fine sands and occasional medium quartz grains; common iron oxides and mica plates.
RFB	Pinkish orange fabric with fine sand, iron oxides, grey ware and mica-dusted surfaces

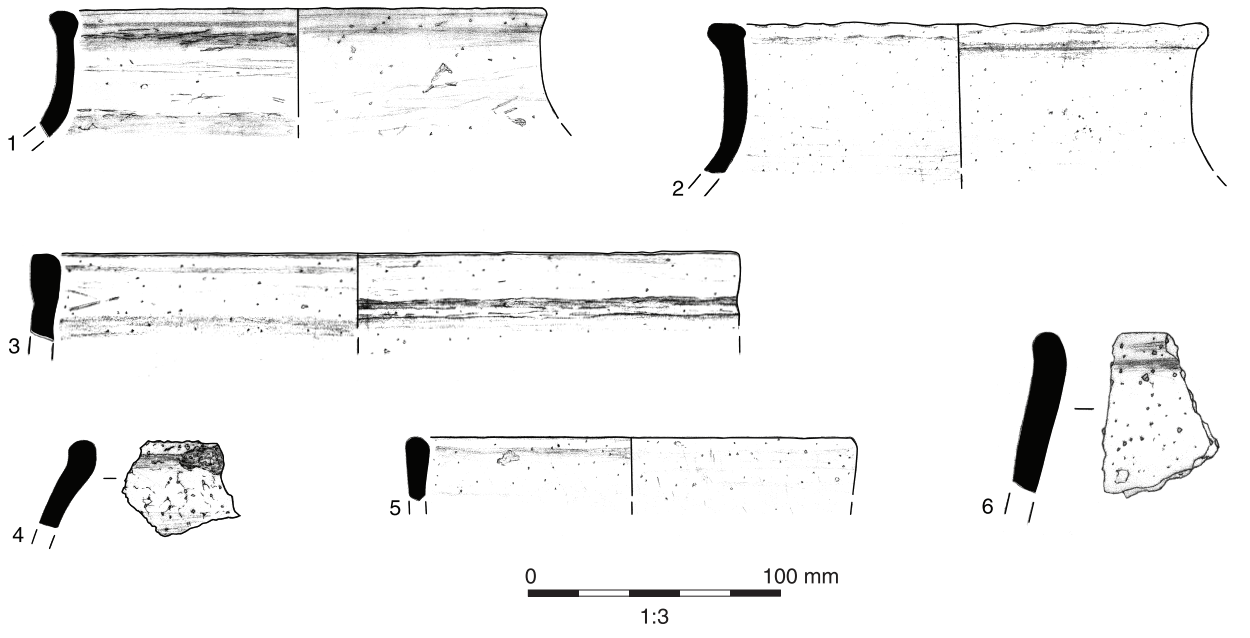


Fig. 7.1 Prehistoric pottery (1–6)

T Unsourced or uncertain fine colour-coated fabrics
T(EPO) Céramique à l'éponge (EPO MA)
TBC Central Gaulish black colour-coated ('Rhenish') ware (CNG BS)
TBF Miscellaneous fine wares of uncertain origin
TCR Colchester colour-coated ware (COL CC 2)
TF New Forest colour-coated ware; oxidised iron-rich fabric (Fulford 1975a, 25, fabric 1b; NFO RS 1)
TFC New Forest colour-coated ware, fabric 1c (Fulford 1975a, 25)
TGA Orange-red fine grained micaceous fabric with fine grit and bright red ferrous inclusions
TGC Cologne colour-coated ware (KOL CC)
THT East Gaulish black colour-coated ('Rhenish') ware (MOS BS)
TLA Lyon ware (LYO CC)
TN Terra Nigra (GAB TN 1)
TO/TOR Oxfordshire red/brown colour-coated ware (Young 1977, 123) (OXF RS)
TR New Forest colour-coated ware; reduced iron-rich fabric (Fulford 1975a, 24-5, fabric 1a)

Amphorae
A Unsourced or uncertain amphora fabric
A(LIP) Liparian amphorae, Richborough 527 fabric (LIP AM)
ACE Camulodunum 186 fabric (Peacock and Williams 1986, 120-123)
ADA Dressel 20 fabric (Peacock and Williams 1986, 139-140 (BAT AM 1)
ADAR ?Late version of Dressel 20 fabric with red/brown core
ADB Dressel 2-4 fabric (Peacock and Williams 1986, 105-106)
AFN African cylindrical amphora fabrics (Peacock and Williams 1986, 158-165) (NAF AM 1/2)
AMB ?Eastern Mediterranean amphora fabric. Hard micaceous fabric with brown outer surface and light orange inner surface and core.
APA Gauloise 4 fabric (Peacock and Williams 1986, 142-143)
APB Gallic amphora fabric, probably belonging to the Gauloise series
ASS Southern Spanish amphora fabric, usually Dressel 20 and Dressel 23

Mortaria
J Unsourced or uncertain mortarium fabric
JHA Hard, granular, greyish-cream fabric. A Hampshire product.
JHC Hard fabric, too fine to be considered granular. A Hampshire product.
JHD Similar to JHC, but pale brown to orange-brown in colour. A Hampshire product.
JMA Oxfordshire white ware (Young 1977, 56) (OXF WH)
JMI Rhineland. Hard cream fabric with pale pinkish-orange core
JMU Oxfordshire white-slipped oxidised ware (Young 1977, 117) (OXF WS)
JMV New Forest red-slipped ware (Fulford 1975a, 25; fabric 1b)
JMW Oxfordshire red colour-coated ware (Young 1977, 123) (OXF RS)
JMY New Forest parchment ware (Fulford 1975a, 26; fabric 2a)
JPR Uncertain origin. Soft cream fabric
JRB Rhineland. Self-coloured, smooth, hard and slightly micaceous cream fabric, sometimes with pink core. (RHL WH)

White wares
U Unsourced or uncertain white ware fabrics
UF Fine white ware, occasional iron oxides
UF(NOG) North Gaulish fine white ware (NOG WH 1/2)
UFA Fine white fabric with internal colour-coat; possibly identical to Cirencester fabric 21 (Rigby 1982, 156) and Exeter fabric 105 (Holbrook and Bidwell 1991, 139).
UFN New Forest parchment ware (fine), fabric 2b (Fulford 1975a, 26) (NFO WH 2)
UM White ware with medium sands and common iron oxides
UMP New Forest parchment ware (sandy), fabric 2a (Fulford 1975a, 26) (NFA PA)

Oxidised wares
Red wares
NF Micaceous fabric with moderate fine sand and iron oxides
NFA Micaceous fabric with fine sand; possibly originally mica-dusted
NFB Red fabric with fine sand and iron oxides
NM Micaceous fabric with medium sand and occasional iron oxides

Pink wares
V Unsourced or uncertain pink fabrics
VF Fine pink ware with common iron oxides
VMB Pink ware with medium sands and iron oxides with a yellow or buff slip

Orange wares
WAA Orange fabric with dense fine transparent sands, scattered medium sand, common iron oxides and white slip
WC Orange fabric with medium and coarse sand
WF Dense fine transparent sands and common iron oxides
WFA Orange fabric with sparse fine sand and iron oxides
WFB Orange fabric with fine sand, iron oxides and white slip
WFC Micaceous orange fabric with fine sand, iron oxides and white slip
WFF Orange fabric with fine sand and small soft limestone fragments
WFJ Orange fabric with fine sand, iron oxides and black or grey exterior slip
WM Orange fabric with medium sand and iron oxides
WMA Dense medium sands, transparent, clear or iron-stained red; common iron oxides and white slip
WMG Moderately micaceous orange fabric with medium sand, iron oxides and grey core
WMN Orange fabric with medium sand, iron oxides, grey core and external slip
WO Oxfordshire oxidised ware, fabric 1 (Young 1977, 185)

Buff wares
Y Unsourced or uncertain buff wares
Y(PNKGT) Pink grogged ware (PNK GT)

Table 7.3: Roman pottery: quantification of fabrics (+ = less than 0.5%)

Fabric	*Sherds*	*% sherds*	*Weight (g)*	*% weight*	*MV*	*% MV*	*EVE*	*% EVE*
Samian ware								
TCA	204	2.0	2309	1.3	63	4.1	3.91	2.7
TCB	1	+	15	+				
TCC	1	+	5	+				
TSA	65	0.6	515	0.3	24	1.6	1.71	1.2
TUS	6	0.1	60	+	1	0.1	0.18	0.1
TUS(EG)	39	0.4	410	0.2	11	0.7	0.69	0.5
Subtotal	316	3.1	3314	1.9	99	6.5	6.49	4.4
Fine wares								
RF	2	+	6	+				
RFB	6	0.1	34	+				
T	1	+	2	+				
T(EPO)	2	+	20	+	1	0.1	0.06	+
TBC	4	+	14	+	1	0.1	0.10	0.1
TBF	7	0.1	28	+	2	0.1	0.18	0.1
TCR	2	+	12	+	1	0.1	0.18	0.1
TF	182	1.8	2300	1.3	48	3.1	3.69	2.5
TFC	1	+	7	+	1	0.1	0.03	+
TGA	1	+	3	+				
TGC	7	0.1	20	+	1	0.1	0.03	+
THT	11	0.1	41	+	4	0.3	0.96	0.7
TLA	1	+	1	+				
TN	4	+	35	+	1	0.1	0.03	+
TO/TOR	124	1.2	1714	1.0	32	2.1	2.32	1.6
TR	835	8.3	9113	5.2	83	5.4	15.86	10.8
Subtotal	1190	11.8	13350	7.6	175	11.5	23.44	16.0
Amphorae								
A	25	0.2	1204	0.7				
A(LIP)	2	+	143	0.1	1	0.1	0.09	0.1
ACE	5	+	475	0.3				
ADA	64	0.6	9108	5.2	1	0.1	0.33	0.2
ADA R	26	0.3	2677	1.5				
ADB	1	+	14	+				
AFN	4	+	397	0.2				
AMB	2	+	107	0.1				
APA	4	+	93	0.1				
APB	21	0.2	1647	0.9				
ASS	96	1.0	7253	4.1				
Subtotal	250	2.5	23118	13.1	2	0.1	0.42	0.3
Mortaria								
J	1	+	7	+				
JHA	6	0.1	233	0.1	4	0.3	0.35	0.2
JHC	1	+	58	+	1	0.1	0.05	+
JHD	2	+	221	0.1	2	0.1	0.23	0.2
JMA	11	0.1	339	0.2	4	0.3	0.33	0.2
JMI	1	+	36	+	1	0.1	0.05	+
JMU	11	0.1	347	0.2	3	0.2	0.31	0.2
JMV	14	0.1	229	0.1	5	0.3	0.26	0.2
JMW	31	0.3	812	0.5	10	0.7	0.92	0.6
JMY	19	0.2	862	0.5	9	0.6	0.78	0.5
JPR	1	+	91	0.1	1	0.1	0.06	+
JRB	1	+	174	0.1	1	0.1	0.10	0.1
Subtotal	99	1.0	3409	1.9	41	2.7	344	2.3

Table 7.3: Roman pottery: quantification of fabrics (+ = less than 0.5%) (continued)

Fabric	*Sherds*	*% sherds*	*Weight (g)*	*% weight*	*MV*	*% MV*	*EVE*	*% EVE*
White wares								
U	1	+	4	+				
UF	18	0.2	111	0.1	2	0.1	0.36	0.2
UF(NOG)	1	+	3	+				
UFA	1	+	5	+				
UFN	33	0.3	973	0.6	10	0.7	1.07	0.7
UM	14	0.1	136	0.1	3	0.2	0.24	0.2
UMP	71	0.7	2303	1.3	13	0.9	1.21	0.8
Subtotal	139	1.4	3535	2.0	28	1.8	2.88	2.0
Oxidised wares								
NF	1	+	2	+				
NFA	5	+	31	+	1	0.1	0.13	0.1
NFB	2	+	5	+				
NM	1	+	5	+				
V	2	+	34	+				
VF	6	0.1	4	+				
VMB	1	+	22	+				
WAA	1	+	15	+				
WC	14	0.1	289	0.2	1	0.1	0.09	0.1
WF	51	0.5	548	0.3	4	0.3	0.51	0.3
WFA	3	+	20	+				
WFB	5	+	36	+	1	0.1	0.23	0.2
WFC	1	+	14	+				
WFF	1	+	2	+				
WFJ	1	+	2	+				
WM	51	0.5	554	0.3	7	0.5	1.46	1.0
WMA	3	+	64	+	1	0.1	0.50	0.3
WMG	1	+	26	+				
WMN	1	+	2	+				
WO	2	+	78	+	1	0.1	0.16	0.1
Y	1	+	13	+				
Y(PNKGT)	1	+	58	+	1	0.1	0.12	0.1
YC	224	2.2	6936	3.9	2	0.1	0.24	0.2
YF	36	0.3	228	0.1	1	0.1	0.25	0.2
YFA	1	+	5	+				
YFD	3	+	37	+				
YFP	2	+	6	+				
YM	35	0.3	439	0.2	4	0.3	0.16	0.1
YM(OVW)	11	0.1	129	0.1	4	0.3	0.30	0.2
YMD	1	+	4	+				
YMZ	1	+	12	+	1	0.1	0.02	+
Subtotal	469	4.7	9620	5.5	29	1.9	4.17	2.8
Reduced wares								
Z	1	+	16	+				
ZC	210	2.1	4039	2.3	22	1.4	1.33	0.9
ZC(MAY)	1	+	61	+	1	0.1	0.19	0.1
ZCZ	10	0.1	386	0.2	2	0.1	0.08	0.1
ZF	621	6.2	7998	4.5	113	7.4	12.60	8.6
ZFB	6	0.1	42	+				
ZFE	2	+	44	+				
ZFG	1	+	1	+				
ZFZ	356	3.5	5088	2.9	66	4.3	9.39	6.4
ZH/ZHA	10	0.1	123	0.1	1	0.1	0.10	0.1
ZM	2875	28.6	33192	18.9	371	24.3	31.78	21.7
ZM+	8	0.1	244	0.1	3	0.2	0.31	0.2

continued overleaf

Table 7.3: Roman pottery: quantification of fabrics (+ = less than 0.5%) (continued)

Fabric	*Sherds*	*% sherds*	*Weight (g)*	*% weight*	*MV*	*% MV*	*EVE*	*% EVE*
ZME	11	0.1	169	0.1	1	0.1	0.23	0.2
ZMF	20	0.2	743	0.4	6	0.4	0.42	0.3
ZMJ	96	1.0	1178	0.7	16	1.0	0.97	0.7
ZMO	1	+	7	+	1	0.1	0.05	+
ZMR	2	+	21	+	1	0.1	0.05	+
ZMT	1	+	38	+				
ZMU	1	+	33	+				
ZMZ	1750	17.4	32466	18.4	271	17.7	25.65	17.5
Subtotal	5983	59.5	85889	48.8	875	57.3	83.15	56.7
Black-burnished ware								
ZMA	257	2.6	4392	2.5	69	4.5	5.28	3.6
Grog-tempered wares								
SG	1184	11.8	24306	13.8	205	13.4	17.21	11.7
SGA	124	1.2	4263	2.4	2	0.1	0.11	0.1
SGD	2	+	54	+				
Subtotal	1310	13.0	28623	16.3	207	13.5	17.32	11.8
'Iron Age' wares								
XF	2	+	22	+				
XM	37	0.4	718	0.4	3	0.2	0.14	0.1
Subtotal	39	0.4	740	0.4	3	0.2	0.14	0.1
TOTAL	10052		175990		1528		146.73	

YC Buff fabric with medium to coarse sand and iron oxides
YF Buff fabric with fine sand
YFA Micaceous pinkish buff fabric with sparse fine and medium sands and iron oxides
YFD Buff fabric with fine sand, iron oxides and grey core
YFP Buff fabric with fine sand and distinctive pink internal surface
YM Buff fabric with dense medium sands and common iron oxides
YM(OVW) Overwey ware (OVW WH)
YMD Buff fabric with medium sand, iron oxides and grey core
YMZ As YM, but with additional iron oxides

Reduced (grey and black) wares
Z Unsourced or uncertain grey wares
ZC Coarse sandy grey ware
ZC(MAY) Mayen ware (MAY CO)
ZCZ As ZC, but with additional iron oxides
ZF Fine grey ware
ZFB Very pale greyish white fabric with grey/white slipped surfaces; sparse fine sands
ZFE Fine grained micaceous fabric with oxidised internal surface
ZFG Grey fabric with fine sands, iron oxides, grog and oxidised slip
ZFZ As ZF, but with additional iron oxides

ZH/ZHA Shell-tempered ware
ZM Medium sandy grey ware
ZM+ Fabric ZM with additional sparse/moderate large sub-rounded pale grey inclusions
ZME Medium-grained grey ware with common chalk inclusions
ZMF Buff fabric with pinkish surfaces, commonly finger-wiped; dense sands and common iron oxides. Storage jar fabric.
ZMJ Medium-grained grey ware with scattered grog-tempering
ZMO Medium-grained moderately micaceous fabric
ZMR Medium-grained fabric with scattered flint and grog
ZMT Medium-grained fabric with dark grey core, oxidised surfaces and margins, and occasional grog
ZMU Slightly micaceous medium-grained buff fabric with scattered flint and grog. Storage jar fabric.
ZMZ As ZM, but with additional iron oxides

Black-burnished ware
ZMA Black-burnished ware, category 1 (DOR BB 1)

Grog-tempered wares
SG Dark grey fabric with abundant fine sand and common grog and iron oxides (includes Tomber and Dore 1998, 139; HAM GT)

Table 7.4: Roman pottery: list of key ceramic groups

Stratigraphic phase	*Ceramic phase*	*Context groups*
2.1	AD 55–70	CC1661, CC1740, CC1772, CC2370, CC3272, CC3345
2.1	AD 70–130	CC1738, CC1739, CC1754, CC1781, CC1804, CC1805, CC1858, CC2080, CC2158, CC2365, CC3269, CC3345, CC3459
2.2	AD 130–260	CC1702, CC3418, NH6194, NH7612
2.3	AD 260–330	CC1637, CC1697, CC3331, NH1263, NH1380, NH7517, NH7575
2.4	AD 350–410	CC1579, CC1630, CC2185, NH1398, NH3745, NH4718, NH5059

Table 7.5: Roman pottery: list of forms represented in key groups

Form code	*Description*
Amphorae	
A	Amphorae
Flagons/jugs	
B	Flagons/jugs, general
BA	Small flagons (up to 60 mm rim diameter)
BB	Larger flagons
Jars	
C	Jars, general
CB	Barrel shaped jars
CC	Narrow mouthed jars (rim diameter less than 2/3 girth)
CD	Medium mouthed jars, usually oval-bodied necked jars
CE	High shouldered necked jars
CG	Globular jars
CH	Bead rim jars
CI	Angled everted rim jars
CJ	Lid seated jars
CK	'Cooking pot type' jars
CM	Wide mouthed jars
CN	Storage jars
Jars or bowls	
D	Jar or bowl (a category for types where insufficient survives to allow an estimate of the height:diameter ratio)
DC	Necked jar/bowl
Beakers	
E	Beakers
EA	Butt beakers
EC	Bag shaped beakers
ED	Globular/bulbous beakers
EE	Indented beakers
EF	Poppyhead beakers
EH	'Jar' beaker, usually small examples of cooking-pot jar types
Cups	
F	Cups, general
FA	Hemispherical cups
FB	Campanulate cups
FC	Conical cups
Mugs/tankards	
GB	Handled mugs/bowls
Bowls	
H	Bowls, general
HA	Carinated bowls
HB	Straight sided (usually flat-based bead and flange-rimmed) bowls
HC	Curving sided bowls
HD	Necked bowls
HG	Globular (not necked) bowls
Bowls or dishes	
I	Bowls/dishes. An indeterminate category, accommodating vessels where insufficient survives to be reasonably sure about the rim diameter:height ratio
IA	Straight sided bowls/dishes
IB	Curving sided bowls/dishes
Dishes	
J	Dishes and platters, general
JA	Straight sided dishes (plain-, bead-, and flange-rimmed)
JB	Curving sided dishes (plain-, bead-, and flange-rimmed)
JC	Platters
JD	Fish dishes
Mortaria	
K	Mortaria, general
KC	Hammer-headed mortaria
KD	Wall-sided mortaria
KE	Tall bead/stubby flanged mortaria
Lids	
L	Lids, general
Miscellaneous	
MB	Candlestick
MG	Strainer

SGA Moderately to heavily grog-tempered fabric with iron oxides and a sandy texture. Reserved for storage jars.
SGD Moderately grog-tempered fabric with iron oxides and fine to medium sands

Wares in the Iron Age tradition
XF Handmade fabric with fine sand and common flint
XM Handmade fabric with medium sand and common flint

Key ceramic groups

A number of key ceramic groups were selected from the entire Roman-period assemblage to provide a picture of the changing pattern of pottery supply to Northgate House and the Discovery Centre sites. The selected context groups generally contained a wide range of forms and fabrics and were well-dated to one of the four stratigraphic phases (Phases 2.1–4); occasionally it was possible to sub-divide these periods into narrower ceramic phases (Table 7.4). Summary descriptions of the vessel type codes used in the quantified tables are given in Table 7.5.

Phase 2.1: Ceramic phase AD 55–70 (Table 7.6)

A total of six ceramic groups, each containing an average of 0.42 EVEs, were assigned a pre-Flavian date (Table 7.6); all were from the Discovery Centre site. Little of this material is likely to date before AD 50 or 60. Good indicators included a *terra nigra Cam* 52 carinated bowl, a type that generally reached Britain after *c* AD 55 (Greene 1979, 111), and the so-called 'Atrebatic' curving-sided bowl that was attested at Alice Holt after AD 60 (Lyne and Jefferies 1979, 30). At the same time, butt-beakers and body sherds from a Drag. 15/17 South Gaulish samian platter suggest an upper date for the key-group assemblage of *c* AD 70/80. Overall, the assemblage was dominated by grey wares, which took an 82% share of the key-group assemblage by EVE. Medium-sandy grey ware without iron oxides were commonest, but that with iron oxides also made a significant contribution. Fine grey wares were less important; curiously, fine fabrics with iron oxides were better represented than those without. Oxidised wares enjoyed a 14% share of the assemblage by EVE. Vessels were identified in buff and red wares, but a greater range of white ware fabrics, including imported North Gaulish pottery, was evident (the New Forest parchment ware is intrusive). In terms of forms, jars were predominant, accounting for 64%; globular, bead-rimmed, and storage jars were the most important categories; high-shouldered necked jars were present, but in small numbers. Table or dining forms were well-represented too; adding the carinated and Atrebatic bowls to the platters and beakers, these took a share of over 30%.

Table 7.6: Roman pottery: key groups, Phase 2.1 (AD 55–70). Quantification by eve. Fabrics totalling 0 are present, but no rim survives.

Fabric			*Jar*			*Beaker*		*Bowl*		*Dish*	*Lid*	*Total*	*% total*
	C	*CE*	*CG*	*CH*	*CN*	*EA*	*H*	*HA*	*HC*	*JC*	*L*		
ASS												0	0%
NFA						13						13	5%
TN								3				3	1%
TSA												0	0%
UF												0	0%
UF(NOG)												0	0%
UFA												0	0%
UM												0	0%
UMP							8					8	3%
WF												0	0%
WFA												0	0%
XM					6							6	2%
YC					14							14	6%
YF												0	0%
ZC					23							23	9%
ZF						6						6	2%
ZFZ				18								18	7%
ZM	18	5	34	4					8	28	7	104	41%
ZMR										5		5	2%
ZMZ	7		19	14				4		9		53	21%
Total	25	5	53	36	43	19	8	7	8	42	7	253	-
% total	10%	2%	21%	14%	17%	8%	3%	3%	3%	17%	3%	-	-

Phase 2.1: Ceramic phase AD 70–130
(Table 7.7; Fig. 7.2)

The amount of pottery being deposited at the Discovery Centre site increased between the late 1st and early 2nd century. Thirteen groups, averaging 0.52 EVEs each, were assigned to this period, although most groups did not extend beyond AD 100. The proportion of grey wares, which continued to dominate the assemblage, was little changed at 85% by EVE. Medium sandy grey ware without iron oxides remained more important than those with. Fine grey wares and coarse grey wares had reduced proportions. Oxidised wares also experienced a drop and only one form based on rims, a fine white butt-beaker, was identified. Surprisingly, given this apparent reduction in finer pottery, samian ware was better represented than in the mid 1st century, though this is part due to the fact that much more samian was reaching Britain after AD 70, and regions across southern Britain saw South Gaulish samian importation peak around AD 75/80 (eg Dannell 1999, fig. 2.1). Samian from South Gaul was joined by micaceous samian from Lezoux. South Spanish amphorae now arrived alongside containers from southern Gaul. As for forms, jars remained the most important category, though at a slightly lower proportion of 55% by EVE. Globular and bead-rimmed jars continued to be used, but a new type, the oval-bodied necked jar, was emerging as the standard vessel. Curving-sided 'Atrebatic' bowls became more important in the late 1st

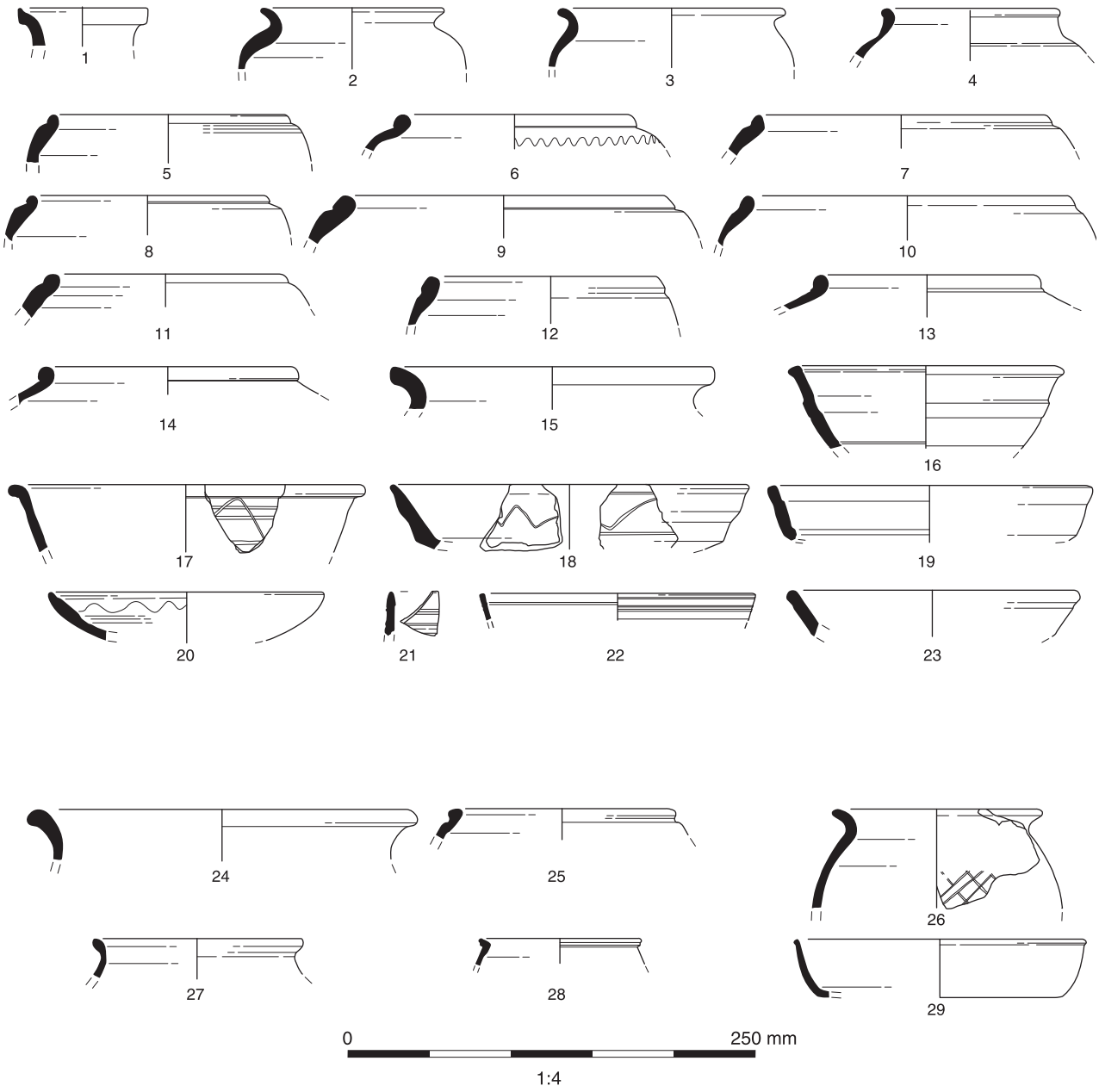


Fig. 7.2 Roman pottery: Phase 2.1, AD 70–130 (1–29)

Table 7.7: Roman pottery: key groups, Phase 2.1 (AD 70–130). Quantification by eve. Fabrics totalling 0 are present, but no rim survives.

Fabric	Jar								Beaker	Bowl		Platter	Lid	Total	% total
	C	CC	CD	CE	CG	CH	CM	CN	EA	HA	HC	JC	L		
APB														0	0%
ASS														0	0%
NFA														0	0%
NFB														0	0%
RFB														0	0%
TBF														0	0%
TCA														0	0%
TCC														0	0%
TGA														0	0%
TN														0	0%
TSA										5		81		86	13%
TUS														0	0%
UF									18					18	3%
UM														0	0%
WFA														0	0%
WFB														0	0%
XM														0	0%
YFA														0	0%
YFD														0	0%
YFP														0	0%
YM														0	0%
ZC								7						7	1%
ZCZ								5						5	1%
ZF														0	0%
ZFB														0	0%
ZM	76	28	107	13	68	9	11	4		3	59	80	5	463	69%
ZMR														0	0%
ZMZ				15	15	13		7				44		94	14%
Total	76	28	107	28	83	22	11	23	18	8	59	205	5	673	-
% total	11%	4%	16%	4%	12%	3%	2%	3%	3%	1%	9%	30%	1%	-	-

century, as did platters, which were boosted by samian platters Drag. 15/17, Drag. 18, and Drag. 18/31. Other samian forms—Drag. 29 decorated bowls and Drag. 27 cups—were represented by body sherds only. Beakers saw no change from the mid 1st century and still occurred as (probably residual) butt-beakers in the late 1st century.

Phase 2.2: Ceramic phase AD 130–260 (Table 7.8)

Just four ceramic groups, each containing on average 0.27 EVEs, were assigned to the mid Roman period. Phase 2.2 saw a drop in the amount of pottery being deposited at the Discovery Centre site and the first appearance of groups, albeit on a very small scale, at the Northgate House site. Its size means that the phase assemblage is unlikely to be fully representative of pottery supply and use during this time, but it provides pointers to some of the key changes from the early to mid Roman periods. Grey wares formed a larger proportion of the assemblage (now 75%) compared with the late 1st/early 2nd century. Medium sandy grey wares without iron oxides were less important as those with iron oxides became predominant, presumably reflecting changes in principal sources. Dorset black-burnished ware, arriving during the mid 2nd century, provided more competition for traditional grey ware producers.

Fine and coarse grey wares were present only as body sherds. Oxidised wares were barely represented; only fine buff ware was recorded. Fine wares increased their proportion to 25% by EVE. Much of this included residual South Gaulish samian, but the assemblage clearly shows the emergence of Central Gaul as the main source for samian in this phase. Some fine wares reached the site from Colchester, but the source was a very minor supplier. South Spain and south Gaul continued to supply amphorae. The assemblage became less jar-orientated in this period (reducing to a 25% share) as dishes made a more significant contribution. This was due mainly to the Dorset potters, who supplied bead- or flange-rimmed dishes; these, along with plain-rimmed dishes, were

Table 7.8: Roman pottery: key groups, Phase 2.2 (AD 130–260). Quantification by eve. Fabrics totalling 0 are present, but no rim survives.

Fabric	*Jar*			*Beaker*	*Cup*	*Bowl*	*Dish - bead/flanged*			*Dish - plain*	*Platter*	*Total*	*% total*
	C	*CC*	*CK*	*EF*	*FC*	*HC*	*J*	*JA*	*JB*	*JB*	*JC*		
APB												0	0%
ASS												0	0%
TBF												0	0%
TCA					13							13	12%
TCR												0	0%
TSA					9						5	14	13%
WM												0	0%
XM												0	0%
YF												0	0%
ZCZ												0	0%
ZFB												0	0%
ZFE												0	0%
ZM						8			6			14	13%
ZMA								22				22	21%
ZMO	5											5	5%
ZMZ		12	10	9			4			4		39	36%
Total	5	12	10	9	22	8	4	22	6	4	5	107	-
% total	5%	11%	9%	8%	21%	7%	4%	21%	6%	4%	5%	-	-

also adopted by the local grey ware producers. Cups were better represented, while the proportion of platters had fallen sharply. Beakers still made little impact, although poppy-headed beakers had replaced butt-beakers. The small size of the group makes the significance of some of these developments doubtful.

Phase 2.3: Ceramic phase AD 260–350
(Table 7.9; Fig. 7.3)

The relative invisibility of specifically early 4th century ceramic groups at the Northgate House and the Discovery Centre sites—a phenomenon recognised elsewhere in Roman Britain (Going 1992, 101)—means that it is more useful to present data from a larger assemblage spanning the late 3rd to mid 4th centuries. Seven context groups were assigned to this period; these were generally large (averaging 2.00 EVEs), indicating that much more pottery was being used and deposited compared with previous phases. The proportion of grey wares had fallen a little to 68% by EVE. Medium sandy grey wares with iron oxides were again dominant; the proportion of those without had fallen further from its already low mid Roman level. The amount of Dorset black-burnished ware was also reduced, resulting no doubt from competition from local potters who had responded to the arrival of BB1 and adopted a range of BB1-style forms. Some of these forms were also taken up by potters making grog-tempered wares in several small-scale centres in Hampshire. Oxidised wares were better represented than they had been in the mid Roman period. This was due almost exclusively to the arrival of white ware flagons—possibly local—and New Forest parchment wares. The New Forest industry was responsible too for the increase in fine wares (now 18%), chiefly in the reduced or dark-slipped colour-coated ware, though the red-slipped oxidised fabric was also available. Oxford red colour-coated ware was recorded in this phase, though as body sherds only. Rhenish ware from Central Gaul appears in this phase, but must be residual, since importation of the ware into Britain probably ceased by the mid 3rd century (Greene 1978, 19). Samian ware in this assemblage now included products from East Gaulish factories, which had replaced the Central Gaulish industry as the principal exporter to Britain after AD 200. East Gaulish vessels began to reach Britain by AD 140, but they appear to have been little seen in Winchester until the early 3rd century, and then in small amounts (Lyne, forthcoming). In any case, both East and South Gaulish samian, like the Rhenish ware, was residual by AD 260—or, at least, no new samian reached the town at this time—though the latest products may well have remained in use. The range of amphorae expanded in this phase; South Spanish amphorae and the now residual Gallic amphorae were joined by containers from Mediterranean and north African sources.

Jars had a larger share of the assemblage compared with the mid Roman period, although the proportion of 43% by EVE remains lower than seen in the early Roman period, suggesting that the figure seen in the previous phase was anomalous; still, the general trend was for a reduction of the

proportion of jars through time. Narrow-necked jars—including jars of a type produced at Alice Holt (Lyne and Jefferies 1979, class 1A)—and cooking-pot type jars were the most prolific jar forms; the latter was especially important for potters working in grog-tempered and sandy grey wares. Flagons and beakers had a more significant place in this assemblage compared with previous phases, thanks mainly to the New Forest industry. Mortaria made their first significant appearance during this time. Simple bead- or flange-rimmed dishes continued to be deposited in the late 3rd century, but were replaced by dropped flanged dishes and bowls by the early 4th century; the intermediate incipient bead-and-flanged dishes and bowls were evident after AD 270. Plain-rimmed dishes were current throughout the phase. The dishes with plain or dropped-flange rims were based on BB1 prototypes but were more usually available in local grey ware fabrics. This was due in part to the response of local potters accommodating new forms, but it must also signal the rapid decline of supply from Dorset.

Table 7.9: Roman pottery: key groups, Phase 2.3 (AD260–350). *Quantification by eve. Fabrics totalling 0 are present, but no rim survives. (Dish/bowl rim types: bead = simple bead or flanged rim; incip. b&f = incipient bead-and-flanged rim; b&f = bead-and-flanged rim or dropped flange rim.)*

Fabric	*Flagon*		*Jar*								*Beaker*			*Cup*
	BA	*BB*	*C*	*CC*	*CD*	*CG*	*CH*	*CK*	*CM*	*CN*	*E*	*EE*	*EH*	*FC*
ADA														
AFN														
AMB														
APB														
ASS														
JHA														
JHD														
JMV														
JMY														
JPR														
NFB														
RF														
SG								17		25				
TBC														
TCA														5
TF														
TGC														
TO/TOR														
TR	100										27	86		
TUS(EG)														
UFN														
UMP														
WC														
WF														
WM														
WMA		50												
XM														
YF														
ZC														
ZF					12			69						
ZFZ				40				20					16	
ZM			64		5				26					
ZMA														
ZMJ														
ZMZ			93	110		3	36	43	30	3				
Total	100	50	157	150	17	3	36	149	56	28	27	86	16	5
% total	7%	4%	11%	11%	1%	0%	3%	11%	4%	2%	2%	6%	1%	0%

Based on the key ceramic groups, it is revealing that no new BB1 is certain to have reached the Northgate House or Discovery Centre sites in the 4th century. This is consistent with the situation at other sites from the town, which saw no significant supplies after the early 4th century (Matthews and Holmes, forthcoming).

Phase 2.4: Ceramic phase AD 350–400
(Table 7.10; Figs 7.4–7.7)

The latest pottery groups had date ranges that began towards the end of Phase 2.3, but belonged to contexts assigned to stratigraphic Phase 2.4 (*c* AD 350/75–400/50). In terms of the ceramic chronology, the groups were broadly dated to the second half of the 4th century, with certain fabrics suggesting deposition after AD 370. Taken together, the groups contained elements that suggest that they are coherent as an assemblage and representative of pottery supply during the final decades of Roman period occupation at the excavated sites. The seven groups selected each on average totalled 3.17 EVEs, suggesting that the amount of pottery available for deposition after AD 350 had increased since the first half of the 4th century.

The proportion of grey wares continued to fall and now stood at 46% by EVE. Compared with the previous ceramic phase, there was little change in

Bowl		*D ish/bowl*				*Mortarium*				*Lid*	*Total*	*% total*
H	*HC*	*J/JA incip b&f*	*JA/JB bead*	*JA/JB plain*	*JA/HB b&f*	*K*	*KC*	*KD*	*KE*	*L*		
											0	0%
											0	0%
											0	0%
											0	0%
											0	0%
							8	5			13	1%
								21			21	1%
									3		3	0%
						11					11	1%
							6				6	0%
											0	0%
											0	0%
				7							49	3%
											0	0%
			19								24	2%
	5										5	0%
											0	0%
											0	0%
											213	15%
			19								19	1%
											0	0%
	16										16	1%
											0	0%
	14										14	1%
											0	0%
											50	4%
											0	0%
											0	0%
											0	0%
					90						171	12%
					124						200	14%
			8	16	16					7	142	10%
		13		22	19						54	4%
											0	0%
4		7	33	10						22	394	28%
4	35	20	79	55	249	11	14	26	3	29	1405	-
0%	2%	1%	6%	4%	18%	1%	1%	2%	0%	2%	-	-

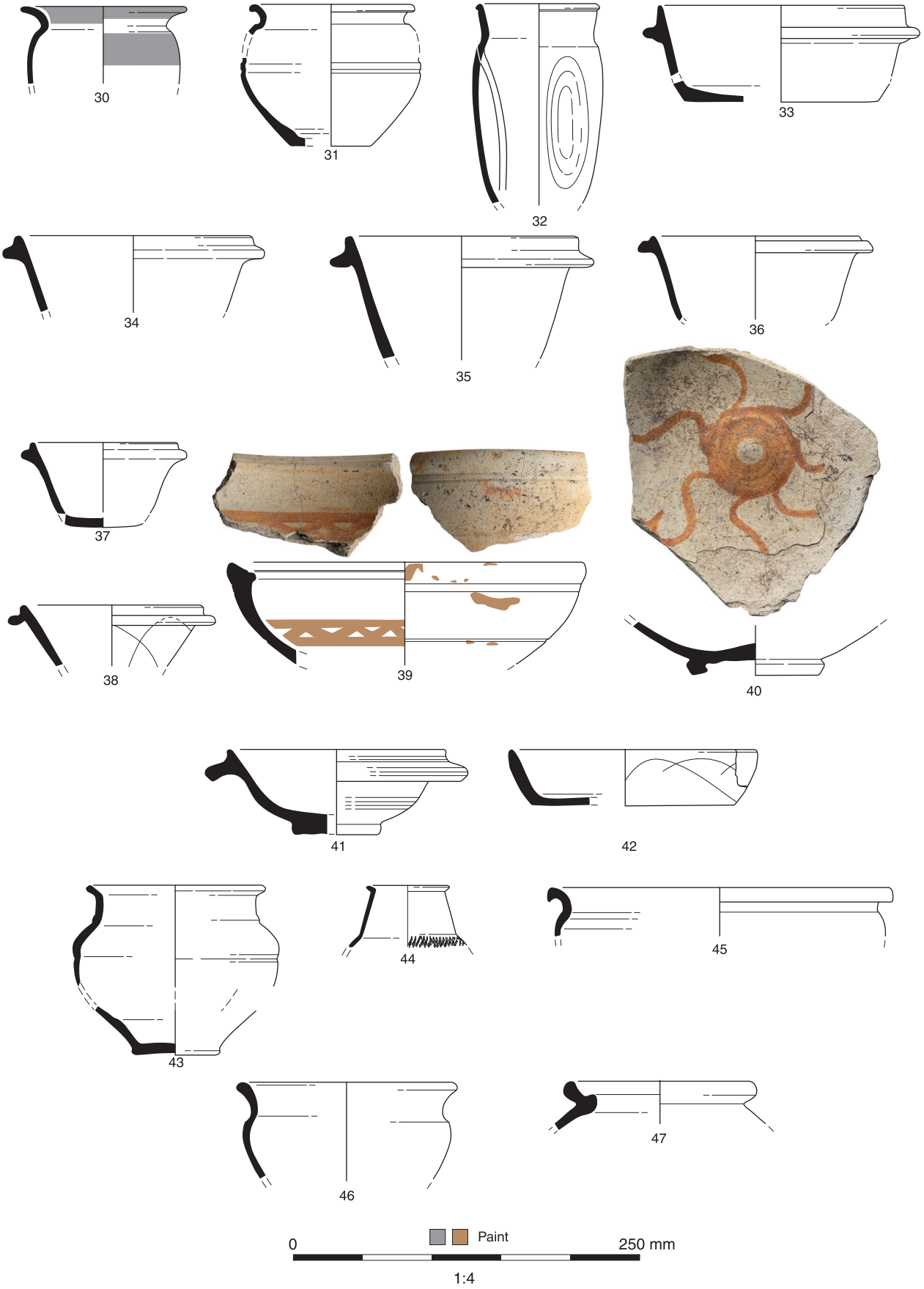


Fig. 7.3 Roman pottery: Phase 2.3, AD 260–350/400 (30–47)

the relationship between medium-sandy grey wares with and without iron oxides (those with oxides still dominating). Black-burnished ware category 1 made a token, if not residual, appearance, supporting the view that new supplies of the fabric had ceased some considerable time before the mid 4th century. Fine grey wares were similarly reduced in quantity, while coarse grey wares were unchanged. Despite the general decline of grey wares, a few new fabrics were introduced, notably storage jar fabric ZMF and shell-tempered ware ZH/ZHA. Part of the market share previously taken by sandy grey wares had been taken by Hampshire grog-tempered wares, which, since forming a minor part of the assemblage in AD 270–350, had become more important after 350, its repertoire becoming more diverse in the process.

Oxidised wares accounted for 5% of the assemblage. This was down from the previous phase, although new fabrics like Overwey ware were present, and the proportion of New Forest parchment wares remained steady. Fine wares enjoyed increased use during the second half of the 4th century, their share of the assemblage almost doubling since the first half of the century. Oxford red colour-coated ware was better represented in this phase. Data from other Winchester sites suggest that importation of Oxford wares was reaching a peak by the middle of the 4th century (Matthews and Holmes, forthcoming). Still, the proportion of New Forest colour-coated ware beakers and flagons was not significantly different from that of the previous phase, and it appears that consumers avoided closed forms from Oxford, instead preferring New Forest products. H Rees (forthcoming) sees this relationship as complementary, though it is important to note that New Forest dishes and bowls were more plentiful than they had been during the late 3rd century and first half of the 4th century, pointing to direct competition for certain classes of vessels, especially those deriving from samian prototypes. The New Forest and Oxford industries also competed on even terms for the market in mortaria. Samian ware from Central, Eastern and Southern Gaul was recorded in the assemblage, but all occurrences must be residual, as was the East Gaulish Rhenish ware. Other imports reached the site in the form of amphorae; Gallic and South Spanish Dressel 20 amphorae were residual, but southern Spanish potters were also responsible for late Roman olive oil containers, which joined vessels from north Africa. *Céramique à l'éponge* was among the latest imports to arrive; the fabric was otherwise absent from the town, and its occurrence

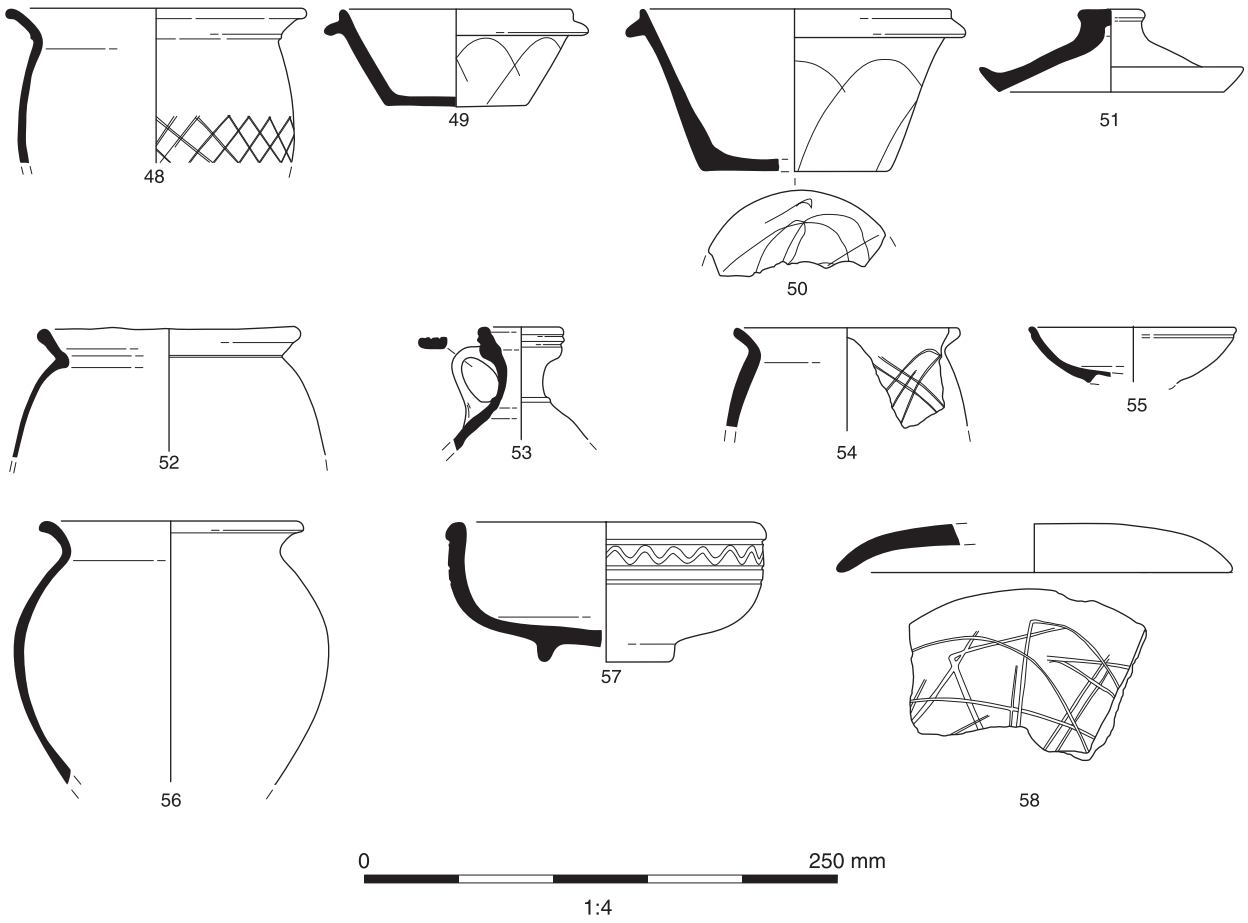


Fig. 7.4 Roman pottery: Phase 2.4, AD 350–400 (48–58)

Table 7.10: Roman pottery: key groups, Phase 2.4 (AD 350–400). *Quantification by eve. Fabrics totalling 0 are present, but no rim survives. (Dish/bowl rim types: bead = simple bead or flanged rim; incip. b&f = incipient bead-and-flanged rim; b&f = bead-and-flanged rim or dropped flange rim.)*

Fabric	*Flagon*			*Jar*						*Beaker*		*Cup*	
	B	*BA*	*BB*	*C*	*CC*	*CD*	*CJ*	*CK*	*CN*	*E*	*EE*	*FC*	*H*
A													
ADA													
ADA R													
AFN													
APA													
APB													
ASS													
JMU													
JMV													
JMW													
JMY													
SG				97				107	6				
SGA													
T(EPO)													
TCA												19	
TF													8
THT										17	43		
TO/TOR										3			17
TR	30	100								155	100		
TSA													
TUS(EG)													
UF													
UFN													
UM													
UMP													
WC													
WF													
WFB													
WFC													
WM				6									7
XF													
YF													
YM													
YM(OVW)				11		8							
ZC				4	13								
ZF				83									
ZFZ				47						47			
ZH/ZHA													
ZM				87		34	2						
ZMA								10					
ZMF				11									
ZMJ				6									
ZMZ		30	13	87	138	83		110	8				
Total	30	130	13	439	151	125	2	227	14	222	143	19	32
% total	1%	6%	1%	20%	7%	6%	0%	10%	1%	10%	6%	1%	1%

	Bowl			Dish/bowl					Mortarium			Lid	Total	% total
HA	HC	HD	HG	J/JA incip b&f	J/JA/JB plain	J/JA/JB/HB b&f	J/JB/HB bead	K	KC	KD	KE	L		
													0	0%
													0	0%
													0	0%
													0	0%
													0	0%
													0	0%
													0	0%
													0	0%
								4			19		23	1%
								6		26	12		44	2%
								6	5		8		19	1%
					50	48							308	14%
													0	0%
	6												6	0%
							7						26	1%
17	59						2						86	4%
													60	3%
21	46	10					5						102	5%
													385	17%
													0	0%
3													3	0%
	18												18	1%
9	13												22	1%
													0	0%
						7						8	15	1%
													0	0%
													0	0%
													0	0%
													0	0%
	5												18	1%
													0	0%
													0	0%
													0	0%
													19	1%
													17	1%
				6		15	12						116	5%
					4								98	4%
													0	0%
			31		52	38							244	11%
													10	0%
					21								32	1%
						5							11	0%
	6	7		6	24	20	6						538	24%
50	153	17	31	12	151	133	32	16	5	26	39	8	2220	-
2%	7%	1%	1%	1%	7%	6%	1%	1%	0%	1%	2%	0%	-	-

at the Northgate House site may represent a chance arrival and secondary distribution from sites where the fabric is better known, such as Bitterne in Southampton (Fulford 1977, 46; Matthews and Holmes forthcoming).

Jars remained the single most important category of vessel, taking a share of 44% by EVE, little different from the previous phase. Cooking-pot jars continued to be the best-represented form—it was the principal form of grog-tempered ware—but these were joined by oval-bodied necked jars, which re-emerged in Overwey ware and medium sandy grey ware after disappearing in the mid 2nd century. Narrow-necked jars, including those from Alice Holt, were also recorded, as were storage jars. Dishes and bowls made an important contribution, though the proportion was reduced from the previous phase. Simple bead-rimmed dishes were represented by residual samian fabrics and New Forest and Oxford forms copying samian forms. Incipient bead-and-flanged dishes had almost disappeared, with occurrences probably being residual. Plain-rimmed and bead-and-flanged or dropped flange dishes and bowls were predominant and available largely in grog-tempered wares and medium sandy grey wares that had replaced Dorset black-burnished ware. Some of the market share previously enjoyed by dishes had been taken by deep New Forest or Oxford bowls. These included some of the latest products of those industries, notably stamped bowls (Fulford 1975a, type 75; Young 1977, type C78) that were produced from *c* AD 340 onwards. Beakers and flagons were also better represented, again thanks largely to New Forest potters. Vessels were confined to folded beakers—available in the standard New Forest colour-coated ware and also in stoneware—and jug-like containers that were recorded in the colour-coated fabric and probable New Forest grey ware.

Evidence of pottery use

Secondary use of pottery

Eighteen pieces of pot exhibited evidence to suggest that they were being used for purposes different from their original function. Almost half of this group was amphorae and almost exclusively south Spanish vessels (Dressel 20 olive oil containers or late Roman versions). All amphorae sherds had been trimmed to produce tesserae (two examples; a third tessera-sized (22 mm x 22 mm) sherd was in grey fabric ZF) or other useful fragments or, from a number of trimmed shoulder sherds, to give presumably complete vessels a new rim with a wider diameter. This last category may have been required if the amphora was still intended to be used as a container. Similar evidence from the Netherlands points to urinals, tubs, or storage vessels for grain and other dry goods (van der Werff 2003). Elaine Morris (pers. comm.) notes that amphorae trimmed at the shoulder were found at the salt-production site at Lizard, Cornwall (McAvoy *et al.* 1980), and possibly used as saltwater or brine containers. An exact parallel to the largest Winchester example has been recovered very recently during excavations at Dorchester-on-Thames (P Booth pers. comm..), where a Dressel 20, complete except for the neck and rim, had been set in a pit. The trimmed neck had been carefully smoothed and the handles cut off and smoothed just above their stumps. Three other similarly cut-down Dressel 20 amphorae have been recovered in recent work at Springhead, Kent (Seager Smith *et al*. forthcoming). Whatever its contents, the round and open shape of the Dressel 20 body made the type ideal for storage (in addition to transportation) in a way that the similarly common Gauloise amphorae did not appear to be. Other trimmed sherds were recorded in sandy grey wares and oxidised wares and, more rarely, New Forest colour-coated ware. The function of these adapted pieces cannot be determined, but a sherd of Central Gaulish samian ware had been cut into a circular piece suitable for a counter. Two sherds, in fabrics YC and YM, had post-firing holes of uncertain purpose but not apparently for riveted repairs (see below).

Wear and repair

Wear, usually internal, provides evidence of vessel use, with the patterns helping to suggest possible functions. Wear data tend to be skewed towards colour-coated pottery, which, compared with unslipped uniformly-coloured coarse ware, better displays eroded surfaces as the slip is worn away to exposed the underlying fabric (it should be noted that the sherds of this assemblage were generally in good condition, allowing reliable identification of wear as opposed to abrasion and attrition of surfaces caused by redeposition or other non-use related factors). Consequently, most examples of wear from the Northgate House and Discovery Centre sites were found on colour-coated fine wares. Six of the twelve worn vessels were in samian ware. Of the two Drag. 33 cups from Central Gaul recorded, the wear pattern on one cup was unspecified, but the other cup had a ring of wear around the junction of the base and wall that is characteristic of the form and may be related to its use as a mixing vessel in which honey was stirred into wine or for a sauce prepared at the table (Biddulph 2008, 98); interestingly a grey ware bead-and-flanged bowl was also worn around the edge of the base internally, though this was more likely to be through cooking than dining. The bases of two central Gaulish Drag. 45 mortaria were also heavily worn. Three other worn sherds were observed, but could not be identified to form, though one was almost certainly part of a bowl. Overall, the proportion of worn samian seems low; the two cups represent 13% of the total number of Drag. 33s (including

vessels without rims), while the two worn mortaria stand against a further five unworn vessels (being a type designed as a heavy-duty mixing bowl). But while the figures suggest that samian tended to be used intermittently or delicately, perhaps because of a perceived prestige value or vagaries of supply, it was clearly used robustly for food preparation on occasion. However, the significance of these observations is uncertain, since useful comparative information is not available. More quantified data are required from a range of other sites to determine normal levels of samian use (at Northfleet villa in Kent, for example, 6% of Drag. 33 cups were worn). Of the other worn vessels, three were bowls in New Forest and Oxford red colour-coated wares, and the base of a New Forest mortarium was eroded.

Some 12 sherds had evidence of repairs. Three of these were Central Gaulish samian, including two fragments from a Drag 37 bowl with a label stamp of DIVIX[TUS], which may well have been regarded as a special piece. The remaining sherds, remarkably, were all from amphorae, having rivet holes with, in two cases, lead rivets still extant. The sherds in question seemed to be predominantly in the later, thinner walled 'Dressel 20' fabric.

Burnt vessels

Pottery function was also determined by evidence of burning. Some 34 vessels (quantification based on rims) were sooted on their external surfaces, presumably after being placed on the hearth. Twenty-three of these were jars, mostly vessels not

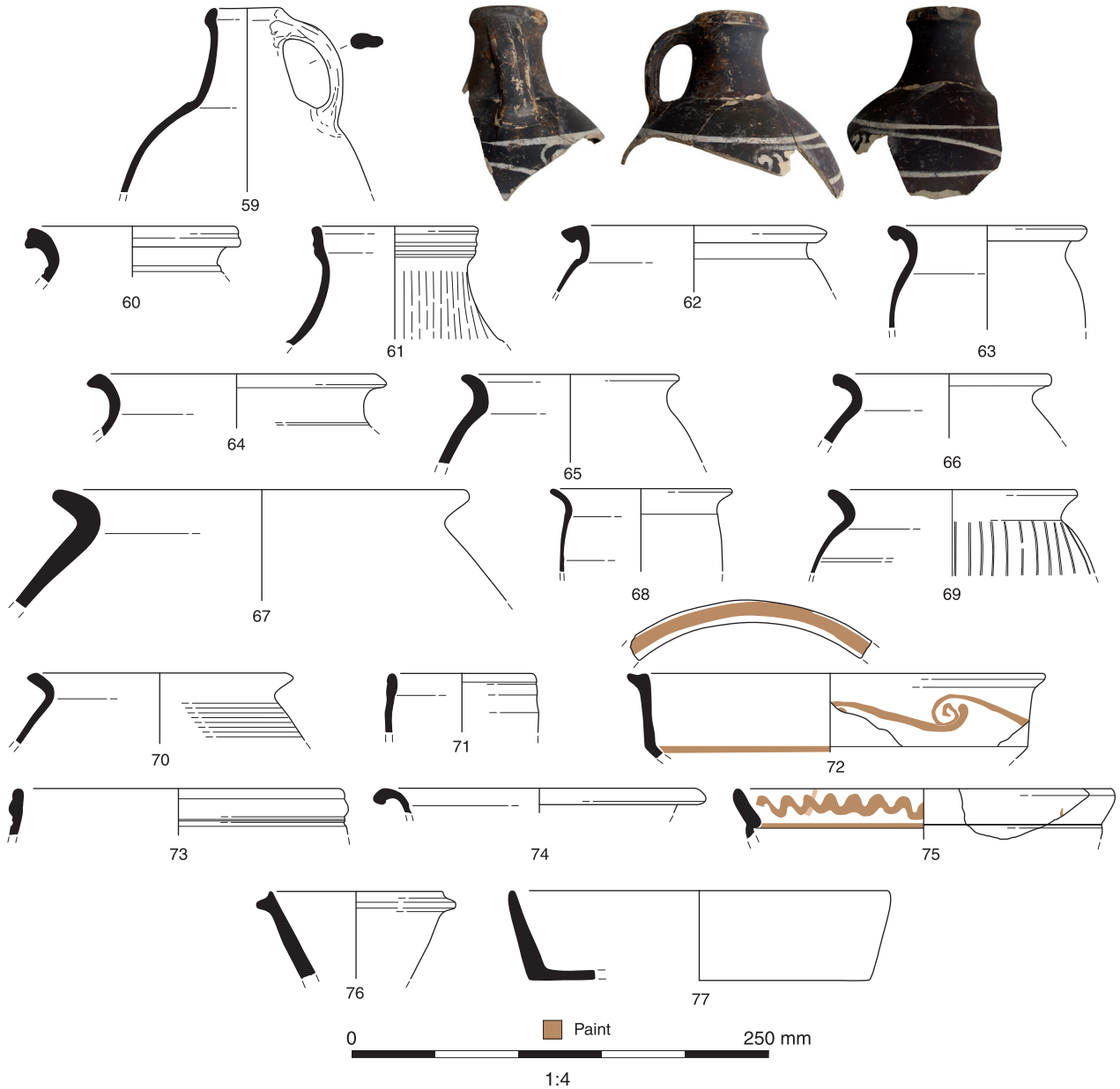


Fig. 7.5 Roman pottery: Phase 2.4, AD 350–400 (59–77)

Fig. 7.6 Roman pottery: Phase 2.4, AD 350–400 (78–115)

identified to a specific form but including eight cooking-pot jars, seven of which were in late Roman grog-tempered ware. Nine vessels were bowls and dishes, and included seven in grog-tempered ware, sandy grey wares and black-burnished ware. Internal burnt food residues and limescale were limited to eight vessels, almost exclusively cooking-pot type jars in the same sandy or groggy reduced fabrics. The evidence forms a small dataset, but nevertheless points strongly to the use of certain jars and flat-based dishes and bowls with flanged or bead-rims, plain rims and dropped flanges —in black-burnished ware or derived from prototypes in that fabric—as cooking vessels. The use of mortaria could also involve the heat of a hearth or the application of heat to ingredients inside them. Three vessels (in Oxford white ware, Oxford red colour-coated ware, and a Hampshire white ware) were burnt internally on the base; in addition one of these was burnt on its external surface and the top of the rim. A flanged bowl in New Forest parchment ware was similarly burnt, suggesting that it served the same function as mortaria. Unsurprisingly, all the candlestick fragments noted (see above) had evidence of burning.

Graffiti

Graffiti were recorded on ten vessels. These are described in the catalogue of illustrated pottery (below), but it is useful here to consider two that point to a good degree of literacy among some of the town's inhabitants. A New Forest colour-coated beaker was marked [...]AF in good letters (Fig. 7.7, no. 134), while a black-burnished ware vessel was inscribed, in rather cursive lettering, with [...]VE RN or A[...] (the E appearing to be separated from the R by two points) (Fig. 7.7, no. 128). Both are incomplete, but appear to represent personal names. The former is especially interesting; while it is difficult to expand the inscription any further, it is possible that the F, which is the final letter, stands for '*feliciter*', urging good luck for the user (cf. RIB 2503.352). If so, this recalls the exhortations on so-called motto beakers in Rhenish ware that wish good luck or demand that the user takes drink. The New Forest beaker already in part owed its development to those fine ware products of central and eastern Gaul (cf. Fulford 1975a, 27-8), but the graffito potentially makes that link more explicit.

The pottery in its urban context

The Discovery Centre site produced 19 groups that belonged to the early Roman period. These correspond with the early phase of the earlier Roman key-group assemblage from the northern suburbs at Victoria Road and assemblages from the city defences—Flavian rampart, Jewry Street and Henly's Garage sites (Holmes *et al*., forthcoming, tables 2.2.7, 2.2.25, 2.4.2, 2.4.3, 2.4.5, 2.4.13, and 2.4.14). Comparing broad ware groups, there is little obvious difference between the areas. Reduced wares dominate and are accompanied by much smaller proportions of other ware types. Samian is better represented at Victoria Road and the defences than it is at the Discovery Centre, however, and this, along with higher proportions of fine ware and amphorae (especially at the defences), hints at a pattern of supply to parts of the city away from the Discovery Centre area that included higher proportions of continentally-derived or inspired pottery. It is notable that early Roman Gallo-Belgic mortaria, absent from the Discovery Centre, were also recovered from the Victoria Road site and defences. Such differences would be expected to be mirrored in the range of forms present, although this is not easy to confirm, since a complete breakdown of form composition at Victoria Road is not available in the report of that site. However, data are available for grey wares. Compared with the Discovery Centre site, jars are less well-represented and beakers, cups and lids better represented in the northern suburbs. The relatively small number of platters seems at odds with the continental emphasis suggested by other pottery in the group, although there may have been little requirement to supply grey ware platters if the class was preferred in samian ware.

The late Roman dataset from the site is rather larger and stands more comfortably alongside other late Roman assemblages from the city. Much quantified material derives from deposits associated with the city defences, in particular from Henly's Garage and Jewry Street (Holmes *et al*., forthcoming, tables 2.2.36, 2.4.11–13). Comparing the proportions of fabrics from the various sites, assemblages from the defences contained higher proportions of amphorae and samian and, conversely, lower proportions of fine wares and late Roman handmade grog-tempered wares. This striking difference points to the two assemblage groups (Discovery Centre/Northgate House sites on the one hand and the defences on the other) deriving, in statistical terms, from separate vessel populations. The reason for the difference could well be chronological and relate to the range of activity along the ramparts.

The late Roman occupation at Jewry Street comprised a succession of timber buildings constructed in an area that had been cultivated from *c* AD 200 (which in turn replaced 2nd-century structures). Late Roman buildings were also recorded at Henly's Garage (Rees, forthcoming). Despite this late Roman activity, the defence deposits appear to have contained higher amounts of residual material than might be expected and received relatively small amounts of new pottery, at least compared with the current site assemblages. The samian and much of the amphorae must be residual, but the small proportion of grog-tempered ware—normally an important fabric in late Roman assemblages—is also notable. Moreover, late Roman Oxford and New Forest fine wares took a smaller share of the defence assemblage compared with the Discovery Centre/Northgate House: some 6% by sherd count against 14%. These observations seem to point to

more intensive occupation at the current site. In contrast, occupation along the ramparts may have been less dense, or pottery supply intermittent. It is also possible that older pottery used during previous occupation there or incorporated in manuring spreads for cultivation had not been removed when the late Roman occupation began. While different than assemblages from the city wall, the composition of the late Roman pottery from the site appears to be more comparable to assemblages recovered from The Brooks, a site nearer to the city centre, with reasonably similar proportions of ware groups across the sites (Lyne, forthcoming, tables A2.4.2–5). The exception is black-burnished ware, which is substantially better-represented at The Brooks.

A number of points emerge from these inter-site comparisons. Occupation in the northern suburbs during the later 1st and 2nd centuries admitted a greater amount and range of fine and specialist wares—samian, amphorae, mortaria and fine wares—compared with the current site and so appears to have been different in character. While richly-adorned town houses are known in the suburbs during the late Roman period (Wacher 1995, 301), the excavations from which the pottery was recovered revealed no grand structures but miscellaneous roadside features instead (Rees, forthcoming). However, it is possible that such residences are located close by. Late Roman occupation along the defences was less dense than that nearer the city centre, and its assemblage derived in part from earlier activity. Within the walls, the same range of pottery was reaching the Discovery Centre/Northgate House sites and The Brooks in the late Roman period, suggesting that these sites acquired pottery in a similar way and that they were broadly similar in terms of status and ceramic use.

Catalogue of illustrated pottery (Figs 7.2–7.7)

The following ceramic groups and individual pieces illustrate the typological and chronological range of the assemblage. Graffiti and potters' marks and pieces of intrinsic interest are also shown. The dates given refer to context-group dates (not necessarily identical to stratigraphic phasing), and the catalogue is ordered by this chronology.

Occupation layer CC1754, group CC7002. AD 70–95
1. Jar CC, fabric ZM. Burnished on external surface
2. Jar CD, fabric ZM
3. Jar CD, fabric ZM
4. Jar CE, fabric ZM
5. Jar CG, fabric ZMZ
6. Jar CG, fabric ZMZ
7. Jar CG, fabric ZM
8. Jar CG, fabric ZM. Burnt internally
9. Jar CG, fabric ZM. Burnished on external surface
10. Jar CG, fabric ZM
11. Jar CG, fabric ZM
12. Jar CG, fabric ZM
13. Jar CG, fabric ZM. Burnished on external surface
14. Jar CH, fabric ZM. Burnt externally on shoulder and rim
15. Jar CN, fabric ZMZ
16. Bowl HC, fabric ZM
17. Bowl HC, fabric ZM. Burnt internally
18. Platter JC, fabric ZM. Wavy line decoration on external and internal surfaces
19. Platter JC, fabric ZM
20. Platter JC, fabric ZMZ. Burnished on external surface
21. Platter JC (Drag. 15/17), fabric TSA
22. Platter JC (Drag. 15/17), fabric TSA
23. Lid L, fabric ZMZ

Levelling layer NH7014, group NH8523. AD 120–130
24. Jar C, fabric ZMZ. Burnished on top of rim
25. Jar CG, fabric ZM
26. Jar CK, fabric ZM. Sooting underneath rim
27. Beaker EA, fabric ZMZ
28. Beaker EC, fabric TBF. Black-slipped on rim and shoulder
29. Platter JC (Drag. 18), fabric TSA

Occupation layer NH1263, group NH8512. AD 270–350
30. Jar CK, fabric ZF (black-slipped). Bands of slip on internal surface of rim, lower part of external surface of rim, and shoulder; slip appears striated through wear
31. Jar CM, fabric ZM. Cordoned shoulder
32. Beaker EE, fabric TR. Near-complete vessel
33. Bowl HB, fabric ZF
34. Bowl HB, fabric ZFZ. Burnished on upper surface of flange
35. Bowl HB, fabric ZFZ
36. Bowl HB, fabric ZFZ
37. Bowl HB, fabric ZFZ. Burnished on internal surface of base
38. Bowl HB, fabric ZMA. Faintly-incised arcs on external surface
39. Bowl HC (Fulford 1975a, type 89), fabric UMP. Patches of paint on external surface
40. Bowl H, fabric UMP
41. Bowl HC, fabric WF. Burnt on rim and flange and in patches on external and internal surfaces, possibly through firing rather than use
42. Dish JA, fabric ZMA. Burnished arcs on external surface

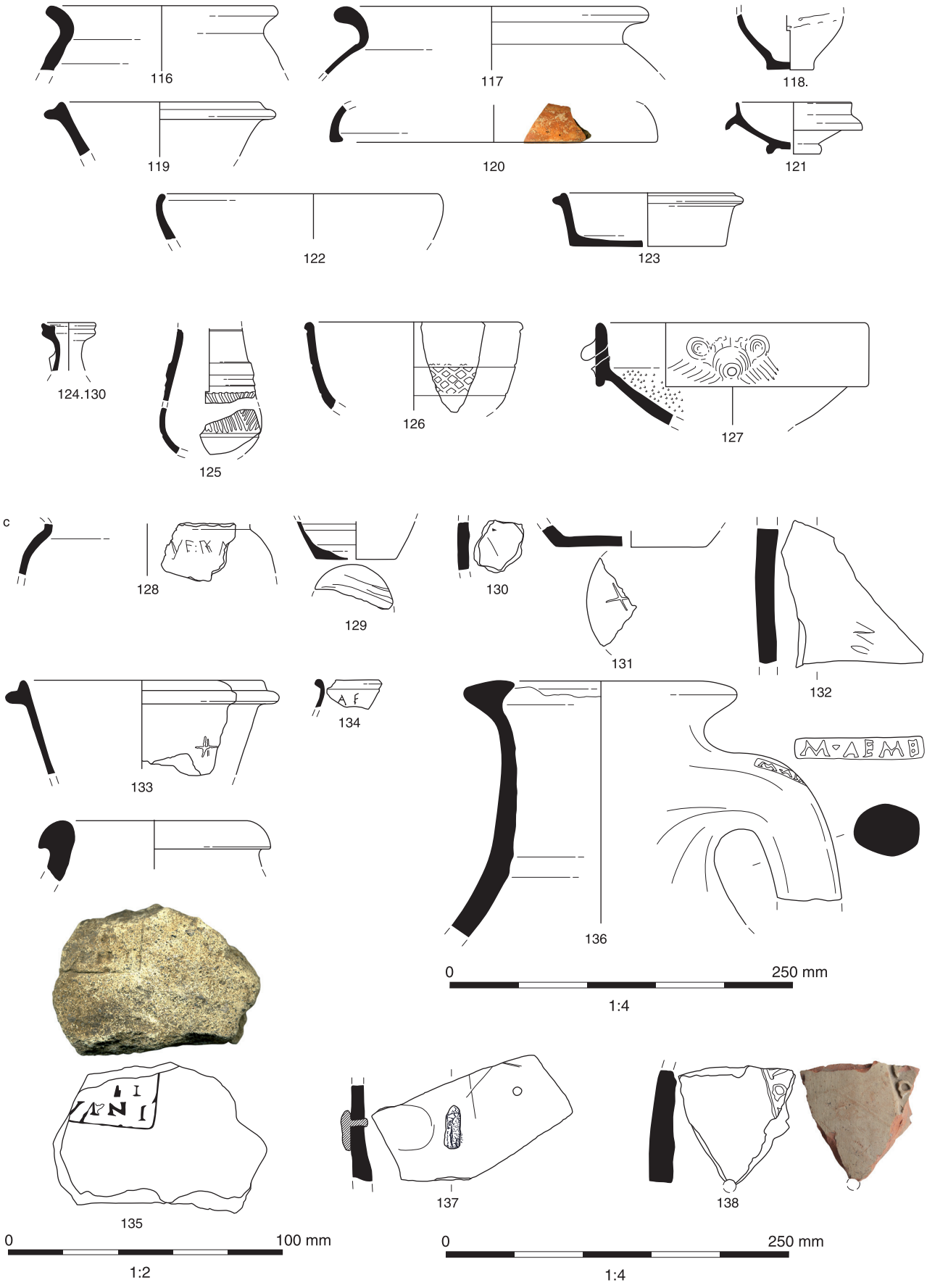
'Dark earth' NH4412, group NH8500. AD 270–400
43. Jar CD, fabric ZME

Pit fill NH2623, group NH8524. AD 270–400
44. Beaker E, fabric TCR

Pit fill NH1412, group NH1642. AD 270–400
45. Jar CM (Young 1977, type O27), fabric WO.

Demolition layer NH1328, group NH8516. AD 270–400
46. Jar CM, fabric Y(PNKGT)

Fig. 7.7 (facing page) Roman pottery: Phase 2.4, AD 350–400 (116–123) and pottery of intrinsic interest, graffiti and potter's stamps and marks (124–138)


116
117
118.
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124.130
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134
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136
137
138
0
250 mm
1:4
0
100 mm
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0
250 mm
1:4

Floor NH2510, group NH8523. AD 270–400
47. Jar CJ, fabric ZC(MAY), apparently overfired

Pit fill NH2239, group NH8524. AD 300–400
48. Jar CK, fabric ZF. Burnished zone above lattice
49. Bowl HB, fabric ZMA. Decorated with burnished arcs. Traces of soot on external surface
50. Bowl HB, fabric ZFZ. Worn around edge of base internally
51. Lid L, fabric ZM

Pit fill NH2369, group NH8524. AD 325–400
52. Jar CD, fabric ZF (black-slipped). The vessel is overfired and its rim distorted; a manufacturing second

Pit fill NH2300, group NH8524. AD 325–400
53. Flagon, fabric ZF (black-slipped)
54. Jar CK, fabric SG
55. Cup FA, fabric TF. Footring has broken off

Pit fill NH1395, group NH8516. AD 340–400
56. Jar CK, fabric SG. Tooled burnishing on external surface
57. Bowl HC (Fulford 1975a, type 70), fabric TF
58. Lid L, fabric SG. Burnished decoration on internal surface

'Dark earth' CC1629, group CC7005. AD 340–350
59. Flagon BA, fabric TR. White-painted decoration on shoulder
60. Jar CC, fabric WF, micaceous surfaces
61. Jar CC, fabric ZMZ. White-slipped external surface; burnished neck
62. Jar CD, fabric ZM. Burnished on shoulder and top of rim
63. Jar CD, fabric ZM
64. Jar CD, fabric ZMZ
65. Jar CK, fabric CG
66. Jar CK, fabric CG
67. Jar CK, fabric CG
68. Jar CK, fabric ZF
69. Jar CK, fabric ZM. Burnished lines on shoulder
70. Jar CK, fabric ZM
71. Beaker E, fabric TR
72. Bowl HA, fabric UMS
73. Bowl HC, fabric TF
74. Bowl HC, fabric TO/TOR
75. Bowl HC, fabric UMS
76. Dish JA, fabric ZM
77. Dish JA, fabric ZM

'Dark earth' CC1579, group CC7005. AD 350–370
78. Jar CC, fabric ZMZ
79. Jar CC, fabric ZMZ. White-slipped external surface; shallow ?combing on neck
80. Jar CD, fabric YM(OVW)
81. Jar CD, fabric ZM
82. Jar CK, fabric SK
83. Jar CK, fabric SK
84. Jar CK, fabric ZMA
85. Jar CK, fabric ZMZ. Limescale deposit on internal surface
86. Beaker E, fabric THT
87. Beaker EE, fabric TR
88. Beaker EE, fabric TR
89. Bowl HA, fabric TF. Half-rosette-stamped
90. Bowl HA, fabric TF
91. Bowl HA, fabric TF. Rosette-stamped
92. Bowl HA, fabric TO/TOR. Rouletted below plain zone
93. Bowl HB, fabric TF
94. Bowl HB, fabric UMS
95. Bowl HC, fabric TO/TOR
96. Bowl HC, fabric ZMZ
97. Bowl HD, fabric TO/TOR
98. Bowl HD, fabric ZMZ
99. Dish JA, fabric SG
100. Dish JA, fabric SG
101. Dish JA, fabric SG
102. Dish JA, fabric SG
103. Dish JA, fabric ZMZ. Burnished arcs on external surface and lattice on internal surface
104. Dish JB, fabric SG
105. Dish JB, fabric SG
106. Dish JB, fabric SG
107. Dish JB, fabric SG. Burnished on external surface
108. Dish JB, fabric ZM
109. Dish JB, fabric ZM. Burnished on internal surface
110. Dish JB, fabric ZMZ. Burnished on internal surface
111. Mortarium KC, fabric JMY
112. Mortarium KE (Fulford 1975a, type 81), fabric JMV
113. Mortarium KE (Fulford 1975a, type 81), fabric JMV
114. Mortarium KE (Young 1977, type C100), fabric JMW
115. Mortarium KE (Fulford 1975a, type 102), fabric JMY

'Dark earth' NH5059, group NH8500. AD 350–400
116. Jar C, fabric SG
117. Jar CD, fabric ZM (white-slipped)
118. Beaker E, fabric TR
119. Bowl HB, fabric SG
120. Bowl HC, fabric T(EPO). Flange only
121. Bowl HC (Fulford 1975a, type 63), fabric TF
122. Dish JA, fabric SG
123. Dish JA, fabric ZM (burnished)

Additional pottery of intrinsic interest
124. 'Pulley-rim' flagon B, fabric WM. Orange slip, especially around rim. Context NH1428. AD 270–400
125. Beaker E (Fulford 1975a, grey ware type 1), fabric ZF (black-slipped). Context NH5197. AD 300–400
126. Bowl HC, fabric WF. Imitation of samian Drag. 37 bowl. Incised lattice below plain zone. Context NH2239. AD 300–400
127. Mortarium KD, fabric JMW. 'Bat-head' spout. Internal surface below collar is worn through use. Context NH1398. AD 350–400

Graffiti and potters' marks and stamps
128. Body sherd, fabric ZMA. Context NH7014. AD 120-130. Graffito incised after firing. ?[...]VE:RN or A[...]. Finger-sized dent in body under the final letter; manufacturing flaw
129. Body sherd, fabric ZFE. Context CC1702. AD 120-150. Lines scored after firing, possibly accidentally
130. Base, fabric SG. Context NH1595. AD 270-400. Post-firing
131. Base, fabric SG. Context NH9716. AD 270-400. Small x-graffito made after firing
132. Body sherd, unidentified amphora fabric. Context NH2239. AD 300-400. Possible post-firing graffito
133. Bowl HB, fabric ZFZ. Context NH1231. AD 300-400. Post-firing graffito
134. Beaker E, fabric TF. Context NH2344. AD 325-400. Graffito made after firing: [...]AF

135. Amphora (Richborough 527), fabric A(LIP). Context NH3681. AD 300-400. Potter's stamp, probably HEL VINI
136. Amphora (Dressel 20), fabric ADA. Context NH4435. AD 270-400. Potter's stamp: M AEME
137. Body sherd, fabric ADA. Context NH4754. AD 270-400. Lead rivet, rivet hole and graffito [...]OX incised before firing
138. Body sherd, fabric ADA R. Context NH2344. AD 325-400. Fragmentary stamp

Post-Roman pottery *by John Cotter*

The Northgate House (NH) and Discovery Centre (CC) sites produced a combined total of 21,222 sherds of post-Roman pottery; 14,516 sherds came from NH and 6706 from CC. All this material was briefly examined, spot-dated and recorded to assessment level. A sampling strategy of the most secure deposits was implemented and this resulted in a detailed catalogue of 14,792 sherds weighing 252.356 kg, with a total estimated vessel equivalent (EVE) value of 159.35. It is this sample that forms the statistical basis of this pottery report. A more detailed report can be found in *Digital Section 1.3*.

Pottery of the 9th to 14th centuries, and particularly the 9th to 12th centuries, dominates the excavated assemblage. A single sherd of early-mid Saxon organic-tempered pottery hints at earlier though superficial post-Roman activity in the area, but it is unlikely on the basis of pottery types present that significant occupation of the site commenced much before *c* 850. The marked tail-off of pottery during the later 13th and 14th centuries is almost certainly due to the conversion of most of the site to gardens, certainly by the 15th century, and its survival in this state almost untouched until the 19th and 20th centuries. Post-medieval pottery (16th–20th century), for example, comprises only a tiny fraction of the assemblage recovered from NH (along with only 12 pieces of clay tobacco pipe) and this must reflect a dearth of later activity. The adjacent CC site presents a similar picture apart from a small early 19th-century pottery group sealed by the building of the new library in the 1830s. Details of the small post-medieval pottery collection remain in archive and are not treated in any significant way in this report.

The state of preservation is variable, ranging from small worn sherds in many cases right up to several complete vessel profiles and a few dozen almost complete profiles. Only a half a dozen or so small robust vessel forms, such as oil lamps and crucibles, survived as complete unbroken profiles. Large thin-walled forms such as glazed tripod pitchers and medieval fineware jugs were particularly susceptible to breakage, whereas robust handmade late Saxon cooking pots often survived as large substantial pieces.

Pottery fabrics were recorded using the official codes of the Winchester Museums Service. Wherever possible vessels have been described following the nationally recommended nomenclature and minimum standards of the Medieval Pottery Research Group (MPRG 1998; 2001). The main form of quantification employed in this text is the sherd count, which is supported by EVEs or weight data. The original aim was to record a 50–60% sample of the post-Roman pottery from the site. Attention was initially focussed on recording contexts dated to the late Saxon and Norman periods (Phases 4 and 5) as this, the largest and best-preserved element of the assemblage, clearly had the greater archaeological value and the best potential to address the project research objectives.

Ceramic phasing

In the forthcoming Winchester pottery monograph (Holmes and Matthews, forthcoming), a system of ceramic phasing was established for the city, based mainly on extramural sites excavated by the Winchester Museums Service. The late Saxon phases are referred to as the Late Saxon sandy ware phase, the Michelmersh ware phase and the Winchester ware phase. These are followed by the Tripod Pitcher phase (also known as the Saxo-Norman group). These phases, spanning the period *c* 850–1200, are well-represented on the current site, but in practice the established traditional ceramic phasing is of limited use, as the main signifiers are quite rare (and possibly sometimes residual), and can only be assigned to the contexts which contain them. Consequently, a simpler and more comprehensive phasing system was devised to deal with the site assemblages. This is closely based on the traditional ceramic phasing, but is more flexible in that it can be applied to whole sequences rather than selective contexts. Although largely dependent on established pottery dating it also incorporates the relative dating provided by the site stratigraphy and is supported, in places, by dating from other object categories and by association with a sequence of independent scientific (archaeomagnetic and radiocarbon) dates (see Chapter 6). The latter, except in a few possibly anomalous cases, are in fairly broad agreement with the ceramic dates for these contexts.

Initial site phasing (and much of the final phasing) mirrored the time divisions established in the traditional ceramic phasing, but was somewhat broader; for example Late Saxon (Phase 4, *c* 850–1066) covered the three late Saxon ceramic phases (Late Saxon sandy ware, Michelmersh and Winchester ware phases), but was somewhat closer as far as the post-Saxon phases were concerned (Anglo-Norman, Phase 5, *c* 1050–1225 matching almost exactly the Tripod pitcher phase). Fine tuning the initial phasing gave the two-century block of the 'Late Saxon' phase (a significant 40% of the pottery sample) a simpler two-fold subdivision rather than the threefold subdivision provided by traditional ceramic phasing. This was largely based on the assumption of a *c* 950 introduction date for the common chalky-flinty fabric MAV (see below

and *Digital Section 1.3*). Subsequent phases are a little more straightforward but these too rely on the presence of main or secondary ceramic indicators. The Anglo-Norman phase (Phase 5, *c* 1050–1225), for example, is largely defined by the presence of glazed tripod pitchers, but also by the presence of local coarsewares with 'scratch-marked' decoration—a decorative style widely accepted to be post-Conquest in origin. The medieval phase (Phase 6, *c* 1225–1550) is largely defined by the presence of glazed wheel-thrown jugs, mainly those in South Hampshire redware. Although the excavator, out of convention, has Phase 6 ending *c* 1550, it should be borne in mind that the amount of pottery on the site datable after *c* 1400 is remarkably little as most of the site was under cultivation by this time.

Fabrics (Tables 7.11–14)

More detailed descriptions of fabrics and vessel typologies, along with full references, can be found in *Digital Section 1.3*. The shortened fabric descriptions below are listed in alphabetical order.

Fabric MAB. Flint-tempered ware. Possibly from *c* 850 but rare, mainly *c* 1000–1250. Probably local. Fairly rare. Fabric Group 3 (see below for explanation of fabric groups).

Fabric MAD. Tripod Pitcher ware. Date *c* 1050–1225. Possibly local, but recent comparison shows the fabric is visually very similar to tripod pitchers in South-east Wiltshire coarseware (MADW, see below). More than one source may therefore be represented although both are almost certainly products of the same regional tradition. Fairly common. Fabric Group 5.

Fabric MADW. South-east Wiltshire coarseware. Present as tripod pitchers. A few pieces in this fabric were originally identified but in the light of recent comparisons with fabric samples from Wiltshire it may be that this fabric is much commoner in Winchester than was originally thought and perhaps represents the coarser end of the MAD fabric range (see MAD, above). Date *c* 1075–1250. Rare. Fabric Group 5.

Fabric MAF. Fine sandy ware with flint, chalk and 'organic' temper (actually selenite). Possibly from *c* 950, mainly *c* 1050–1150. See variant Fabric MBK. Probably local. Fairly common. Fabric Group 3.

Fabric MAQ. Coarse grained sandy ware with flint. Possibly from *c* 850 but rare, mainly *c* 1000–1250. Probably local and regional. Common. Fabric Group 3.

Fabric MAV. Chalk tempered ware with some flint. Date *c* 850–1200, mainly *c* 1000–1200? Probably local. Very common. Fabric Group 1.

Fabric MBEAU. Beauvais-type ware. Date *c* 900–1100. North-west France. Very rare. Fabric Group 8.

Fabric MBK. Fine sandy ware with flint and chalk. Possibly from *c* 950, mainly *c* 1050–1150. Probably fairly local. Very common. Fabric Group 3.

Fabric MBN. Portchester ware. A wheel-thrown late Saxon coarseware. Date perhaps *c* 925(?)–1050. Source possibly the Portchester area, south Hampshire. Rare. Fabric Group 2.

Table 7.11: Post-Roman pottery: quantification of catalogued sample by fabric

Fabric	*Sherds*	*%*	*Weight (g)*	*%*	*EVE*	*%*
MAB	36	0.24%	674	0.27%	0.53	0.33%
MAD	163	1.10%	3,297	1.31%	0.65	0.41%
MADW	9	0.06%	248	0.10%	0.11	0.07%
MAF	321	2.17%	3,541	1.40%	1.95	1.22%
MAQ	590	3.99%	10,566	4.19%	10.69	6.71%
MAV	3,034	20.51%	68,114	26.99%	33.06	20.75%
MBEAU	2	0.01%	36	0.01%	0	0.00%
MBK	1,324	8.95%	17,520	6.94%	13.2	8.28%
MBN	19	0.13%	268	0.11%	0.18	0.11%
MBX	6,253	42.27%	99,945	39.60%	65.74	41.26%
MCK	6	0.04%	26	0.01%	0	0.00%
MDF	581	3.93%	7,388	2.93%	5.64	3.54%
MDG	9	0.06%	166	0.07%	0.04	0.03%
MDL	94	0.64%	410	0.16%	2.63	1.65%
MFGY	2	0.01%	91	0.04%	0	0.00%
MFI	1	0.01%	130	0.05%	0	0.00%
MMG	16	0.11%	273	0.11%	0.45	0.28%
MMH	62	0.42%	582	0.23%	0.2	0.13%
MMI	223	1.51%	3,530	1.40%	1.95	1.22%
MMK	1	0.01%	18	0.01%	0.06	0.04%
MMQ	12	0.08%	116	0.05%	0	0.00%
MMR	7	0.05%	131	0.05%	0.05	0.03%
MMU	205	1.39%	3,556	1.41%	2.65	1.66%
MNG	80	0.54%	1,282	0.51%	0.5	0.31%
MNV	3	0.02%	2	0.00%	0	0.00%
MNVY	1	0.01%	8	0.00%	0	0.00%
MNX	19	0.13%	317	0.13%	0.08	0.05%
MOE	567	3.83%	10,917	4.33%	5.4	3.39%
MPIN	4	0.03%	59	0.02%	0	0.00%
MSH	165	1.12%	3,472	1.38%	2.67	1.68%
MTE	578	3.91%	8,788	3.48%	4.78	3.00%
MWW	133	0.90%	2,003	0.79%	2.48	1.56%
MZM	138	0.93%	2,458	0.97%	2.57	1.61%
PMED	16	0.11%	302	0.12%	0.18	0.11%
UNID	77	0.52%	1,028	0.41%	0.91	0.57%
WWX	41	0.28%	1,094	0.43%	0	0.00%
Total	14,792	100.00%	252,356	100.00%	159.35	100.00%

Fabric MBX. Chalk-tempered ware. The dominant fabric in late Saxon assemblages. Date *c* 850–1150, mainly perhaps *c* 850–1050? See also MAV, the flintier variant. Probably local. Very common. Fabric Group 1.

Fabric MCK. Kingston-type whiteware. One of the medieval Surrey whitewares. Usually green glazed. Date *c* 1240–1400. Surrey and Surrey/Hampshire border. Rare. Fabric Group 6.

Fabric MDF. Medium grained sandy ware. Common medieval sandy ware (mainly wheel-thrown jars/cooking pots). Date said to be from *c* 1000, mainly *c* 1050–1350. On the site mainly perhaps *c* 1150–1350. Local or regional. Common. Fabric Group 6.

Fabric MDG. Late medieval red ware. Date *c* 1350–1500? Fabric MGR (see below) is a later development of this and is often white painted. Local or regional. Rare. Fabric Group 6.

Table 7.12: Post-Roman pottery: fabrics by phase. Quantification by sherd count.

Fabric	4		4.1		4.2		5		6		Total	Total %
	Sherds	%	Sherds	%	Sherds	%	Sherds	%	Sherds	%		
MAB	1	3.85%		0.00%	4	0.09%	24	0.37%	7	0.30%	36	0.24%
MAD		0.00%		0.00%	4	0.09%	115	1.75%	44	1.91%	163	1.10%
MADW		0.00%		0.00%		0.00%	4	0.06%	5	0.22%	9	0.06%
MAF		0.00%		0.00%	10	0.22%	260	3.96%	51	2.22%	321	2.17%
MAQ		0.00%	17	1.32%	170	3.69%	353	5.38%	50	2.17%	590	3.99%
MAV	11	42.31%	22	1.70%	1150	24.96%	1736	26.44%	115	5.00%	3034	20.51%
MBEAU		0.00%		0.00%		0.00%	2	0.03%		0.00%	2	0.01%
MBK	1	3.85%	4	0.31%	69	1.50%	1086	16.54%	164	7.13%	1324	8.95%
MBN		0.00%		0.00%	15	0.33%	4	0.06%		0.00%	19	0.13%
MBX	12	46.15%	1179	91.25%	2754	59.78%	1792	27.29%	516	22.43%	6253	42.27%
MCK		0.00%		0.00%		0.00%		0.00%	6	0.26%	6	0.04%
MDF		0.00%	2	0.15%	9	0.20%	161	2.45%	409	17.78%	581	3.93%
MDG		0.00%		0.00%		0.00%		0.00%	9	0.39%	9	0.06%
MDL		0.00%	12	0.93%	40	0.87%	33	0.50%	9	0.39%	94	0.64%
MFGY		0.00%		0.00%	2	0.04%		0.00%		0.00%	2	0.01%
MFI		0.00%		0.00%		0.00%	1	0.02%		0.00%	1	0.01%
MMG		0.00%		0.00%	1	0.02%		0.00%	15	0.65%	16	0.11%
MMH		0.00%		0.00%		0.00%	2	0.03%	60	2.61%	62	0.42%
MMI		0.00%		0.00%	1	0.02%	9	0.14%	213	9.26%	223	1.51%
MMK		0.00%		0.00%		0.00%		0.00%	1	0.04%	1	0.01%
MMQ		0.00%		0.00%	1	0.02%		0.00%	11	0.48%	12	0.08%
MMR		0.00%		0.00%		0.00%		0.00%	7	0.30%	7	0.05%
MMU		0.00%	13	1.01%	91	1.98%	89	1.36%	12	0.52%	205	1.39%
MNG		0.00%		0.00%	1	0.02%	49	0.75%	30	1.30%	80	0.54%
MNV		0.00%		0.00%		0.00%		0.00%	3	0.13%	3	0.02%
MNVY		0.00%		0.00%		0.00%		0.00%	1	0.04%	1	0.01%
MNX		0.00%		0.00%		0.00%	4	0.06%	15	0.65%	19	0.13%
MOE		0.00%	5	0.39%	19	0.41%	229	3.49%	314	13.65%	567	3.83%
MPIN		0.00%		0.00%		0.00%	4	0.06%		0.00%	4	0.03%
MSH		0.00%	34	2.63%	91	1.98%	35	0.53%	5	0.22%	165	1.12%
MTE	1	3.85%	1	0.08%	5	0.11%	381	5.80%	190	8.26%	578	3.91%
MWW		0.00%		0.00%	77	1.67%	54	0.82%	2	0.09%	133	0.90%
MZM		0.00%	1	0.08%	60	1.30%	63	0.96%	14	0.61%	138	0.93%
PMED		0.00%		0.00%	3	0.07%	8	0.12%	5	0.22%	16	0.11%
UNID		0.00%	2	0.15%	17	0.37%	44	0.67%	14	0.61%	77	0.52%
WWX		0.00%		0.00%	13	0.28%	25	0.38%	3	0.13%	41	0.28%
Total	26	100.00%	1292	100.00%	4607	100.00%	6567	100.00%	2300	100.00%	14792	100.00%

Fabric MDL. Medium grained sandy crucible fabric. Date *c* 850–1200. Local? Fairly rare. Fabric Group 7.

Fabric MFGY. North French greyware. Date *c* 875–1000. Pas-de-Calais/Flanders. Very rare. Fabric Group 8.

Fabric MFI. Normandy gritty white ware. Date *c* 1070–1250. Normandy. Very rare—a single piece only. Fabric Group 8.

Fabric MFS. Saintonge polychrome ware. Date *c* 1280–1350. South-west France. Very rare—a single piece identified (unsampled context). Fabric Group 8.

Fabric MGR. Late medieval red ware. Date *c* 1475–1550. Possibly West Sussex or east Hampshire. Includes 'black and white painted' wares. Very rare—a single piece identified (unsampled context). Fabric Group 6.

Fabric MGV. Anglo-Saxon organic-tempered ware. Date early to mid Saxon *c* 400–800. Probably local. Very rare—a single piece identified (unsampled context). Fabric Group 7.

Fabric MMG. Pink quartz-tempered ware. A high medieval glazed ware. Date *c* 1225–1400. Rare. Hampshire. Fabric Group 6.

Fabric MMH. Common white ware. A high medieval glazed ware. Date *c* 1225–1400. Rare. Hampshire. Fabric Group 6.

Fabric MMI. South Hampshire red ware. A high medieval glazed ware and the commonest of the several, quite similar, South Hampshire red ware fabrics. Probably from *c* 1175, mainly *c* 1225–1400. Fairly common. South Hampshire. Fabric Group 6.

Fabric MMK. Glazed sandy ware with flint inclusions. A high medieval glazed ware. Date *c* 1225–1400. Hampshire or Sussex? Very rare—a single piece only. Fabric Group 6.

Table 7.13: Post-Roman pottery: fabrics by phase. Quantification by weight (g).

Fabric	4		4.1		4.2		5		6		Total	Total %
	Weight	%	Weight	%	Weight	%	Weight	%	Weight	%		
MAB	56	12.04%		0.00%	38	0.05%	481	0.44%	99	0.27%	674	0.27%
MAD		0.00%		0.00%	68	0.08%	2,098	1.90%	1,131	3.10%	3,297	1.31%
MADW		0.00%		0.00%		0.00%	110	0.10%	138	0.38%	248	0.10%
MAF		0.00%		0.00%	140	0.17%	2,837	2.57%	564	1.55%	3,541	1.40%
MAQ		0.00%	316	1.51%	2,973	3.54%	6,253	5.66%	1,024	2.81%	10,566	4.19%
MAV	179	38.49%	802	3.82%	26,837	31.98%	38,093	34.47%	2,203	6.04%	68,114	26.99%
MBEAU		0.00%		0.00%		0.00%	36	0.03%		0.00%	36	0.01%
MBK	2	0.43%	15	0.07%	780	0.93%	14,810	13.40%	1,913	5.24%	17,520	6.94%
MBN		0.00%		0.00%	184	0.22%	84	0.08%		0.00%	268	0.11%
MBX	223	47.96%	18,705	89.19%	45,258	53.92%	26,973	24.41%	8,786	24.08%	99,945	39.60%
MCK		0.00%		0.00%		0.00%		0.00%	26	0.07%	26	0.01%
MDF		0.00%	16	0.08%	165	0.20%	2,178	1.97%	5,029	13.78%	7,388	2.93%
MDG		0.00%		0.00%		0.00%		0.00%	166	0.46%	166	0.07%
MDL		0.00%	44	0.21%	90	0.11%	198	0.18%	78	0.21%	410	0.16%
MFGY		0.00%		0.00%	91	0.11%		0.00%		0.00%	91	0.04%
MFI		0.00%		0.00%		0.00%	130	0.12%		0.00%	130	0.05%
MMG		0.00%		0.00%	4	0.00%		0.00%	269	0.74%	273	0.11%
MMH		0.00%		0.00%		0.00%	17	0.02%	565	1.55%	582	0.23%
MMI		0.00%		0.00%	1	0.00%	103	0.09%	3,426	9.39%	3,530	1.40%
MMK		0.00%		0.00%		0.00%		0.00%	18	0.05%	18	0.01%
MMQ		0.00%		0.00%	11	0.01%		0.00%	105	0.29%	116	0.05%
MMR		0.00%		0.00%		0.00%		0.00%	131	0.36%	131	0.05%
MMU		0.00%	134	0.64%	1,794	2.14%	1,381	1.25%	247	0.68%	3,556	1.41%
MNG		0.00%		0.00%	6	0.01%	897	0.81%	379	1.04%	1,282	0.51%
MNV		0.00%		0.00%		0.00%		0.00%	2	0.01%	2	0.00%
MNVY		0.00%		0.00%		0.00%		0.00%	8	0.02%	8	0.00%
MNX		0.00%		0.00%		0.00%	47	0.04%	270	0.74%	317	0.13%
MOE		0.00%	193	0.92%	327	0.39%	4,424	4.00%	5,973	16.37%	10,917	4.33%
MPIN		0.00%		0.00%		0.00%	59	0.05%		0.00%	59	0.02%
MSH		0.00%	689	3.29%	2,147	2.56%	522	0.47%	114	0.31%	3,472	1.38%
MTE	5	1.08%	16	0.08%	98	0.12%	5,488	4.97%	3,181	8.72%	8,788	3.48%
MWW		0.00%		0.00%	1,255	1.50%	742	0.67%	6	0.02%	2,003	0.79%
MZM		0.00%	8	0.04%	1,225	1.46%	915	0.83%	310	0.85%	2,458	0.97%
PMED		0.00%		0.00%	98	0.12%	170	0.15%	34	0.09%	302	0.12%
UNID		0.00%	35	0.17%	192	0.23%	538	0.49%	263	0.72%	1,028	0.41%
WWX		0.00%		0.00%	149	0.18%	920	0.83%	25	0.07%	1,094	0.43%
Total	465	100.00%	20,973	100.00%	83,931	100.00%	110,504	100.00%	36,483	100.00%	252,356	100.00%

Fabric MMQ. Pink quartz-tempered ware. A high medieval glazed ware and a finer variant of MMG. Date *c* 1225–1400. Rare. Hampshire. Fabric Group 6.

Fabric MMR. Glazed buff sandy ware. A high medieval glazed ware. Date possibly from *c* 1175, mainly *c* 1225–1400. Hampshire. Rare. Fabric Group 6.

Fabric MMU. Michelmersh-type ware. A late Saxon wheel-thown sandy ware. Date *c* 925(?)–1050. Only known production site Michelmersh, Hampshire. Fairly common. Fabric Group 2.

Fabric MNG. Early South Hampshire red ware. Date *c* 1175–1250. Probably Hampshire. Fairly common. Fabric Group 5.

Fabric MNV. Northern French green glazed white ware. Date *c* 1150–1300. North-west France. Very rare—three pieces only identified. Fabric Group 8.

Fabric MNVY. Northern French yellow glazed white ware. Date *c* 1150–1300. North-west France. Very rare—a single piece only identified. Fabric Group 8.

Fabric MNX. Laverstock-type ware. A high medieval glazed ware. *c* 1230–1270. Source Laverstock kilns, Wiltshire. Rare. Fabric Group 6.

Fabric MOE. Coarse grained sandy ware. Coarse gritty texture. Date *c* 1070–1225. Probably local. Common. Fabric Group 4.

Fabric MPAF. Paffrath-type ware. Date *c* 1075–1225. Rhineland. Very rare—a single piece identified (unsampled context). Fabric Group 8.

Fabric MPIN. Pingsdorf-type ware. Date *c* 925–1250 but commonest *c* 1075–1225. Rhineland. Very rare – five sherds only identified. Fabric Group 8.

Fabric MSH. Late Saxon Sandy ware. A late Saxon wheel-thrown sandy ware. Date *c* 850–950 (–1000?).

Table 7.14: Post-Roman pottery: fabrics by phase. Quantification by EVEs.

Fabric	*4*		*4.1*		*4.2*		*5*		*6*		*Total*	*Total %*
	EVE	*%*	*EVE*	*%*	*EVE*	*%*	*EVE*	*%*	*EVE*	*%*		
MAB	0.09	24.32%		0.00%		0.00%	0.34	0.52%	0.1	0.45%	0.53	0.33%
MAD		0.00%		0.00%		0.00%	0.4	0.61%	0.25	1.12%	0.65	0.41%
MADW		0.00%		0.00%		0.00%	0.11	0.17%		0.00%	0.11	0.07%
MAF		0.00%		0.00%		0.00%	1.72	2.61%	0.23	1.03%	1.95	1.22%
MAQ		0.00%		0.00%	4.49	7.89%	5.53	8.39%	0.67	3.00%	10.69	6.71%
MAV		0.00%	0.53	3.85%	13.7	24.08%	18.11	27.46%	0.72	3.22%	33.06	20.75%
MBEAU		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%
MBK		0.00%		0.00%	0.98	1.72%	10.77	16.33%	1.45	6.48%	13.2	8.28%
MBN		0.00%		0.00%	0.12	0.21%	0.06	0.09%		0.00%	0.18	0.11%
MBX	0.28	75.68%	11.75	85.27%	30.22	53.11%	17.18	26.05%	6.31	28.22%	65.74	41.26%
MCK		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%
MDF		0.00%		0.00%	0.18	0.32%	1.41	2.14%	4.05	18.11%	5.64	3.54%
MDG		0.00%		0.00%		0.00%		0.00%	0.04	0.18%	0.04	0.03%
MDL		0.00%	0.5	3.63%	1	1.76%	0.97	1.47%	0.16	0.72%	2.63	1.65%
MFGY		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%
MFI		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%
MMG		0.00%		0.00%		0.00%		0.00%	0.45	2.01%	0.45	0.28%
MMH		0.00%		0.00%		0.00%		0.00%	0.2	0.89%	0.2	0.13%
MMI		0.00%		0.00%		0.00%		0.00%	1.95	8.72%	1.95	1.22%
MMK		0.00%		0.00%		0.00%		0.00%	0.06	0.27%	0.06	0.04%
MMQ		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%
MMR		0.00%		0.00%		0.00%		0.00%	0.05	0.22%	0.05	0.03%
MMU		0.00%	0.14	1.02%	0.97	1.70%	1.22	1.85%	0.32	1.43%	2.65	1.66%
MNG		0.00%		0.00%		0.00%	0.46	0.70%	0.04	0.18%	0.5	0.31%
MNV		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%
MNVY		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%
MNX		0.00%		0.00%		0.00%	0.08	0.12%		0.00%	0.08	0.05%
MOE		0.00%	0.33	2.39%	0.07	0.12%	1.93	2.93%	3.07	13.73%	5.4	3.39%
MPIN		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%
MSH		0.00%	0.53	3.85%	1.45	2.55%	0.58	0.88%	0.11	0.49%	2.67	1.68%
MTE		0.00%		0.00%	0.1	0.18%	3.33	5.05%	1.35	6.04%	4.78	3.00%
MWW		0.00%		0.00%	2.06	3.62%	0.42	0.64%		0.00%	2.48	1.56%
MZM		0.00%		0.00%	1.41	2.48%	0.86	1.30%	0.3	1.34%	2.57	1.61%
PMED		0.00%		0.00%	0.05	0.09%	0.09	0.14%	0.04	0.18%	0.18	0.11%
UNID		0.00%		0.00%	0.1	0.18%	0.37	0.56%	0.44	1.97%	0.91	0.57%
WWX		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%
Total	0.37	100.00%	13.78	100.00%	56.9	100.00%	65.94	100.00%	22.36	100.00%	159.35	100.00%

Probably an earlier product of the Michelmersh kilns, Hampshire. Fairly common. Fabric Group 2.

Fabric MTE. Newbury B-style ware. Mainly flint-tempered. Named after the type-site at Newbury in Berkshire. Kilns also known near Newbury. Recent research however suggests the fabric found in Winchester may be a local copy. Date *c* 1050–1200. Probably local. Common. Fabric Group 3.

Fabric MWW. Winchester ware. A late Saxon high quality wheel-thrown glazed tableware. Date *c* 950–1100. Production site unknown but probably local. Fairly common. Fabric Group 2.

Fabric MZM. Sandy grey ware. A late Saxon wheel-thrown sandy ware. Date *c* 950–1050? Either an import or possibly a reduced Michelmersh product? Fairly common. Fabric Group 2.

Fabric PMED. Post-medieval wares. Umbrella code for post-medieval wares *c* 1550–1900. Rare from the site. Fabric Group 7.

Fabric UNID. All unidentified wares. Late Saxon to medieval. Rare. Fabric Group 7.

Fabric WWX. Winchester-style ware. A glazed late Saxon sandy ware. Possibly a variant of Winchester ware (MWW). Date *c* 950–1100. Possibly local. Fairly rare. Fabric Group 2.

Pottery fabrics by property and phase

The quantity of each fabric recovered, by sherd count, weight and EVEs, as well as the percentage of each in phased deposits, is shown in Tables 7.12–14. The 36 fabric codes present from sampled contexts are too numerous to lend themselves to easy graphic representation in the form of pie-charts

and the like. These, however, can be ordered into fabric groups based on a range of criteria including physical and/or technological similarity, presumed date or presumed source etc. All of these criteria overlap to varying extents but the following groupings—some more arbitrary than others—have been defined in order that the main trends within the assemblage can be seen more clearly whether spatially or chronologically. Some groupings (eg chalk-tempered wares) are more obvious than others. The justification for other less obvious groupings is expanded upon below.

Group 1. Local chalk-tempered wares (*c* 850–1200). MBX, MAV. The latter fabric (MAV chalk and flint) overlaps with some Group 3 fabrics below (MAQ, MTE). Group 1 vessel forms almost exclusively have sagging bases as opposed to round ones. Not surprisingly this is the largest fabric group from the excavations here comprising 62.74% by sherds (or 61.9% by EVEs; see Table 7.15).

Group 2. Late Saxon wheel-thrown wares (*c* 850–1100). All probably Hampshire products, all basically sandy wares. Includes glazed Winchester ware (MWW) and Winchester-style ware (WWX). Also unglazed Late Saxon sandy ware (MSH), Michelmersh ware (MMU), Portchester ware (MBN, sand and flint), and the unsourced grey ware (MZM) which may be a reduced variant of Michelmersh ware. This small group comprises 4.75% (by sherds) of the site assemblage (or 6.64% by EVEs and 5.10% by weight).

Group 3. Local sand and flint-tempered coarsewares (*c* 850–1250, mostly *c* 1050–1225). MBK, MAF, MAQ, MTE. These all also have some chalk content but usually as a sparse to moderate component. The fine sandy wares MBK and MAF ('organic'-tempered) are clearly related by fabric and manufacturing technique (possibly 'paddle and anvil' technique, both with round-bottomed jars). MBK and occasionally MAF are sometimes decorated with scratch-marked decoration which is apparently a post-conquest phenomenon. MAQ (flint-tempered sandy ware) is also related to these by fabric and can sometimes be seen to share the same distinctive manufacturing technique as well as the common round-bottomed jar form. It does, however, overlap in character with MAV (chalk and flint-tempered) if the chalk content in both is high and the quartz sand content coarser than usual (usually in late examples). MTE, the local Newbury B style of pottery, is placed in Group 3 on the basis of its fabric character, which contains coarse quartz, flint and chalk and appears quite late in the Winchester sequence. However MTE is thin-walled, certainly wheel-thrown in many cases, and normally occurs as jars with pronounced sagging bases. In this latter respect, and in terms of fabric similarity, it could be grouped with MAV in Group 1 but the pronounced flint content aligns it perhaps more properly with Group 3 fabrics. This group comprises 19.27% (by sherds) of the site assemblage (or 19.54% by EVEs).

Group 4. Local coarse quartz-tempered ware, MOE (*c* 1050–1225). Mainly coarse quartz-tempered but often with small amounts of flint and chalk. Usually occurs as large round-bottomed jars frequently with scratch-marked decoration. These features, including shared rim forms, align MOE most closely with MBK in Group 3 but MOE seems texturally distinct enough to form a separate group. This group comprises 3.84% (by sherds) of the site assemblage (or 3.40% by EVEs).

Group 5. Local glazed quartz-tempered tripod pitcher wares (*c* 1050–1225). MAD, MADW, MNG. Although MAD is technically a fabric and not a form it does seem to occur almost exclusively as tripod pitchers or large jugs. It may be a glazed version of MOE above. MNG, though finer and possibly later (from *c* 1175?), also frequently occurs in these forms and is included here for convenience. This group comprises 1.71% (by sherds) of the site assemblage (or 0.79% by EVEs).

Group 6. High medieval wares (*c* 1225–1450). This mainly comprises glazed and often decorated fine sandy ware jugs of local or presumed Hampshire origin—primarily South Hampshire red ware (MMI) and a range of rarer but apparently related pink, buff or white wares including MDG, MMG, MMH, MMK, MMQ, MMR. However it also includes the rare regional glazed imports Laverstock ware (MNX) and Kingston-type ware (MCK) as well as the predominant unglazed common medieval coarseware or greyware (MDF) which, chronologically and technologically, belongs in this group despite evidence of earlier origins. Apart from the commonest of these two (MMI and MDF) all other high medieval wares are rare from the site as this period is not very well represented here. It therefore seems convenient to lump all high medieval wares together. This group comprises 6.34% (by sherds) of the site assemblage (or 5.33% by EVEs).

Group 7. Miscellaneous, or other wares (Saxon to 19th century). Includes crucibles in the common local crucible fabric (MDL), but not the few other possible crucibles in rarer fabrics (see crucibles elsewhere). Also post-medieval wares (PMED) and unidentified wares (UNID). This group comprises 1.27% (by sherds) of the site assemblage (or 2.34% by EVEs).

Group 8. Continental imports (*c* 850–1350). All rare in Winchester. Includes Beauvais-type ware (MBEAU), Pingsdorf-type ware (MPIN), North French grey ware (MFGY), Normandy Gritty ware (MFI), Northern French green glazed white ware (MNV) and Northern French yellow glazed white ware (MNV). This group comprises only 13 sherds from sampled contexts (plus 3 more from unsampled contexts). The sampled group comprises 0.09% (by sherds) of the site assemblage (or 0% by EVEs and 0.13% by weight).

The quantity of each fabric group and the proportion it forms in each phase is presented in Table 7.15. This shows, among other things, the gradual decline of the major Group 1 local chalky wares from nearly 93% (by sherds) in Phase 4.1 (*c* 850–950) to a little under 54% in Phase 5 (*c* 1050–1225) to only 27% in Phase 6 (*c* 1225–1550), by which time they were almost certainly residual. The virtual monopoly which the chalky wares held in the late Saxon phases gradually yielded to the Group 3 'local' sand- and flint-tempered wares which, by Phase 5, comprised 32% of the phase assemblage, with Group 2 and 4 sandy wares and the Group 5 and 6 glazed sandy wares also encroaching on the declining chalky ware monopoly. Some very early

Table 7.15: Post-Roman pottery: fabric groups by phase. Quantification by sherd count.

Fabric group	*4.1*		*4.2*		*5*		*6*		*Total*	*Total %*
	Sherds	*%*	*Sherds*	*%*	*Sherds*	*%*	*Sherds*	*%*		
1	1201	92.96%	3904	84.74%	3528	53.72%	631	27.43%	9264	62.74%
2	48	3.72%	347	7.53%	270	4.11%	36	1.57%	701	4.75%
3	22	1.70%	258	5.60%	2104	32.04%	462	20.09%	2846	19.27%
4	5	0.39%	19	0.41%	229	3.49%	314	13.65%	567	3.84%
5		0.00%	5	0.11%	168	2.56%	79	3.43%	252	1.71%
6	2	0.15%	12	0.26%	176	2.68%	746	32.43%	936	6.34%
7	14	1.08%	60	1.30%	85	1.29%	28	1.22%	187	1.27%
8		0.00%	2	0.04%	7	0.11%	4	0.17%	13	0.09%
Total	1292	100.00%	4607	100.00%	6567	100.00%	2300	100.00%	14766	100.00%

but very low sherd count occurrences in Phase 4.1 such as Group 4 coarse quartz-tempered ware (MOE, 5 sherds) and the Group 6 high medieval wares (2 sherds) can almost certainly be discounted as intrusive or misidentified examples. The Group 5 glazed tripod pitcher wares are, appropriately, absent from Phase 4.1 (*c* 850–950) but present in very low quantity (5 sherds) in Phase 4.2 (*c* 950–1050), but even here they may be intrusive, otherwise they are exceptionally early examples of this group. Continental imports, which are very rare anyhow, are not present until Phase 4.2 where they comprise only two sherds of North French grey ware (fabric MFGY), both from Brudene Street East properties (BE2 and BE4). Seven sherds occur in Phase 5 where they occur in a wider range of fabrics and on each of the three frontages, but again mainly from the BE frontage. The four continental sherds from Phase 6 are North French glazed wares of late 12th- or 13th-century date (MNV, MNVY from BE5 and BW3 respectively).

Inter-frontage and inter-property comparisons are rather harder to evaluate in terms of fabric groups because of the variables affecting the quantities of pottery recovered from each property/frontage/phase. The phased quantified data for the eight fabric groups from the three street frontages—SE (Snitheling Street East), BW (Brudene Street West) and BE (Brudene Street East)—are presented in Table 7.16. Without further manipulation of the data, which space does not permit here, there is a fairly high degree of uniformity and predictability in the fabrics groups data. To make a few broad comparisons between the frontages (by sherd count), there is, for example, a much higher chalky ware Group 1 reading for the BE frontage (71.25% of all pottery on that frontage) compared to the BW and SE frontages (around 62% and 54% respectively). This is due, in part, to the relatively low percentage of Group 3 sandy-flinty wares on BE (12%). These make up a much higher percentage on BW and SE (18% and 32% respectively), where they occupy their normal second place after the chalky wares, whereas on BE they are closely followed in third place by the (later) Group 6 high medieval glazed wares (10.5% of BE) which are not so common on the other two frontages. This is partly the result of the selection procedure to include the high medieval (Phase 6) BE5 assemblage in the detailed catalogue, although it is also, to some extent, a reflection of the fact that high medieval glazed pottery was genuinely common on the BE frontage. In the less common fabric groups, however (excluding G1, G3 and G6), there is some evidence from the BW and SE frontages for a higher proportion of these wares than that found on BE and this fabric diversity may be a reflection of slightly greater prosperity (expressed through G5 glazed wares and late Saxon G2 wheel-thrown wares) and industrial activity (expressed through G7 crucibles, and dyepots). These slightly elevated percentages for BW and SE may in part be a reflection of the unequal size of the three frontage assemblages (mainly for the larger BW assemblage), but as the SE assemblage (*c* 3000 sherds) is smaller than the BE assemblage (4000 sherds) this cannot entirely be the case. The northern end of the BE frontage is reasonably represented in terms of industrial wares (crucibles and dyepots on BE5 and BE4 respectively), except for the central property (BE2), but they all have a relatively low proportion of Phase 4.2 and 5 glazed wares (see below) suggesting, perhaps, that the BE frontage was somewhat less well-to-do than the other two frontages. The only contradiction here is that the BE frontage has most of the imported G8 continental wares (7 sherds, compared to 5 on BW and 1 on SE) but these form only a very small proportion of the sherds on this frontage (0.18%) and one might question whether these few largely unglazed imports (including cooking wares) were really more of an expression of status than glazed Winchester ware vessels.

Glazed wares: Chronological development and distribution on the site

Glazed wares can also be viewed as a fabric group in their own right—although for chronological and cultural purposes they have been accommodated under more than one fabric group in the discussion above (mainly G2, G5 and G6). Just as crucibles and

Table 7.16: Post-Roman pottery: fabric groups by street frontage and phase. Quantification by sherd count.

Fabric group	Frontage	4.1 Sherds	4.1 %	4.2 Sherds	4.2 %	5 Sherds	5 %	6 Sherds	6 %	Total	Total %
1	BE	23	85.19%	1598	89.47%	1170	70.31%	59	11.28%	2850	71.25%
2	BE	4	14.81%	95	5.32%	48	2.88%	4	0.76%	151	3.78%
3	BE		0.00%	81	4.54%	367	22.06%	37	7.07%	485	12.13%
4	BE		0.00%	4	0.22%	30	1.80%	6	1.15%	40	1.00%
5	BE		0.00%	1	0.06%	18	1.08%	1	0.19%	20	0.50%
6	BE		0.00%	1	0.06%	18	1.08%	401	76.67%	420	10.50%
7	BE		0.00%	4	0.22%	11	0.66%	12	2.29%	27	0.68%
8	BE		0.00%	2	0.11%	2	0.12%	3	0.57%	7	0.18%
Sub-total		27	100.00%	1786	100.00%	1664	100.00%	523	100.00%	4000	100.00%
1	BW	1134	93.03%	1555	80.28%	1639	52.92%	547	33.33%	4875	61.76%
2	BW	42	3.45%	165	8.52%	139	4.49%	24	1.46%	370	4.69%
3	BW	22	1.80%	135	6.97%	951	30.71%	339	20.66%	1447	18.33%
4	BW	5	0.41%	15	0.77%	114	3.68%	308	18.77%	442	5.60%
5	BW		0.00%	4	0.21%	83	2.68%	68	4.14%	155	1.96%
6	BW	2	0.16%	10	0.52%	114	3.68%	340	20.72%	466	5.90%
7	BW	14	1.15%	53	2.74%	53	1.71%	14	0.85%	134	1.70%
8	BW		0.00%		0.00%	4	0.13%	1	0.06%	5	0.06%
Sub-total		1219	100.00%	1937	100.00%	3097	100.00%	1641	100.00%	7894	100.00%
1	SE	44	95.65%	751	84.95%	719	39.81%	25	18.38%	1539	53.59%
2	SE	2	4.35%	87	9.84%	83	4.60%	8	5.88%	180	6.27%
3	SE		0.00%	42	4.75%	786	43.52%	86	63.24%	914	31.82%
4	SE		0.00%		0.00%	85	4.71%		0.00%	85	2.96%
5	SE		0.00%		0.00%	67	3.71%	10	7.35%	77	2.68%
6	SE		0.00%	1	0.11%	44	2.44%	5	3.68%	50	1.74%
7	SE		0.00%	3	0.34%	21	1.16%	2	1.47%	26	0.91%
8	SE		0.00%		0.00%	1	0.06%		0.00%	1	0.03%
Sub-total		46	100.00%	884	100.00%	1806	100.00%	136	100.00%	2872	100.00%
TOTAL		1292		4607		6567		2300		14,766	

dyepots can occur in several fabrics but can still be viewed as indicators of industrial activity, so glazed pottery can occur in many fabrics but can be viewed collectively as an important technological development or cultural phenomenon within English medieval pottery. In the general late Saxon to early medieval pottery assemblage here there are relatively few indicators of social stratification—the assemblage is clearly dominated by coarse local cooking wares which, being the functional objects that they are, provide precious few indications of anything but cooking and storage. Glazed wares, in medieval England, as in many cases elsewhere, tended to be used for table wares, mainly jugs for the serving of wine and other beverages. They were more attractive and showy than coarsewares and, in certain social contexts, can be taken as a minor indicator of moderate prosperity and perhaps higher social status. The connection between glazed wares, increased prosperity and social drinking is a reasonably well accepted phenomenon in medieval archaeology although the very richest in society probably expressed their wealth though glass or metalware drinking vessels.

In the context of everyday late Saxon and early medieval Winchester it seems reasonable to assume that the presence of glazed tablewares (spouted pitchers, tripod pitchers and jugs) can be taken as an indicator of greater prosperity—though perhaps only slightly greater prosperity. In some cases, however, the presence or absence of glazed wares may be due to functional differences between areas (eg. kitchen and dining areas) but there seems to be little clear evidence for this from this site—partly because no complete building plan was recovered. Winchester was one of those few places in late Saxon England where glazed pottery, in the form of glazed and decorated Winchester ware, was available as early as *c* 950. Many areas of England had no regular supply of glazed wares until the late 12th

aTable 7.17 Post-Roman pottery: quantities of glazed wares on each of the phased properties as percentage of total phased pottery assemblage (Phases 4.2, 5 and 6)

	Phase 4.2				Phase 5				Phase 6			
Property	*Sherds*	*sherds % all prop*	*Wgt*	*Wgt % all prop*	*Sherds*	*sherds % all prop*	*Wgt*	*Wgt % all prop*	*Sherds*	*sherds % all prop*	*Wgt*	*Wgt % all prop*
BE 2	23	2.93%	221	1.41%	14	3.14%	425	4.96%		0.00%		0.00%
BE 4	12	1.62%	72	0.49%	24	3.59%	424	2.90%		0.00%		0.00%
BE 5	8	3.09%	113	2.73%	18	3.27%	166	1.72%	241	46.17%	3725	44.87%
BW 1		0.00%		0.00%	6	3.64%	53	2.07%	5	8.47%	30	4.57%
BW 2	29	3.60%	583	4.82%	14	6.73%	223	7.52%	18	14.40%	559	20.80%
BW 3	2	0.69%	35	0.69%	13	1.08%	140	0.82%	142	9.75%	2095	9.05%
BW 4	5	1.08%	120	1.41%	81	7.79%	1323	8.20%		0.00%		0.00%
BW 5	16	4.49%	294	4.20%	29	6.09%	953	8.58%		0.00%		0.00%
SE 1		0.00%		0.00%	73	5.08%	1597	6.94%	5	62.50%	138	66.67%
SE 2	4	1.04%	49	0.81%	5	1.35%	61	1.25%	7	5.47%	61	4.51%
Grand Total	99	2.15%	1,487	1.77%	277	4.22%	5365	4.86%	418	18.17%	6608	18.11%

century. Glazed pottery was still comparatively rare during the 10th–12th centuries and it was probably more an indicator or higher social status then than it was later on from the 13th century onwards when glazed wares were more commonplace. For these reasons a detailed discussion of the high medieval (Phase 6) glazed wares is largely excluded here as the inclusion of this obscures to some extent the picture of what was going on here in the 10th–12th centuries.

The 795 sherds of glazed pottery from the catalogued properties (Phases 4.1 to 6) comprise 5.38% (by sherds) of the entire assemblage (or 5.35% by weight) (Table 7.17). Discounting the single (unidentified) sherd in Phase 4.1 as intrusive, the 99 sherds in Phase 4.2 (*c* 950–1050) comprise 2.15% of all pottery in that phase. This proportionately more than doubles in Phase 5 (*c* 1050–1225) where the 277 glazed sherds comprise 4.22% of that phase, and in Phase 6 (*c* 1225–1550) the 418 glazed sherds comprise an impressive 18.17% of the phase assemblage.

To bring out any trends in the late Saxon to early medieval phased assemblage each of the ten catalogued properties was considered in turn and the combined sherd total of its Phase 4.2 and 5 glazed pottery was calculated as a proportion of all its pottery in those combined phases. The proportion varies from Property BW 3 in lowest (10th) position with 15 sherds comprising just 1%, to adjacent Property BW 4 in first place with 86 sherds comprising 5.73% of the total from that property (though nearly all from Phase 5). The Brudene Street West (BW) frontage holds the three highest consumers of glazed wares in this time period with Property BW 4, as mentioned, in first place, adjacent Property BW 5 in second place with 5.40% and Property BW 2 in third place with 4.24% (but in first place in Phase 4.2 with 3.6% of that phase). In fourth place is Property SE 1 with 3.77% of the combined phase (but in this case all from Phase 5) and Property BE 5 occupies fifth place, with a total of 26 glazed sherds comprising 3.21% (the others in descending order are: BW 1, 6th with 3.14%; BE 2, 7th with 3%; BE 4, 8th with 2.55%; SE2, 9th with 1.19% and BW 3, 10th, already mentioned).

It should be noted that these figures are percentages of the combined phase total for each site and, for the lower counts, do not always reflect the actual number of sherds of glazed pottery. The lowest number of sherds (6 sherds) was actually from Property BW 1 although proportionately this occupies 6th position whereas Property BW 3 with 15 sherds is only in 10th. Of these Property BW 1 is the least excavated property and the validity of its glazed ware rating may well be diminished by this. The contiguous block of Properties BW 1–6 all rate highly as glazed ware consumers in the combined phase except, surprisingly, Property BW 3, which is right in the middle. Why this should be is unclear as the phase sample is reasonably large and in the following high medieval phase (Phase 6) Property BW 3 was one of the highest consumers of glazed wares on the site (9.7% of its Phase 6 assemblage—mostly from the backfill of a large well). Property BW 4 was among the lowest consumers of glazed wares in Phase 4.2 (5 sherds or 1.08% of its phase assemblage) but rose to be the largest consumer in Phase 5. Why it produced so few glazed wares in the earlier phase is puzzling but these few pieces are quite large and possibly represent five separate Winchester ware spouted pitchers. The Phase 4.2 assemblage on this property also produced the most highly decorated (coarseware) spouted pitcher from the whole site (fabric MAV, Fig. 7.11, no. 38), so perhaps it was not so impoverished as first appears. Property SE 1, with its abundant evidence for textile dyeing in Phase 4.2 (see dyepots, *Digital Section 1.3, Appendix 2*) curiously produced not a single sherd of glazed pottery in this phase and Property SE 2 produced only four sherds in this phase (1% of all its phase assemblage). In the following Phase 5 (*c*

1050–1225) Property SE 2 remained glaze impoverished but Property SE 1 became the fourth largest consumer of glazed pottery on the site (73 sherds), mostly large tripod pitchers/jugs (fabric MAD and MNG), a few Winchester ware vessels (in lower grade fabric) and a ?jug base in Normandy Gritty ware—the only one from this site. This coincides with the animal bone evidence for this phase which suggests the property was occupied by a furrier and therefore probably by a person of some wealth.

For Phase 4.2 alone, although the total of glazed sherds is smaller (99 sherds), Property BW 5 is proportionately the highest consumer of glazed wares which comprise 4.5% of its total assemblage for this phase. In second place is Property BW 2 with 3.6% and in third place Property BE 2 with 2.93%. Glazed Winchester ware occurs as 133 sherds in the sampled contexts. The highest sherd counts (Phases 4.2 to 6) were from Property BW 2 with 25 sherds, BW 5 had 20 sherds and BW 4 had 17 sherds. Other properties with high Winchester ware counts were BE 2 and BE 4 with 20 sherds each and BE 5 with 13 sherds.

From a broader perspective, considering the frontages rather than individual properties, in the combined Phase 4.2 and 5 assemblages from each frontage the differences between each of them in terms of glazed ware 'enrichment' is not strikingly different. Brudene Street West (BW) is in first place with glazed wares (195 sherds) forming 3.87% of its combined phase assemblage, Snitheling Street East (SE) is in second place with 82 glazed sherds forming 3.05% of its assemblage and Brudene Street East (BE) is in third place with 99 sherds though forming only 2.87% of its assemblage. If the presence of glazed wares can be taken as an indicator of relative wealth (though not necessarily great wealth) then the properties on BW seem always to have been somewhat more prosperous during the 10th–12th centuries than the other two frontages, with BE perhaps being perhaps the least prosperous—a suggestion also hinted at in the fabric groups data above. The glazed ware data for Phase 6 (*c* 1225–1550) is of somewhat less value and reliability as the Phase 6 deposits were only catalogued from six properties (BE 5, BW 1, BW 2, BW 3, SE 1 and SE 2). These show quite low glazed ware sherd counts for most of the properties but very high counts for Property BW 3 and especially BE 5. Those from Property BW 3, as mentioned above, are mostly from the backfill of a high status stone well house possibly belonging to the residence of the Archdeacon of Winchester. This appears to have been rapidly back-filled in the early 13th century. The highest glazed ware sherd count for this phase (and any phase) is from Property BE 5 with 241 glazed sherds, which comprise an impressive 46% of all Phase 6 pottery from that property. These came from a truncated chalk-built medieval cellar and a flint-lined well which suggests the owners of this property were people of some wealth. The pottery included small sherds from the only North French green-glazed ware jug from the entire site. Elsewhere on the same frontage, on Property BE 2, a high quality Saintonge polychrome ware jug rim was recovered (from unsampled contexts), the only example from the excavations. Apart from these very rare instances of imported high quality pottery, most of the glazed wares during this period were regionally sourced jugs in South Hampshire red wares.

Vessel forms by property and phase

The quantity of each type of vessel form recovered from sampled contexts on the site is shown in Table 7.18. This shows what might have been predicted for the vessel composition of a site dominated by late Saxon and early medieval pottery. The assemblage is dominated by the jar form (83.34% by EVEs). The presence of sooting on a great many of these confirms their use as cooking pots although some unsooted examples were probably multi-purpose jars for storage, etc. Lack of vessel form diversity is a characteristic of Saxon and early medieval pottery assemblages, with the jar usually dominating—sometimes exclusively. A few bowls and spouted pitchers or jugs complete the picture along with rare forms such as lamps or crucibles. Vessel form diversity, reflecting the wider range of uses to which pottery was put, is more a feature of high medieval and post-medieval pottery. In a mainly domestic and mainly early pottery assemblage such as this where cooking is almost exclusively the main activity reflected in the pottery, this rather limits the extent to which pottery can inform us of any other functions to which it might have been put. Other functions can of course be inferred from the non-cooking pot forms (eg jugs for serving liquids, etc.) but unless these other forms occur in unusually high quantities, suggesting more of one type of activity than another in a certain area, then

Table 7.18: Post-Roman pottery: quantification of vessel form by EVEs. (See Digital Section 1.3 for vessel codes)

Vessel	*EVE*	*%*
BOWL	4.45	2.79%
CIST		0.00%
COST	0.1	0.06%
CRUC	3.22	2.02%
CUP	0.04	0.03%
CURF	0.04	0.03%
FPOT	0.14	0.09%
JAR	132.8	83.34%
JUG	3.27	2.05%
LAMP	10.19	6.39%
MISC	0.17	0.11%
SPP	4.06	2.55%
TPTCH	0.87	0.55%
Total	159.35	100.00%

it is difficult to know if slight variations in the pottery data from different areas (or properties as here) carry much significance. Ultimately the main reason for comparing the vessel form assemblages from the three different street frontages here and the ten catalogued properties is to see if these reflect any differences in the activities going on within each frontage and property. Except perhaps for the industrial pottery forms such as metallurgical crucibles and dyepots, which are relatively rare, and a few function-specific vessel forms such as lamps and curfews, which are equally rare, the pottery assemblages from these properties and frontages exhibit a high degree of similarity with little marked evidence for specific activities other than food preparation, the serving of beverages and storage.

Some variations within the quantified form data can of course be observed—just as the data for glazed ware occurrence across the site has already been analysed as a possible indicator of the relative prosperity of contemporary properties (see above), and with some degree of success. The distribution of glazed tableware forms (spouted pitchers, tripod pitchers and jugs) also bears-out these findings to a large degree so there is little point in revisiting the distribution of these forms in great detail. These would, most likely, only tell us where and when beverages were served and consumed in higher than usual quantities—thus, so the reasoning goes, showing us which areas were relatively wealthier than others. There is certainly a predictable degree of chronological variation from phase to phase as certain vessels forms (and fabrics) became more popular or fell out of use but the variations between individual properties are not very marked (even for glazed wares) and thus difficult to interpret in terms of function or area specialisation. For the most part, it would seem the same sorts of activity were taking place in each of the ten catalogued properties but here and there to a slightly differing degree.

Some of these typological and hence functional differences can be highlighted and summarised here without the degree of data manipulation employed for the analysis of the glazed wares (see above). Doubtless further manipulation of the data would probably reveal further minor variations across the site but, for the present, do not permit every possible variation to be explored. The relative proportions of different vessel forms in each phase for the whole site are presented in Table 7.19. Notable trends here include the almost total domination of the jar form in the earliest phase, Phase 4.1, where it comprises 92.24% (by EVEs) of all identifiable forms in the phase assemblage whereas in the latest phase, Phase 6, this figure had dropped to 79.20% as a result of gradual form diversification. Other than jars the range of vessel forms available in Phase 4.1 was limited to a few spouted pitchers, a single lamp, a miscellaneous form (?costrel) and a few crucibles.

Bowls do not appear in the Phase 4.1 data—they probably existed but were very rare. Bowls were never very common on this site. They appear in Phase 4.2 and reached their peak in the following Phase 5 where they comprised only 3.70% of the phase assemblage. Many of these seem to have been of the socket-handled kind with a wide diameter and the evidence from sooting suggests these were mainly used for cooking—like an early form of saucepan. Elsewhere the presence of bowls in large quantities on medieval sites (mainly rural ones) has sometimes been taken as evidence for their use in dairying practices (Brown 1997, 92–3), so their relative scarcity in this corner of urban Winchester may be an indication that dairying activities were of low priority here. Spouted pitchers, for serving beverages, were never very common either. They reached their peak in Phase 4.2 where they comprised 5.25% of the vessel assemblage

Table 7.19: Post-Roman pottery: vessel form by phase. Quantification by EVEs.

	4.1		*4.2*		*5*		*6*		*EVE*	*Total %*
Vessel	*EVE*	*%*	*EVE*	*%*	*EVE*	*%*	*EVE*	*%*		
BOWL		0.00%	1.26	2.21%	2.44	3.70%	0.75	3.35%	4.45	2.80%
CIST		0.00%		0.00%		0.00%		0.00%		0.00%
COST		0.00%	0.1	0.18%		0.00%		0.00%	0.1	0.06%
CRUC	0.6	4.35%	1	1.76%	1.12	1.70%	0.5	2.24%	3.22	2.03%
CUP		0.00%		0.00%		0.00%	0.04	0.18%	0.04	0.03%
CURF		0.00%		0.00%	0.04	0.06%		0.00%	0.04	0.03%
FPOT		0.00%	0.05	0.09%	0.09	0.14%		0.00%	0.14	0.09%
JAR	12.71	92.24%	46.2	81.20%	55.81	84.64%	17.71	79.20%	132.43	83.30%
JUG		0.00%		0.00%	0.5	0.76%	2.77	12.39%	3.27	2.06%
LAMP	0.1	0.73%	5.27	9.26%	4.72	7.16%	0.1	0.45%	10.19	6.41%
MISC		0.00%	0.03	0.05%	0.14	0.21%		0.00%	0.17	0.11%
SPP	0.37	2.69%	2.99	5.25%	0.5	0.76%	0.2	0.89%	4.06	2.55%
TPTCH		0.00%		0.00%	0.58	0.88%	0.29	1.30%	0.87	0.55%
Total	13.78	100.00%	56.9	100.00%	65.94	100.00%	22.36	100.00%	158.98	100.00%

(although the weight percentage is higher at 13.15%). Tripod pitchers were also relatively scarce. They were apparently present in Phase 4.2 (*c* 950–1050, but probably at the very end of this phase), relatively common in Phase 5, and reached their peak in Phase 6 (presumably early in the phase, unless they were residual?) where they comprised 1.30% of the vessel assemblage. Jugs (or undiagnostic tripod pitchers) were present but fairly rare in Phases 4.2 and 5 but the high medieval form of glazed jug is well-represented in Phase 6 where it comprised 12.39% of the assemblage. Cresset oil lamps were present but rare in Phase 4.1 but fairly common in the following Phase 4.2 where they comprised 9.26% of the assemblage and in Phase 5 where they comprised 7.16%, but these robust little forms usually survive in the ground quite well which gives them a slightly higher EVEs reading—the figure for weight in Phase 4.2, for instance, is only 2.92%. Crucibles, being smallish too, are also subject to slight EVEs over-representation. They are present, but fairly rare in all phases (perhaps mainly residual in Phase 6 at 2.24% by EVEs); their true peak was in Phases 4.2 and 5

Table 7.20: Post-Roman pottery: vessel form by street frontage and phase. Quantification by EVEs.

Vessel	*Frontage*	*4.1*		*4.2*		*5*		*6*		*Total EVE*	*Total %*
		EVE	*%*	*EVE*	*%*	*EVE*	*%*	*EVE*	*%*		
BOWL	BE		0.00%	0.23	1.20%	0.24	1.45%	0.17	2.97%	0.64	1.54%
CRUC	BE		0.00%		0.00%	0.29	1.75%		0.00%	0.29	0.70%
CURF	BE		0.00%		0.00%		0.00%		0.00%		0.00%
JAR	BE	0.16	100.00%	16.79	87.45%	13	78.55%	3.46	60.38%	33.41	80.24%
JUG	BE		0.00%		0.00%		0.00%	1.82	31.76%	1.82	4.37%
LAMP	BE		0.00%	1.85	9.64%	2.57	15.53%		0.00%	4.42	10.61%
MISC	BE		0.00%	0.03	0.16%		0.00%		0.00%	0.03	0.07%
SPP	BE		0.00%	0.3	1.56%	0.34	2.05%	0.2	3.49%	0.84	2.02%
TPTCH	BE		0.00%		0.00%	0.11	0.66%	0.08	1.40%	0.19	0.46%
Sub-total		0.16	100.00%	19.2	100.00%	16.55	100.00%	5.73	100.00%	41.64	100.00%
BOWL	BW		0.00%	0.69	2.69%	1.6	5.43%	0.52	3.27%	2.81	3.33%
CIST	BW		0.00%		0.00%		0.00%		0.00%		0.00%
CRUC	BW	0.6	4.49%	1	3.90%	0.43	1.46%	0.5	3.14%	2.53	3.00%
CUP	BW		0.00%		0.00%		0.00%	0.04	0.25%	0.04	0.05%
CURF	BW		0.00%		0.00%		0.00%		0.00%		0.00%
FPOT	BW		0.00%	0.05	0.20%		0.00%		0.00%	0.05	0.06%
JAR	BW	12.3	92.00%	18.84	73.51%	24.96	84.67%	13.58	85.41%	69.68	82.58%
JUG	BW		0.00%		0.00%	0.29	0.98%	0.95	5.97%	1.24	1.47%
LAMP	BW	0.1	0.75%	3.42	13.34%	1.95	6.61%	0.1	0.63%	5.57	6.60%
MISC	BW		0.00%		0.00%	0.1	0.34%		0.00%	0.1	0.12%
SPP	BW	0.37	2.77%	1.63	6.36%	0.08	0.27%		0.00%	2.08	2.47%
TPTCH	BW		0.00%		0.00%	0.07	0.24%	0.21	1.32%	0.28	0.33%
Sub-total		13.37	100.00%	25.63	100.00%	29.48	100.00%	15.9	100.00%	84.38	100.00%
BOWL	SE		0.00%	0.34	2.82%	0.6	3.01%	0.06	8.22%	1	3.03%
COST	SE		0.00%	0.1	0.83%		0.00%		0.00%	0.1	0.30%
CRUC	SE		0.00%		0.00%	0.4	2.01%		0.00%	0.4	1.21%
CURF	SE		0.00%		0.00%	0.04	0.20%		0.00%	0.04	0.12%
FPOT	SE		0.00%		0.00%	0.09	0.45%		0.00%	0.09	0.27%
JAR	SE	0.25	100.00%	10.57	87.57%	17.85	89.65%	0.67	91.78%	29.34	89.02%
JUG	SE		0.00%		0.00%	0.21	1.05%		0.00%	0.21	0.64%
LAMP	SE		0.00%		0.00%	0.2	1.00%		0.00%	0.2	0.61%
MISC	SE		0.00%		0.00%	0.04	0.20%		0.00%	0.04	0.12%
SPP	SE		0.00%	1.06	8.78%	0.08	0.40%		0.00%	1.14	3.46%
TPTCH	SE		0.00%		0.00%	0.4	2.01%		0.00%	0.4	1.21%
Sub-total		0.25	100.00%	12.07	100.00%	19.91	100.00%	0.73	100.00%	32.96	100.00%
TOTAL		13.78		56.9		65.94		22.36		158.98	

where they comprised 1.76% and 1.70% respectively. The rarest vessel forms in these tables are nearly always present by just one or two vessels including a few curfew sherds in Phases 5 and 6 and a single cup in Phase 6 from Property BW 3 (probably in Tudor Green ware, *c* 1375–1500, but catalogued as fabric PMED). The latter is the latest type of medieval pottery identified from the site apart from a handful of much later intrusive post-medieval sherds.

The quantity and distribution of vessel forms across each of the three street frontages and through each phase is presented in Table 7.20, but the value of the latter varies according to the size of each property assemblage. The table shows, among other things, slighter higher values for bowls on the BW frontage for Phase 5 particularly (discounting the high Phase 6 EVEs value for SE as only 2 sherds were present). This probably just represents a slighter wider range of kitchenware forms on this possibly wealthier frontage and possibly a wider range of foodstuffs being prepared. It is less likely to represent an increased concern with dairying practices as most of the bowls had clearly been used for cooking. These figures are slightly biased towards Property BW 5 which produced an almost complete socket-handled bowl (Fig. 7.11, no. 42). Property BW 5, however, also holds the second highest glazed ware count for Phase 4.2 to 5 indicating moderate wealth.

Oil lamps: their possible significance

The distribution data for oil lamps is a little ambiguous and capable of a number of possible interpretations depending on whether they are viewed as an indicator of slightly higher or lower status dwellings, or neither. The lamps here are mainly in local 10th–12th century coarsewares at a time when most domestic lighting was probably in the form of rush lamps. Tallow or wax candles were not widely used in domestic contexts in Winchester (and elsewhere) until after *c* 1200 (Barclay and Biddle 1990, fig. 307). The possession of ceramic lamps then might be seen as either as an indication of slightly greater wealth, or as an accessory to certain activities or trades (textile working, writing etc.), or both. A very high number of ceramic lamps (105) were recovered from two medieval houses in Lower Brook Street, Winchester, and their distribution here has been interpreted as perhaps a reflection of the use of these buildings for light industry (requiring long hours of indoor work) as well as density of occupation along the street (ibid., 986). Abundant evidence for tanning pits from the site might imply that leather working and similar activities took place there. Elsewhere in the city the lack of ceramic lamps from the Castle, the Bishop's palace and the domestic buildings of the cathedral imply that only the wealthiest tier of society could afford candles at this time and thus had little need for ceramic lamps (ibid.). The wealthiest occupants of the site might have used stone cressets or even glass hanging lamps—in which case ceramic lamps would be fairly low in this hierarchy—but still probably well above rush lamps. Lamps are present on all the catalogued properties except SE 2. In terms of the three street frontages, the BE frontage has the highest percentage of lamps at 10.61% (EVEs) of the identified forms from the whole frontage (or 3.44% weight), and most of these were from Phase 5 (15.53% of that phase). Of these, Property BE 4 has the highest percentage of lamps on the site (19 sherds, 14.76% EVEs, 5.84% weight). Adjacent Property BE 5 also has a moderate amount (3.88% EVEs). This is at slight odds though with the relatively low glazed ware count for this frontage (see above) which suggested that the occupants of BE (in Phases 4.2 and 5) might be somewhat poorer than those of the other two frontages (see also fabric groups data above). However, Property BE 4 did have quite a high Winchester ware sherd count (20 sherds) so perhaps it was slightly better-off than its BE neighbours at this time?

The BW frontage is also quite well-endowed with oil lamps at this time too—particularly the two northernmost Properties BW 4 and BW 5. Property BW 4 has the highest percentage of lamps on this frontage (7 sherds, 12.02% EVEs, 2.18% weight) and this property also has the highest number of glazed sherds (in Phases 4.2 and 5) than any property on the site (see above). Adjacent Property BW 5 also has quite a high percentage of lamps (10 sherds, 5.32% EVEs, 3.34% weight) and the second highest number of glazed sherds on the site. In the case of Properties BW 4 and BW 5 the high percentage of lamps and glazed wares (mainly tripod pitchers) may be a genuine reflection of somewhat greater wealth but this correlation does not seem to hold true for Property BE 4 across the road which has many lamps but not much glazed ware. The Snitheling Street frontage (SE) has the lowest percentage of lamps (0.61% EVEs, 0.17% weight) and these come from Property SE 1 alone (2 sherds, 0.80% EVEs, 0.22% weight) yet SE 1 has a high glazed ware count for these phases (fourth highest on the site)—again mostly tripod pitchers—which suggests comparative wealth. In Phase 5 this property was a possible furrier's residence (see above and bone report, below) and in Phase 4.2 this property produced the highest number of dyepots from the whole site (see dyepots *Digital Section 1.3, Appendix 2*), both facts suggesting a connection with the textile industry and the origin of the late Saxon 'Street of the Tailors' (Snitheling Street).

The very low presence of oil lamps from the SE frontage might appear to rule out any significant connection between oil lamp usage and the textile industry and also perhaps between oil lamps and high glazed ware counts? There may, however, be other factors at play here which are not reflected in the ceramic evidence and which we do not fully understand. It may be that the excavated Snitheling Street properties provide too small a sample of pottery compared to the other two frontages and

perhaps there are dumps of ceramic lamps that have not yet been discovered? Or it may be that the tailors and furriers on SE were content to use rush lamps or some other type of non-ceramic lighting accessory (a furrier potentially could produce his own tallow—animal fat—candles)? In the case of the BE frontage there may be a special explanation for the high concentration of oil lamps and the low presence of early glazed wares. Rather than simply signifying that its occupants were somewhat poorer than those of the wealthier BW frontages (which still might be the case), the concentration of lamps here might suggest that the function of this area was different from BW and SE. Like SE, with its tailors and furriers, it may have had an artisanal function but perhaps a more heavy duty one, such as tanning and leather working (as at the Lower Brooks Street sites above)? And perhaps these related industries required increased illumination (lamps) but being perhaps primarily workshops they had little need for glazed wares or ceramic fripperies? Whatever its exact nature there seems to have been some sort of craft activity going on in the BE frontage that required a high number of oil lamps and perhaps these were primarily workshops rather than private residences (as on the BW frontage?) or combined residence/workshops (as on Property SE 1?). Ceramic lamps, in this case, may not therefore be a reliable indicator of greater wealth but rather of craft specialisation, at least when found in quantity. On the possibly wealthier BW properties (BW 4 and 5) the relatively high number of lamps there may just be reflection of the fact that they could easily afford them anyhow, and perhaps social entertaining and/or more lightweight trades did not require quite so much illumination.

Other vessel forms

The jug/tripod pitcher form has a fairly low presence in Phases 4.2 and 5 but the increased incidences of the glazed tripod pitcher (mainly Phase 5) have been noted above (eg Properties SE 1, BW 4). The jug form does not become really common until the high medieval period and is best represented on the BE frontage (mainly Property BE 5) where very high glazed ware sherd counts (see above) have already revealed its presence. In Phase 6, on BE frontage, the form reached its peak where it comprised 31.76% by EVEs (or 59% by weight) challenging the long-established monopoly of the jar/cooking pot. The spouted pitcher form, glazed or unglazed, also has a fairly low presence across the site (mostly under 5% EVEs) but there are two instances where two almost complete highly decorated chalky-flinty ware examples of this form result in an unusually high percentage of the property assemblages, namely Property SE 2 (11.38% EVEs, 20.05% weight caused by Fig. 7.10, no. 31) and Property BW 4 (3.97% EVEs, 14.67% weight caused by Fig. 7.11, no. 38).

The distribution of crucibles across the site has been considered at length elsewhere (see fabric MDL, *Digital Section 1.3*). This identified Property BW 2 as having the highest quantity of crucibles on the site, followed by Properties BE 5 and SE 2. They were never very common however and clearly the copper-working industry they represent was widely dispersed across the site. The distribution of dyepots likewise has identified Property SE 1 as having the highest quantity of these, followed by Properties BW 4 and BW 3 (see dyepots *Digital Section 1.3, Appendix 2*).

The rarest vessel forms here are usually represented by just a few examples and these are not always from sampled contexts. High medieval (Phase 6) vessel forms, other than jugs and jars, are rare from this site but common on other sites in Winchester where this period is better represented. One or two possible costrels (flasks) in late Saxon sandy ware have been identified including an example from Property SE 1 (see fabric MSH), and a possible high medieval example was identified from BW 3 (see fabric MDG). Dripping pans—a mainly high medieval ceramic form for collecting fat from spit roasts—occur as one definite example from an unsampled context on Property BW 5, Phase 6 (see fabric MDF). This example is of semicircular form which might imply the presence of a proper fireplace on Property BW 5 by this date. There is one definite example of a high medieval cistern or bunghole jar, most likely for brewing or storing ale (see fabric MDG). This occurs on Property BW 3 (Phase 6) the possible residence of the Archdeacon. Ceramic curfews (firecovers) reflecting a concern with fire prevention are rare but represented by at least four separate examples from Properties BE 2 and BE 5 (both Phase 6) and from Properties BW 2 and SE 2 (both Phase 5). Chimney pots, also perhaps reflecting a concern with fire prevention and ventilation, are not represented in the quantified tables here as the three examples recovered come from unsampled contexts. These are probably of 13th-century date and also perhaps reflect buildings of a fairly substantial nature. One example comes from Property BE 3 (Phase 5), another from adjacent Property BE 2 (Phase 6), the third example is from a modern context on the Northgate House site.

Vessel forms analysis: General conclusions

The data on fabric groups, glazed ware distribution and vessel form distribution have been examined in a number of ways to bring out any trends that might exist. For the overwhelming bulk of the assemblage—mainly represented by the ubiquitous jar/cooking pot—there is undoubtedly a high degree of similarity between the assemblages from the ten catalogued properties and three street frontages. This is taken to mean that the overall differences in social status between these properties and their occupants was not particularly marked and the general utilitarian nature of most of the pottery suggests a fairly low to middling class of occupant with occasional hints, here and there and

from time to time, of moderate wealth reflected by the increased concentrations of glazed tablewares or decorated spouted pitchers, implying social dining and entertaining. The distribution of industrial vessels, mainly metallurgical crucibles and dyepots, also highlights a few properties where the high concentration of these suggests craft specialisation. This is more likely to be so in the case of crucibles, as copper metallurgy (clearly their main use) is likely to have been a specialist trade. This highlights Property BW 2 (in Phase 4.2) as a likely coppersmith's workshop at some point in time, and also perhaps Properties BE 4 and SE 2 but perhaps not to the same degree. As a few crucible sherds occur on almost every property it is difficult to know if these represent sporadic and short-lived metallurgy workshops on almost every property, or just rubbish present as a background scatter across the whole site, or even perhaps, in some cases, unused crucibles used as oil lamps.

The same is true, to some extent, for the many jar sherds showing evidence of purplish internal madder-staining implying use as dyepots and thus related to the textile industry (see *Digital Section 1.3, Appendix 2*). These occur on almost every property in varying numbers and probably imply small-scale domestic textile dyeing on almost every property between the 10th and 12th centuries. The marked concentration of these on Property SE 1, however, (mainly in Phase 4.2), is suggestive of craft specialisation and quite possibly linked to the origin of the name Snitheling Street—the 'Street of the Tailors'. The higher than usual concentration of ceramic oil lamps on the Brudene Street East (BE) frontage (BE4 particularly) is also possibly an indication of craft specialisation rather than an indication of wealth. These properties were relatively poor in glazed tablewares and this fact, plus the high number of lamps could imply they were primarily workshops of some kind (tanning/leather working?) rather than private residences or social areas.

The ceramic evidence suggests that the central area of the excavations—the Brudene Street West frontage—was perhaps a few degrees more prosperous than the other two street frontages. To some extent, however, the data are biased here because of the better level of layer preservation and deeper stratigraphy yielding a larger and more varied assemblage of pottery. Nevertheless, a proportionate analysis of early (ie 10th to early 13th century) glazed wares from the site indicates that the Brudene Street West frontage had a higher concentration of these (including glazed Winchester ware) than the other two properties and this is interpreted here as evidence of somewhat greater prosperity at this time. The adjacent Properties BW 4 and BW 5 had the highest concentrations of early glazed wares from the whole site (mainly Phase 5). Property BW 4 also had the largest and most highly decorated local coarseware spouted pitcher from the whole site. This may originally have had three spouts (like a similar example from Chichester) and might have had a special ceremonial significance. Coincidentally, or perhaps not, Property BW 4 also had the second highest concentration of madder-stained sherds from the site (after Property SE1). Properties BW 4 and BW 5 also had a high concentration of ceramic oil lamps, but unlike those across the road in BE 4 these were possibly intended to illuminate private residences and social gathering rather than a common workshop. Like other types of evidence from this site the pottery assemblage, for a variety of reasons, is patchy and incomplete. It is highly possible over the centuries of occupation that the function and status of any given property could have changed even within a single lifetime but evidence for this will not always survive.

Brown has published a useful summary of pottery types from The Brooks site in Winchester comparing this quantified assemblage with three other properties of similar date in both urban and rural Hampshire and Wiltshire (Brown 1997). However, all of these sites are of high medieval date (late 13th–14th century) and thus slightly too late to allow direct comparison with the site here. The Brooks site, furthermore, was a wealthy town house by this date, which does not seem to have been the case for most of the earlier properties here. The greater variety of vessel forms and imported wares at The Brooks is a reflection both of the wealth of its merchant owners and of the increasing diversity of ceramic forms available by the 14th century. There are one or two points of overlap, however, between The Brooks and the two properties here where high medieval pottery is best represented—BE 5 and BW 3. Brudene Street East Property BE 5 is the only property on the site with evidence of a high medieval (Phase 6) chalk-built cellar and a flint-lined well, both features suggesting occupation by someone of some wealth. The property produced a much larger assemblage of high medieval glazed jug sherds than any other on the site (16.44% by EVEs of all identifiable forms from the property, or 37.83% by weight, or 48.37% by sherd count) including one or two imported North French jugs, which are very rarely found in Winchester. In this sense Property BE 5 compares reasonably well with data from The Brooks where jugs were very abundant (Brown 1997, table 6). The Brooks data, however has to be adjusted to make direct comparisons with the data here as 'unidentified' body sherds have been treated as a vessel form in their own right whereas they are completely excluded from this sort of data in the present report (eg the 50% jug EVEs, or rim percent, from The Brooks adjusts to 53% here).

The 13th–14th century occupants of Property BE 5 may therefore have been reasonably prosperous merchants with a wine cellar and perhaps a direct connection with markets in Winchester or Southampton from which imported pottery could be acquired, perhaps as an accessory of the wine trade. However, most of his glazed jugs were in relatively local but still decorative South Hampshire

red wares and pink wares and these would easily have been available in local Winchester markets. Similarly Property BW 3, with its high status stone well-house backfilled with the second highest assemblage of high medieval glazed wares from the site, has tentatively been identified as the likely residence of the Archdeacons of Winchester. The large assemblage of (highly fragmentary) glazed jugs from here also hints at increased wine consumption and social entertainment as befits a person of this status. In addition, a possible glazed costrel (flask) and a ceramic cistern for ale-brewing from this site point to wine or ale consumption and a degree of self-sufficiency, as do a couple of small sherds from a Tudor Green ware cup (*c* 1375–1500), the latest type of medieval pottery recovered from the site (PMED).

General conclusions

It is difficult to assess to what extent the study of the pottery assemblage from these excavations has advanced our knowledge of late Saxon and medieval pottery from Winchester. The quantified data and computerised records certainly constitute a significant resource in their own right whose full potential has by no means been fully exploited. Each of the separate accounts of the forty or so pottery fabrics from the site has in its own way widened or deepened our knowledge of these types and this perhaps is the report's strongest contribution. This is truer for the late Saxon and early medieval (Saxo-Norman) wares than for the high medieval wares—the latter, poorly preserved in any case, have been adequately dealt with in other reports. The lack of scientific fabric characterisation means, unfortunately, that our knowledge of exactly where most of this pottery was produced remains one of the biggest outstanding obstacles in the study of Winchester's medieval pottery. To date the only definite late Saxon production site identified in the region is at Michelmersh, about 8 miles west of Winchester, where wheel-thrown Michelmersh ware was produced *c* 925/50–1050. However, recent scientific analysis now suggests that Late Saxon sandy ware, an even earlier wheel-thrown ware, may have been produced in the same Michelmersh area from as early as *c* 850 (Mepham and Brown 2007). Chalk-tempered wares, the dominant pottery tradition in Winchester *c* 850-1150, remain unsourced but must have been fairly locally produced. These were also common in mid Saxon Southampton (Timby 1988, 80–2) and comparisons with the typology and fabric descriptions of the Southampton examples that are not local to Southampton suggest that the same source or sources supplying Winchester from *c* 850 may have been the same as those supplying Southampton *c* 750–850. This source, thought to have been located around 15 miles north of Southampton where the Reading Beds outcrop immediately south of the chalk escarpment, is therefore more likely to have been closer to Winchester than Southampton, perhaps to the south of the city. If such an industry (perhaps dispersed along the chalk valleys) was that much closer to Winchester then perhaps the dating of chalk-tempered ware (MBX) in the city could be even earlier than the local *c* 850 start-date traditionally accepted? The simplicity of this ware type and the inability to date it very closely could mean that its earliest occurrences in the city might have been overlooked.

The exact source of the remarkable late Saxon glazed Winchester ware industry (*c* 950–1100) is still unknown but presumed to be fairly local. A few defectively glazed and flawed 'seconds' vessels from the site here would seem to support this notion. These have been scientifically examined by Alan Vince (see *Digital Section 1.3, Appendix 3*) and the results support the suggestion of a fairly local origin.

Some late Saxon or Saxo-Norman sandy and flinty coarsewares in the city (MBK, MOE) have recently been suggested to be from the London Clay area east of the city in the area of Alton and Petersfield perhaps (Blackmore 2007, and this report). These round-bottomed more archaic-looking jar forms are completely different in style to the more robust sagging based jars of the dominant local chalky ware tradition (MBX, MAV) and it is difficult to see why they should have become popular in the city and why chalky wares should simultaneously have been in decline. They may perhaps represent potters or pottery merchants from east of the city travelling to markets in Winchester to peddle their wares, or possibly Winchester folk travelling to markets in those areas during the 11th and 12th centuries. Whatever the case, chalky wares fell out of fashion and were effectively gone by *c* 1200 when the region was swamped by sandy ware cooking pots (also perhaps from the east) and increasingly by glazed jugs from sources in south Hampshire. Microscopic analysis of late Saxon 'organic-tempered' sandy ware sherds, in this report (MAF *c* 950–1150), has also demonstrated that this is not true organic tempering (chaff etc.), in the early Anglo-Saxon sense, but that these are actually voids caused by the dissolution of needle-like crystals of the mineral selenite (gypsum)—another mineral commonly found in the London Clay to the south and east of the city. Examination of identical sherd samples from Southampton also suggests this to be the case. It always seemed rather incongruous that a basically early-mid Anglo-Saxon pottery tempering tradition could have persisted in the region as late as *c* 1150 and it now seems this notion can be dispelled.

The number of imported continental wares recovered from the site—fifteen or so sherds covering the period *c* 900–1250—is remarkably low, but consistent with the established view that imported wares were very rare in inland Winchester

and somehow never made it up the twelve miles of river connecting the city with the port of Southampton where imported pottery was relatively abundant. One rare imported type known from earlier excavations in the Staple Gardens area is Badorf-type ware, a 9th–10th century Rhenish ware often imported as large relief-band amphoras (Helen Rees pers. comm; Hodges 1981, 37). This type has not been identified from the present excavations. A sherd of early 15th-century Valencian lustreware from Staple Gardens has also been published (Hurst 1964, fig. 63.12). The only new type of imported pottery identified from the present excavations that does not seem to have been previously noted in Winchester is a Rhenish Paffrath-type ware 'ladle', probably of 11th–12th century date. By and large, Winchester citizens did not express their wealth and status through imported continental pottery. Why should they need to when they had attractive yellow-glazed Winchester ware in the late Saxon period and regionally-sourced glazed tripod pitchers and highly decorated South Hampshire red ware jugs in the early and high medieval periods?

Overall the pottery from the site suggests occupation of low to middling status with occasional hints of relative wealth. The distribution of certain classes of pottery across the site, particularly the industrial wares and the glazed wares, has identified areas of more intense industrial activity or relative wealth against a general background of fairly monotonous local coarsewares, primarily cooking pots. Study of the crucible fabrics confirms earlier studies suggesting that (true) organic-tempered crucibles are primarily late Saxon in date, and that post-conquest examples are mainly in sandy wares and are generally larger.

The distribution of crucible sherds has also highlighted one or two properties (mainly BW2) where copper-working metallurgy was relatively intense, suggesting the presence of workshops here. The identification of over 300 purplish-red madder-stained sherds from pots used as dyepots—the largest collection from an English excavation—would appear to support earlier suggestions that Winchester was heavily involved with the textile industry in the late Saxon and early medieval periods. The distribution of dyepot sherds across the site has also highlighted a few properties where this activity was most intense, in particular Property SE1 during the period *c* 950–1050, and it hardly seems a coincidence that the location of this property was on Snitheling Street—the 'Street of the Tailors'. These sherds are also the only hard archaeological evidence for the likely importation of the commodity dyestuff madder, probably from France, during this period.

The distribution of glazed wares may have highlighted areas of relative wealth, mainly the Brudene Street West properties, whereas an unusual concentration of ceramic oil lamps in the northern properties of the Brudene Street East frontage (BE4 and BE5), coupled with a general poverty in glazed wares, has suggested this area may have been an area of workshops for some craft specialisation requiring a fair degree of illumination, possibly leather working or textile production etc.

Catalogue of illustrated pottery (Figs 7.8-7.17)

1. Fabric MAB, Jar with thumbed rim. Very coarse flint temper. Di 280 mm., Group NH8550, Context NH3580, Phase 5
2. Fabric MAD, Tripod pitcher with combed dec and applied thumbed strips. Dark greenish-brown glaze (reconstruction drawing). Di 150 mm., Group NH8543, Context NH3286, Phase 6
3. Fabric MAD, Tripod pitcher rim with complex rouletted dec on top, inside and outside. Greenish-brown glaze. Di 190 mm., Group DC7021, Context DC3126, Phase 5
4. Fabric MAD, Wide tripod pitcher rim with circular gridiron stamps on top. Combed dec and traces of applied thumbed strips on the outside. Decayed greenish-brown glaze. Di 220 mm., Group DC7024, Context DC2114, Phase 6
5. Fabric MAD, Unglazed MAD (or fine brown MOE). Probable tripod pitcher sherd with applied strips or cordons and traces of combed and possible rouletted dec, Group DC7021, Context DC3126, Phase 5
6. Fabric MAD, Tripod pitcher base with applied foot with deep circular indent. Grey-green glaze, Group NH8612, Context NH5128, Phase 5
7. Fabric MAF, ?Cresset lamp rim. Possibly with notch or perforation cut through rim. Unsooted. Di 80 mm., Group DC7031, Context DC3021, Phase 5
8. Fabric MAQ, Jar with simple A2P-type rim. MAQ/MBK hybrid. 12-13C ctx. Di 140 mm., Group DC7039, Context DC6043, Phase 5
9. Fabric MAQ, Small jar rim. Di 120 mm., Group NH8530, Context NH4130, Phase 4.2
10. Fabric MAQ, Jar rim. Cavetto neck. Grooved rim. MAQ/MBK. Di 180 mm., Group DC7019, Context DC2077, Phase 5
11. Fabric MAQ, Jar profile. Bag-shaped with rounded base. Weak shoulder carination. Di 240 mm., Group NH8636, Context NH1391, Phase 5
12. Fabric MAQ, Jar profile with rounded base. Finer MAQ/MBK fabric. Di 210 mm., Group DC7007, Context DC1381, Phase 4.2
13. Fabric MAQ, Hammerhead bowl rim. Oxid. Di. 270 mm., Group DC7031/DC7043, Context DC3013, 2212, Phase 5/6
14. Fabric MAQ, Profile small chalice-shaped cresset lamp with pedestal base. Heavily sooted internally. Di 80 mm., Group DC7023, Context DC2027, Phase 5
15. Fabric MAQ, Complete small chalice-shaped cresset lamp with pedestal base. Only slight traces sooting. Very coarse fabric. SF220. Di 87 mm., Group DC7019, Context DC2077, Phase 5
16. Fabric MAQ, Cresset lamp profile. Possibly with plain flat base or damaged short pedestal-type base? Heavily sooted internally. Di 125 mm., Group NH8594, Context NH2462, 2461, Phase 4.2
17. Fabric MAQ, Chimney pot rim. Unsooted. Di 160 mm., Group DC7051, Context DC1160, Phase 6

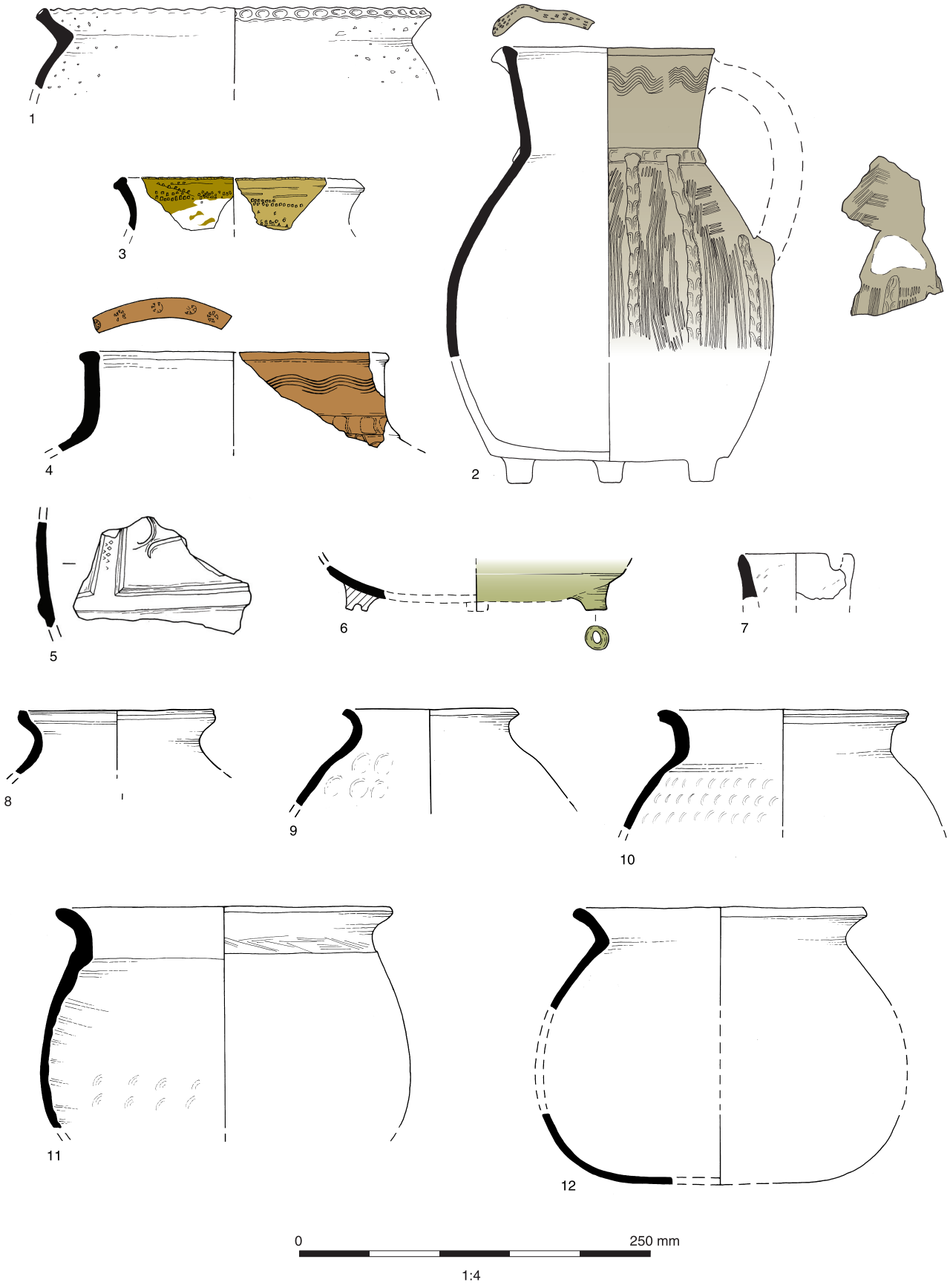


Fig. 7.8 Post-Roman pottery: MAB (1), MAD (2–6), MAF (7), and MAQ (8–12)

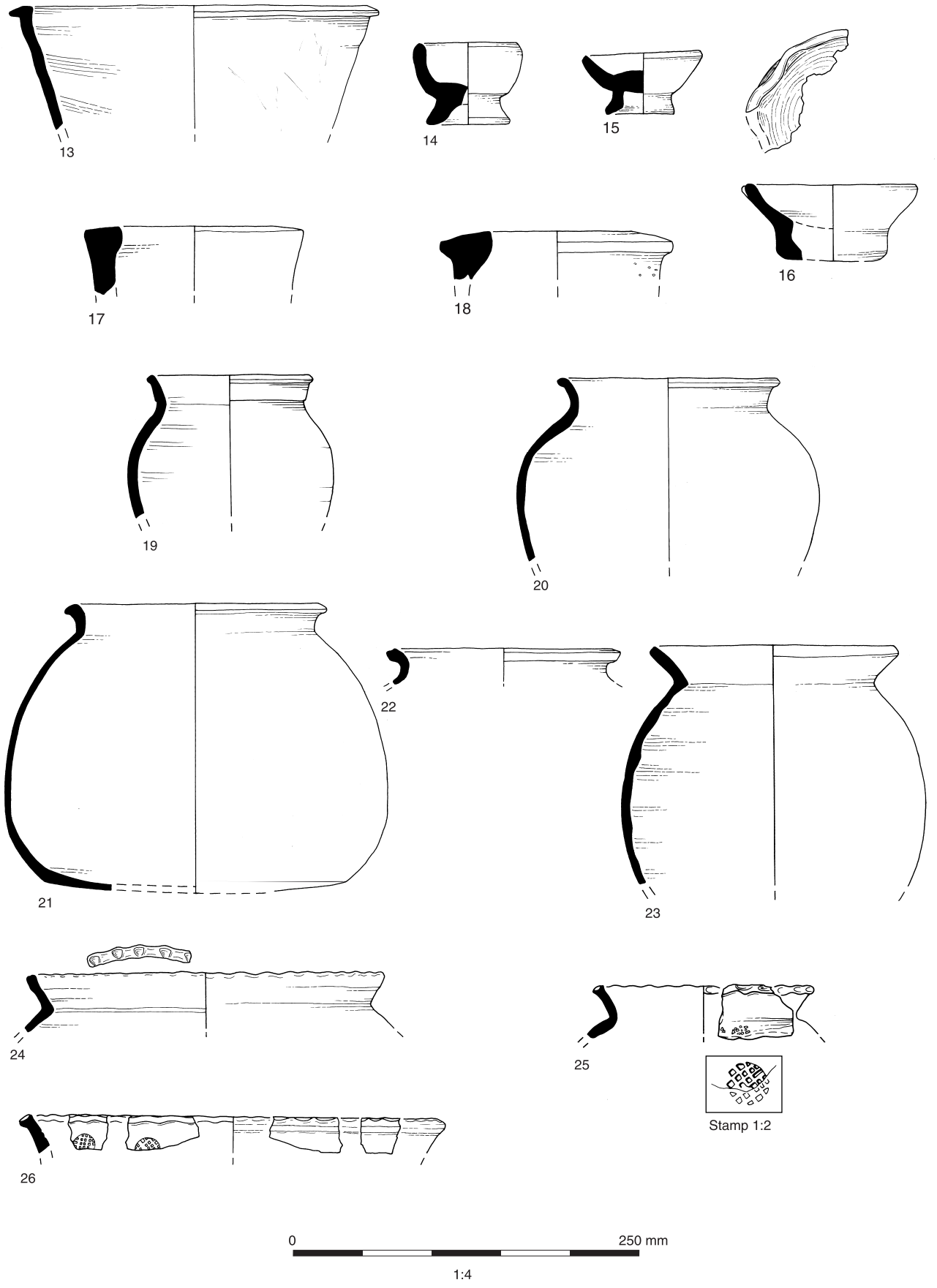


Fig. 7.9 Post-Roman pottery: MAQ (13–19) and MAV (20–26)

18. Fabric MAQ, Chimney pot rim. Unsooted. Very coarse fabric. Di 160 mm., Group DC7051, Context DC1109, Phase 5
19. Fabric MAV, Near-profile smallish globular jar. Upright rim. Di 120 mm., Group DC7031, Context DC3018, Phase 5
20. Fabric MAV, Jar profile. A1C-type rim form. Di 160 mm., Group DC7019, Context DC2036, Phase 5
21. Fabric MAV, Profile globular jar. Short near-upright rim. Di 190 mm., Group NH8612, Context NH5202, Phase 5
22. Fabric MAV, Jar. Unusually squared rim. Di 170 mm., Group , Context NH1070, Phase 8
23. Fabric MAV, Near-profile jar. A3B-type flaring rim form. Di 180 mm., Group DC7017, Context DC1618, Phase 5
24. Fabric MAV, Jar rim with spaced thumbing. Oxid. Di 260 mm., Group NH8542, Context NH4177, Phase 5
25. Fabric MAV, Jar with thumbed rim and circular gridiron stamps on shoulder. Oxid. Di 160 mm., Group NH8500, Context NH1215, Phase 2.4
26. Fabric MAV, Jar with thumbed rim and circular gridiron stamps inside rim. Di 310 mm., Group DC7014, Context DC1360, 1361, Phase 4.2
27. Fabric MAV, Large jar rim with shoulder carination. B2-type rim form. Di 340 mm., Group DC7008, Context DC1398, Phase 5
28. Fabric MAV, Near-profile large jar. Di 330 mm, Group DC7007, Context DC1381, Phase 4.2
29. Fabric MAV, Jar with horizontal rim. Late? Di 280 mm., Group DC7051, Context DC1517, Phase 5
30. Fabric MAV, Jar base/body profile. Oxid. Base Di 160 mm., Group NH8554, Context NH3546, Phase 5
31. Fabric MAV, Spouted pitcher with thumbed rim and impressed dimple dec on body. Di 180 mm., Group NH8621, Context NH1589, Phase 4.2
32. Fabric MAV, Spouted pitcher with combed dec on shoulder. Oxid. Di 120 mm., Group DC7019, Context DC2078, 2094, Phase 5
33. Fabric MAV, Spouted pitcher with incised oblique stroke dec on rim. Di 170 mm., Group DC7015, Context DC1663, Phase 5
34. Fabric MAV, Large spouted pitcher with incised oblique stroke dec on rim. Oxid. Di 280 mm., Group NH8531, Context NH4562, Phase 4.1
35. Fabric MAV, Large jar rim with incised oblique stroke dec on rim and incised/combed dec on shoulder. Oxid. Di 280 mm., Context DC3176, Phase 4.2
36. Fabric MAV, Jar shoulder with incised/combed dec. Oxid, Group NH8633, Context NH1022, Phase 5
37. Fabric MAV, Jar shoulder with incised/combed dec (interlaced chevrons). Oxid, Group NH8636, Context NH1362, Phase 5
38. Fabric MAV, Large, highly dec spouted pitcher with thumbed rim and incised and stabbed dec on body. Oxid. Di 300 mm., Group NH8567, Context NH3389, Phase 4.2
39. Fabric MAV, Spouted pitcher rim (evidence of spout) with stabbed pit dec. Di 240 mm., Group NH8593, Context NH9767, Phase 5
40. Fabric MAV, Jar shoulder with carination and unusual incised diagonal line and dot dec. Di at girth c. 210 mm., Context NH5022, Phase 6
41. Fabric MAV, ?Jar body sherd with incised ?vertical line dec. Oxid, Group DC7021, Context DC3235, Phase 6
42. Fabric MAV, Unusual deep bowl profile with tubular socket handle. Di 270 mm., Group NH8593, Context NH9666, Phase 5
43. Fabric MAV, Bowl, or jar, with slightly inturned rim. Di 280 mm., Group NH8603, Context NH7600, Phase 4
44. Fabric MAV, Bowl with near-vertical rim (rim added on as separate coil). Di 290 mm., Group NH8596, Context NH2411, Phase 4.2
45. Fabric MAV, Bowl (or curfew?). Flaring walls. Di 400 mm., Group NH8620, Context NH6051, Phase 5
46. Fabric MAV, Shallow bowl with curved sides. Di 250 mm., Group DC7056, Context DC1254, Phase 4
47. Fabric MAV, Profile small spiked cresset lamp. Heavily sooted internally. Di 64 mm., Group DC7050, Context DC1315, Phase 5
48. Fabric MAV, Profile spiked cresset lamp. Heavily sooted internally. Di 84 mm. SF1255, Group NH8530, Context NH4130, Phase 4.2
49. Fabric MAV, Profile cresset lamp with pedestal base. Heavily sooted internally. Di 83 mm. SF268, Group , Context DC2277, Phase 6
50. Fabric MAV, Cresset lamp rim. Unusual deep form. Sooted internally. Di 120 mm., Group DC7039, Context DC3029, Phase 5
51. Fabric MAV, Bowl, probably used as lamp. Has oxidised 'tide marks' internally and some sooting on rim. Di 240 mm, Group DC7023, Context DC2027, Phase 5
52. Fabric MAV, Curfew rim. Di 450 mm., Group DC7051, Context DC1160, Phase 6
53. Fabric MAV, Chimney pot rim. Slight sooting internally. MAV/MAQ fabric. Di 150 mm., Context NH2251, Phase 8
54. Fabric MBEAU, Beauvais-type ware. Jar base with red painted vertical lines externally and continuing under base. Base Di c. 180 mm., Group DC7058, Context DC1022, Phase 4
55. Fabric MBEAU, Beauvais-type ware.?Jar sherd with red painted lattice decoration, Group DC7015, Context DC1292, Phase 6
56. Fabric MBK, Jar rim. Silty, early-looking MBK/MAQ fabric. 10C ctx? Di 130 mm, Group NH8619, Context NH6116, Phase 4.2
57. Fabric MBK, Jar rim. MBK/MDF hybrid? 13C? Di. 200 mm., Group NH8514, Context NH8020, Phase 6
58. Fabric MBK, Jar rim with cavetto neck and slight shoulder carination. Di 220 mm., Group NH8593, Context NH9666, Phase 5
59. Fabric MBK, Jar with thumbed rim and scratch-marked dec. Di 220 mm., Group NH8612, Context NH5128, Phase 5
60. Fabric MBK, Large jar rim with scratch-marked dec. Di 340 mm., Group NH8612, Context NH5128, Phase 5
61. Fabric MBK, Jar shoulder. Unusual incised vertical line dec., Group NH8623, Context NH1029, Phase 5
62. Fabric MBN, Jar with rouletted rim. Di. 120 mm., Group NH8596, Context NH2422, Phase 4.2
63. Fabric MBN, Jar body with rouletted dec, Group NH8554, Context NH3491, Phase 5
64. Fabric MBN, Jar body with rouletted dec and prominent rilling or ribbing, Group DC7009, Context DC1408, Phase 4.2
65. Fabric MBX, Small jar. Di 70 mm., Group NH8622, Context NH1180, Phase 4.2
66. Fabric MBX, Small jar. Near profile. Di 85 mm. 10C pit group, Group NH8531, Context NH4232, Phase 4.1

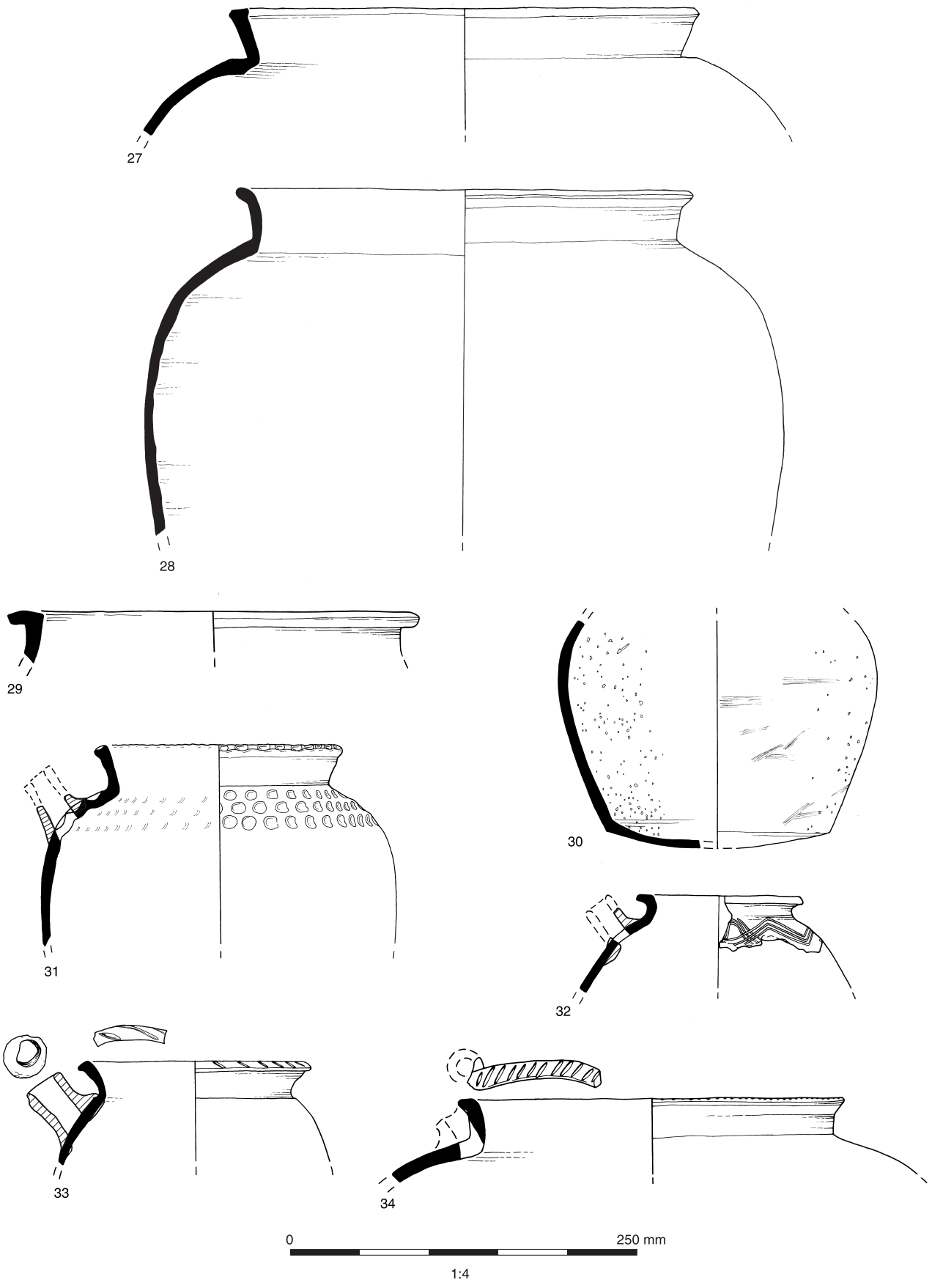


Fig. 7.10 Post-Roman pottery: MAV (27–34)

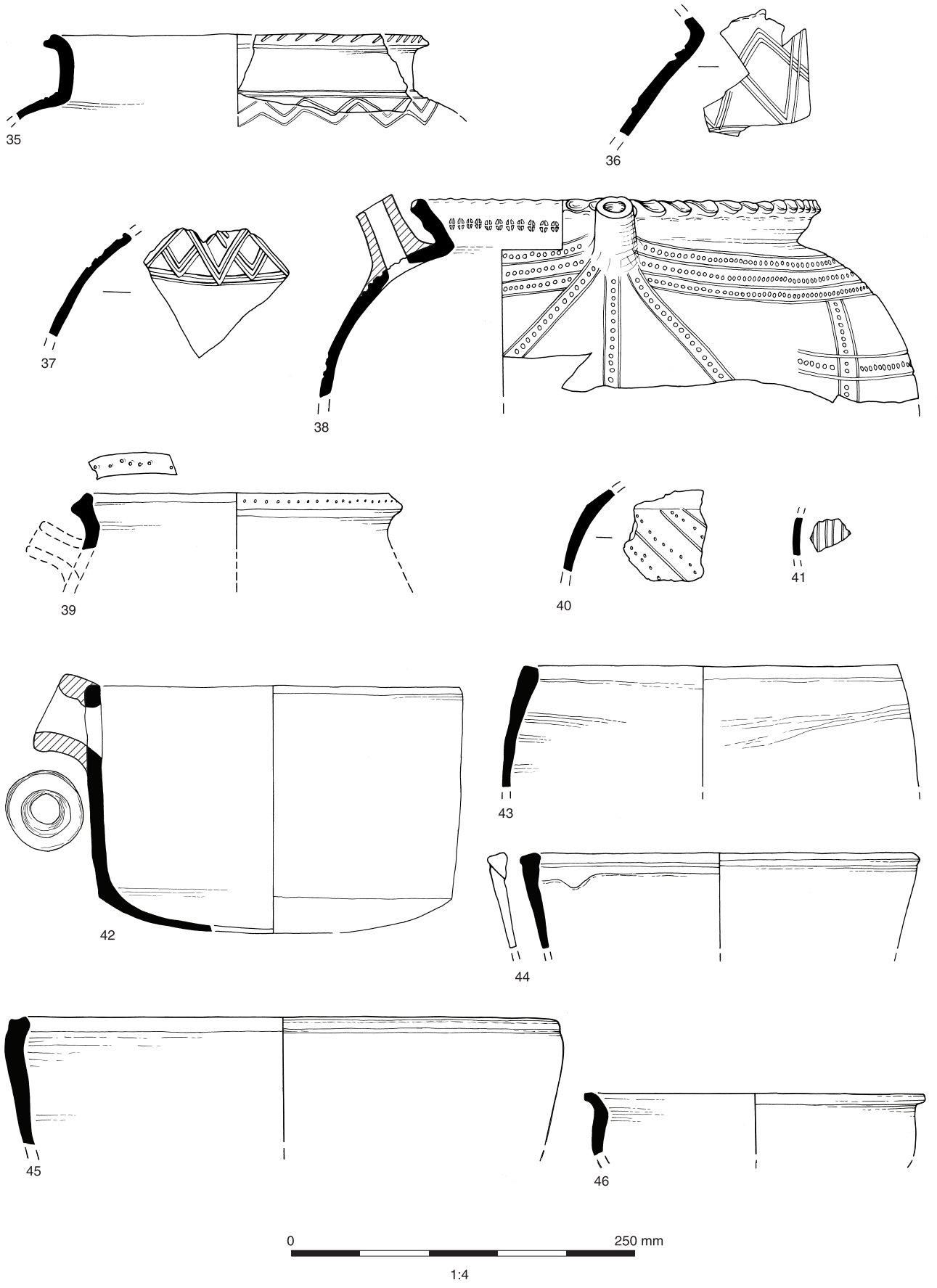


Fig. 7.11 Post-Roman pottery: MAV (35–46)

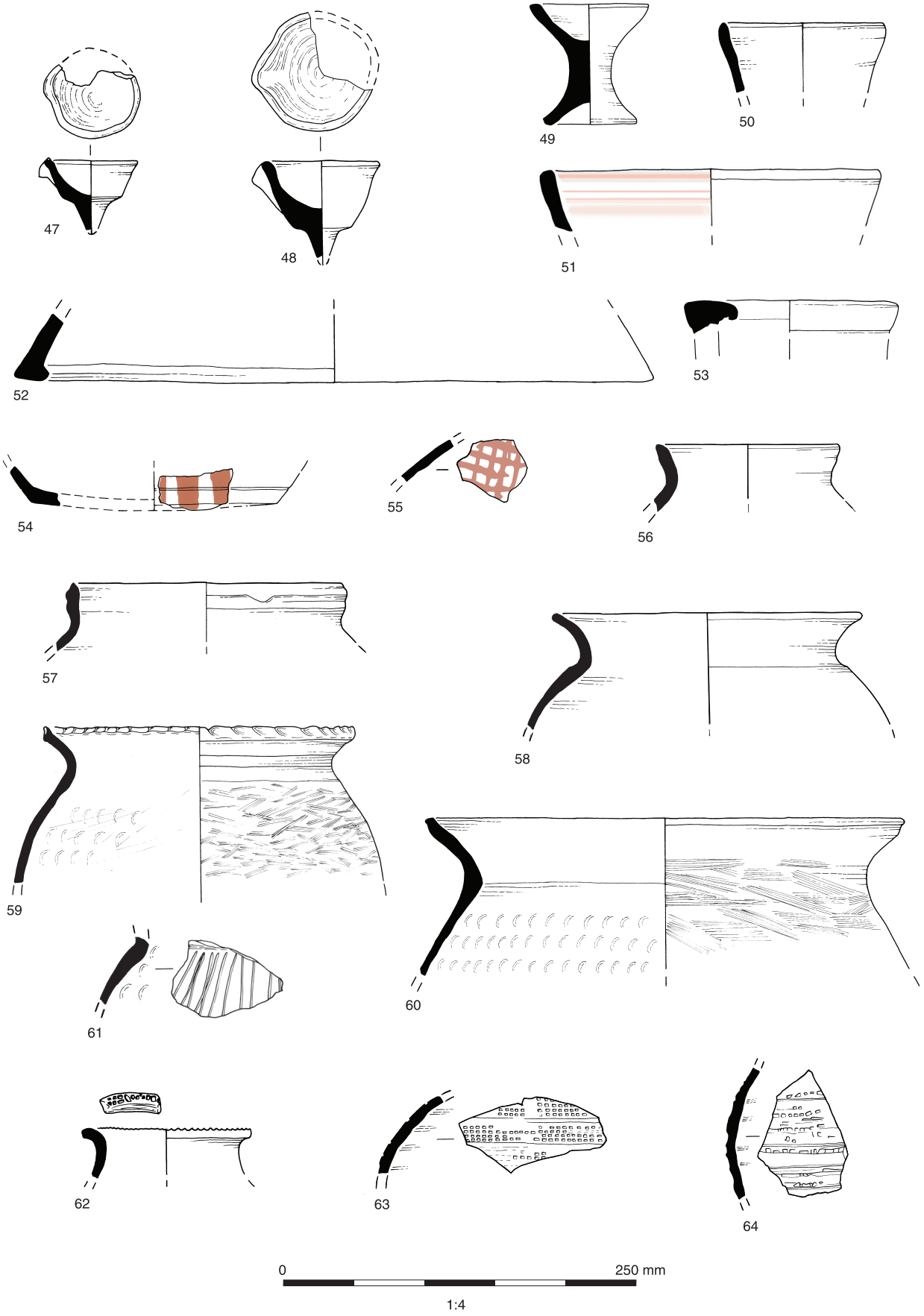


Fig. 7.12 Post-Roman pottery: MAV (47–53), MBEAU (54–5), MBK (56–61) and MBN (62–4)

67. Fabric MBX, Small jar with thumbed rim. Di 100 mm., Group NH8578, Context NH3400, Phase 4.1
68. Fabric MBX, Small jar with prominent shoulder carination. Di 110 mm., Group NH8550, Context NH3699, Phase 5
69. Fabric MBX, Jar with cavetto neck. Bevelled A2 rim form. 10C ctx. Di 160 mm., Group NH8619, Context NH6116, Phase 4.2
70. Fabric MBX, Jar with spaced groups of thumbing on rim. L11-12C ctx? Di 180 mm., Group NH8538, Context NH4223, Phase 4.2
71. Fabric MBX, Jar with cavetto neck. Incipient bead rim form A1C. Shoulder carination. 10C ctx. Di 160 mm., Group NH8619, Context NH6116, Phase 4.2
72. Fabric MBX, Jar rim with prominent shoulder carination. Late? Di 210 mm., Group NH8609, Context NH4623, 4624, Phase 4.1
73. Fabric MBX, Jar rim with prominent shoulder carination. Di 270 mm., Group NH8556, Context NH3669, Phase 4.2
74. Fabric MBX, Slack-sided jar or bowl. Di 210 mm., Group NH8592, Context NH2044, Phase 5
75. Fabric MBX, Jar rim. Dec int with band of stabbed pits. Di 140 mm., Group DC7018, Context DC2288, Phase 4.2
76. Fabric MBX, Sherd with multiple circular gridiron stamps. Residual in 13-14C ctx., Group DC7042, Context DC2107, Phase 6
77. Fabric MBX, Sherd with small circular gridiron stamps (stamps Di 11 mm.), Group NH8558, Context NH3416, Phase 4.2
78. Fabric MBX, Sherd with all over sunburst stamps, Group NH8543, Context NH3282, Phase 6
79. Fabric MBX, Sherd with cross-in-circle stamps, Group NH8620, Context NH6148, Phase 5
80. Fabric MBX, Jar or deep bowl rim with upright pierced lug handle. 8-9C? Residual. Di c. 240 mm?, Group NH8576, Context NH3496, Phase 5
81. Fabric MBX, Spouted pitcher with thumbed rim and complete stubby tubular spout. Di 240 mm., Group NH8528, Context NH4592, Phase 4.1
82. Fabric MBX, Spouted pitcher with handle. 10C ctx. Di. 190 mm., Group NH8619, Context NH6116, Phase 4.2
83. Fabric MBX, Bowl. Di 220 mm. 9-10C context. Assoc with madder-stained vessels, Group NH8619, Context NH6161, Phase 4.2
84. Fabric MBX, Bowl profile with socket handle. 10-11C ctx? Di 220 mm., Group NH8530, Context NH4277, Phase 4.2
85. Fabric MBX, Cresset lamp. Possibly pedestal-type? Di 140 mm., Group NH8632, Context NH1145, Phase 4
86. Fabric MBX, Cresset lamp. Possibly pedestal-type? Di 150 mm., Context NH2097, Phase 4.2
87. Fabric MDF, Jar with brushed decoration. Di 260 mm., Context NH805, Phase EVAL
88. Fabric MDL, Crucible rim with pouring lip. Vitreous external coating with reddish copper staining plus a few specks of greenish copper internally. Some organic inclusions in fabric. Di c. 60 mm., Group NH8529, Context NH4394, Phase 4.2
89. Fabric MDL, Crucible rim with thick external vitreous coating, extending partly internally, with reddish copper staining and slag-like debris plus a few specks of greenish copper embedded internally. Organic inclusions in fabric. Di c. 40 mm., Group NH8633, Context NH1022, Phase 5
90. Fabric MDL, Crucible profile with pouring lip. Fine cream sandy fabric. Probably unused. Di 80 mm., Group NH8602, Context NH7616, Phase 5
91. Fabric MDL, Crucible rim. Trace of spout. Fine brown sandy fabric like MMU. Sooted externally. Di 120 mm., Group NH8633, Context NH1027, Phase 5
92. Fabric MFI, Normandy gritty white ware. Jar/jug base with single speck of clear yellow glaze externally. Base Di 81 mm., Group NH8620, Context NH6101, Phase 5
93. Fabric MMU, Jar rim. Di 200 mm., Group NH8622, Context NH1155, Phase 4.2
94. Fabric MMU, Jar in oxid Michelmersh fabric but handmade rather than wheel-thrown. Di 210 mm., Group NH8633, Context NH1022, 1030, Phase 5
95. Fabric MMU, Jar rim with incised wavy line dec on rim. Di 140 mm., Group NH8628, Context NH1085, Phase 5
96. Fabric MMU, Jar with thumbed rim (or possibly MSH?). Probably residual in 10-12C ctx. Di 180 mm., Group NH8576, Context NH2229, Phase 5
97. Fabric MMU, Spouted pitcher with inturned rim and notched shoulder cordon. Di 160 mm., Group NH8615, Context NH5046, Phase 6
98. Fabric MMU, Spouted pitcher with inturned rim and stamped strip decoration. Di 160 mm., Group DC7027, Context DC2312, Phase 6
99. Fabric MMU, Small jar base. Base Di 54 mm., Group NH8567, Context NH3466, Phase 5
100. Fabric MMU, Shallow dish profile. Di 310 mm., Group NH8622, Context NH1155, Phase 4.2
101. Fabric MMU, Crucible rim. Sooted externally. Di 100 mm., Group NH8609, Context NH4623, Phase 4.1
102. Fabric MNG, Tripod pitcher rim and handle. Highly dec with applied strip and roulette dec. Yellow-brown glaze (fabric related to Winchester ware?). Di 190 mm., Context NH303, 305, Phase EVAL
103. Fabric MOE, Unusual jar rim form. Pale br-buff. Di. 310 mm., Group DC7042, Context DC2203, Phase 6
104. Fabric MOE, Jar rim with scratch-marked dec. Di 195 mm., Group DC7024, Context DC2113, Phase 6
105. Fabric MOE, Large jar rim. B2-related rim form. Di 320 mm., Group NH8632, Context NH1293, Phase 5
106. Fabric MPAF, Paffrath-type ware. 'Ladle' rim with attached handle fragment. Di 90 mm., Group DC7059, Context DC1131, Phase 6
107. Fabric MPIN, Pingsdorf-type ware. Jar/beaker body with red painted dec. probably 'commas', Group NH8575, Context NH2038, Phase 5
108. Fabric MSH, Unusually simple handmade jar rim (?or MMU/MZM). Di 140 mm., Group , Context DC3276, Phase 6
109. Fabric MSH, Simple jar rim with lightly combed wavy band on shoulder. Di 130 mm., Group NH8632, Context NH1146, Phase 4
110. Fabric MSH, Jar rim. Di 120 mm., Group NH8607, Context NH4695, Phase 4.1
111. Fabric MSH, Jar profile. 10C ctx. Di 150 mm., Group NH8619, Context NH6116, Phase 4.2
112. Fabric MSH, Jar rim. Internally hollowed. Di 160 mm., Group NH8559, Context NH3069, Phase 5
113. Fabric MSH, Rim from narrow-necked ?costrel. Di 75 mm., Group NH8619, Context NH6116, Phase 4.2
114. Fabric MSH, Sherd from odd vessel form with scar of applied spout or tubular handle. Possibly a costrel?, Group NH8607, Context NH4689, Phase 4.1

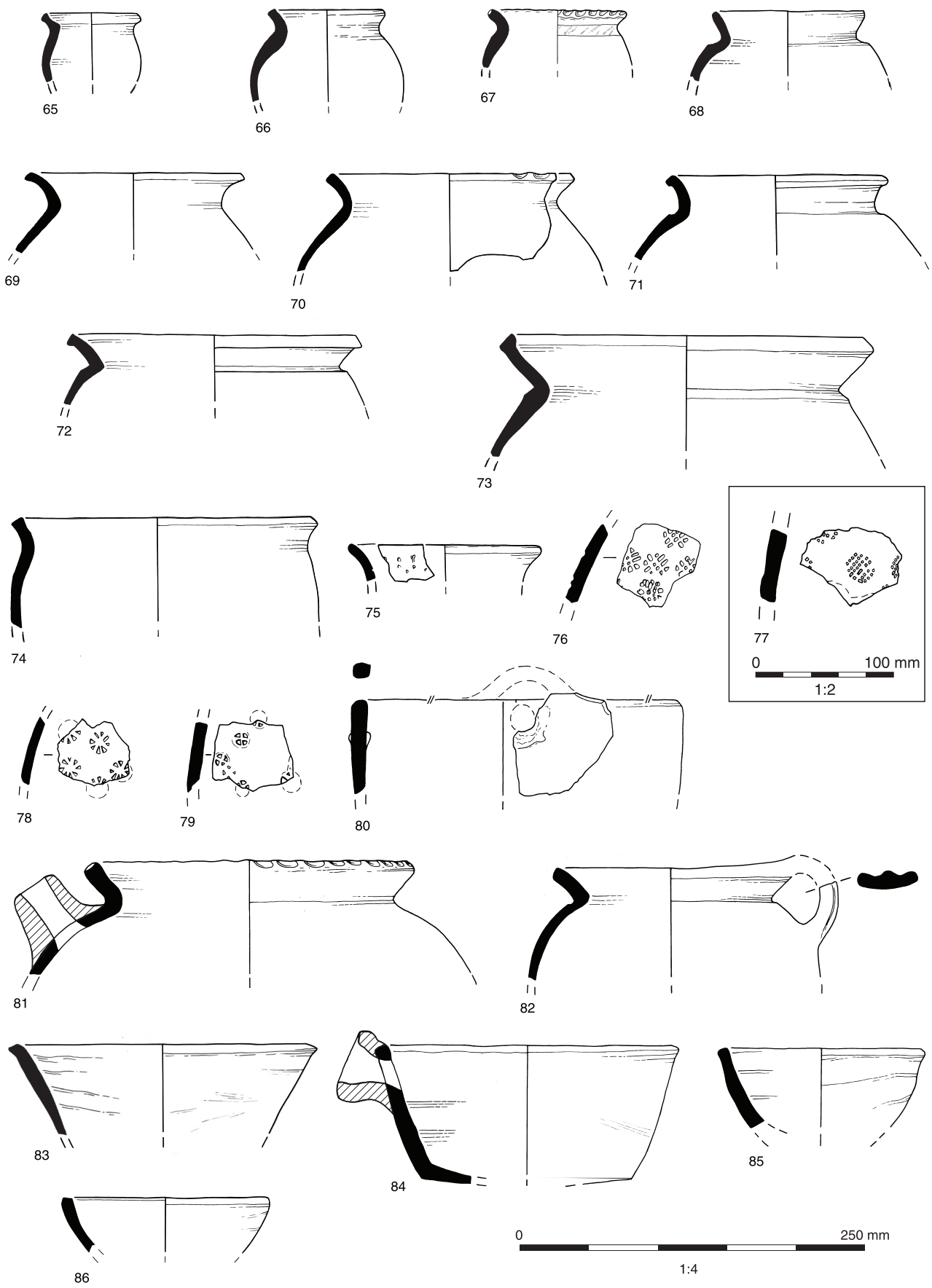


Fig. 7.13 Post-Roman pottery: MBX (65–86)

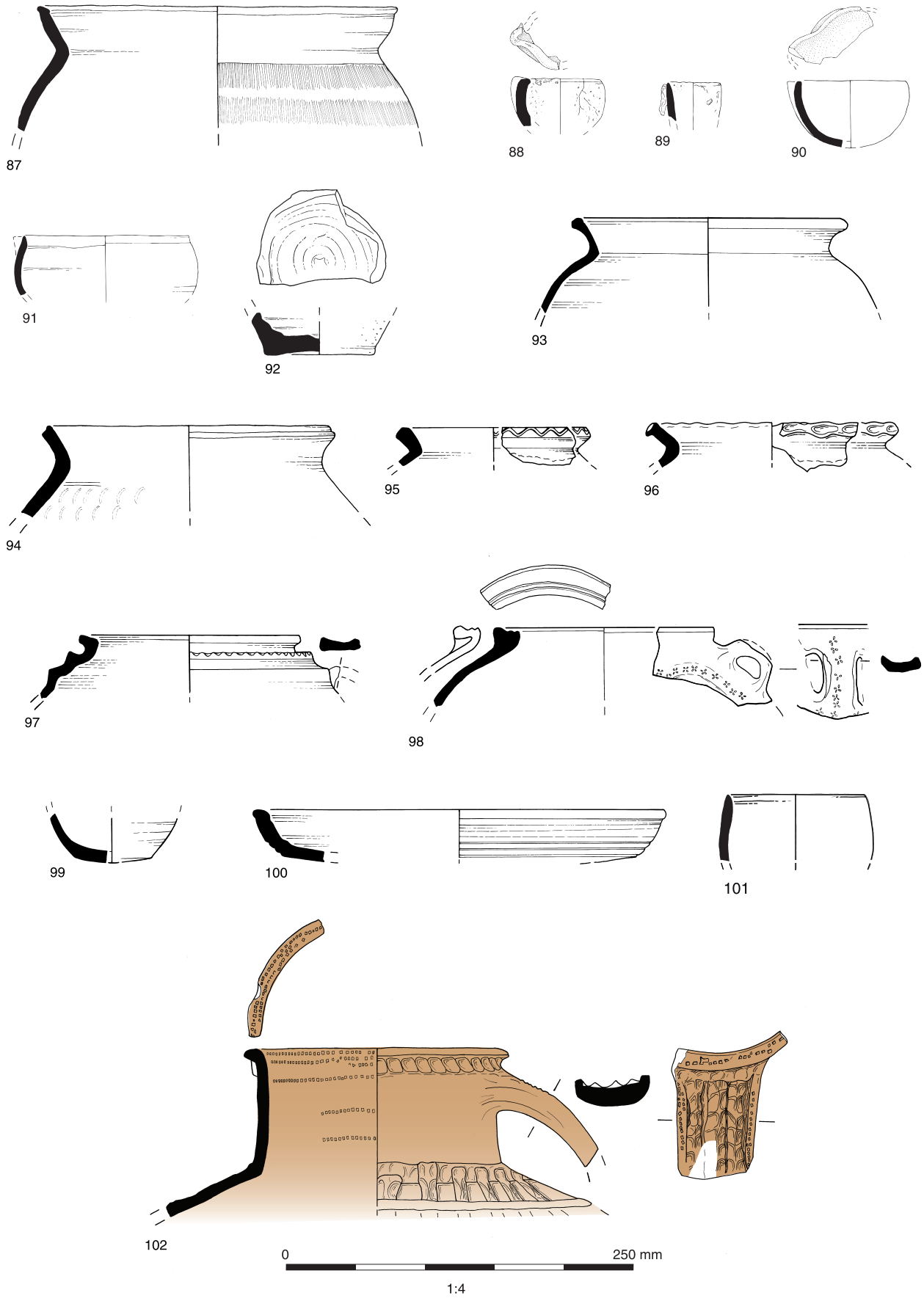


Fig. 7.14 Post-Roman pottery: MDF (87), MDL (88–91), MFI (92), MMU (93–101) and MNG (102)

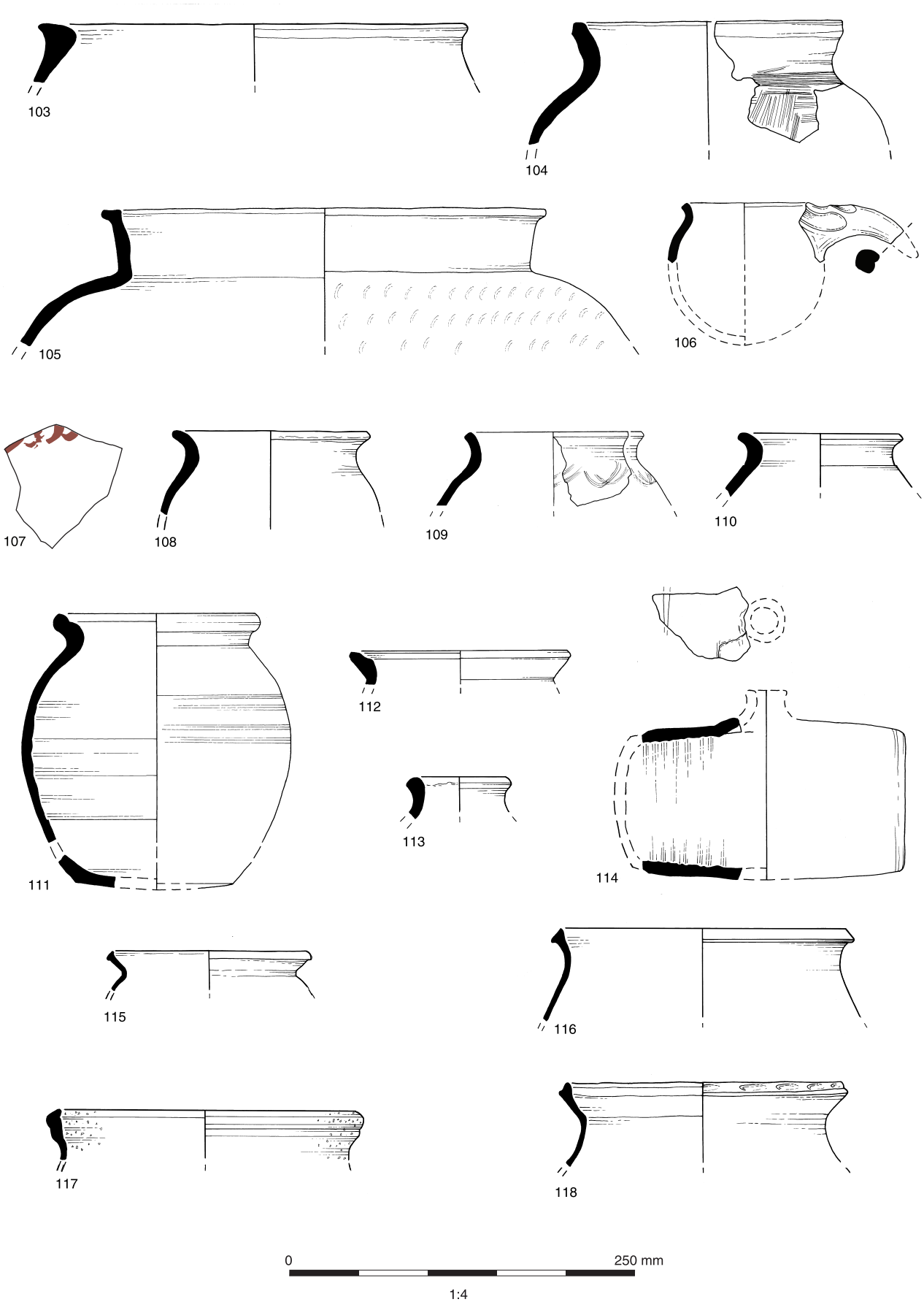


Fig. 7.15 Post-Roman pottery: MOE (103–5), MPAF (106), MPIN (107), MSH (108–114) and MTE (115–8)

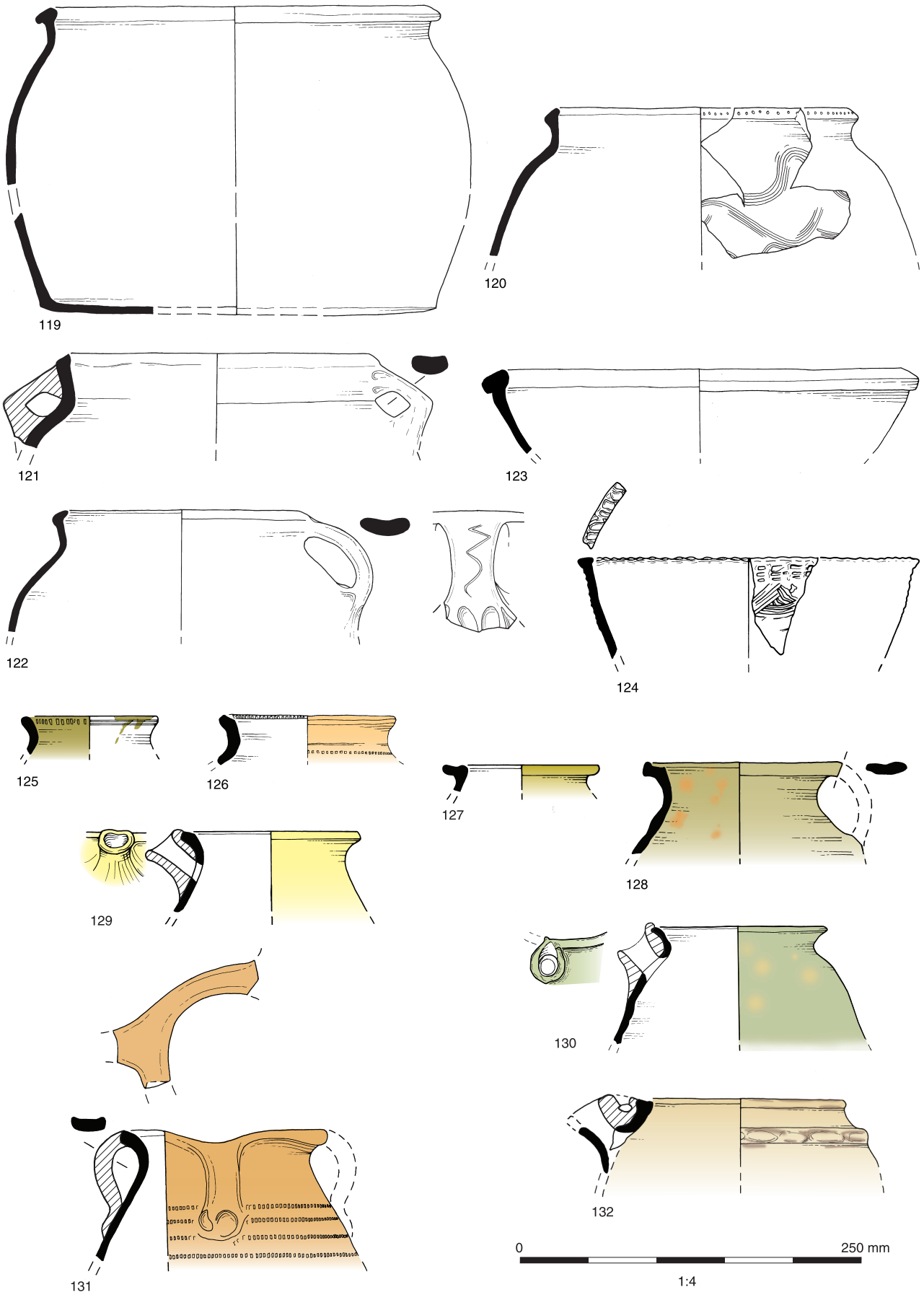


Fig. 7.16 Post-Roman pottery: MTE (119–124) and MWW (125–132)

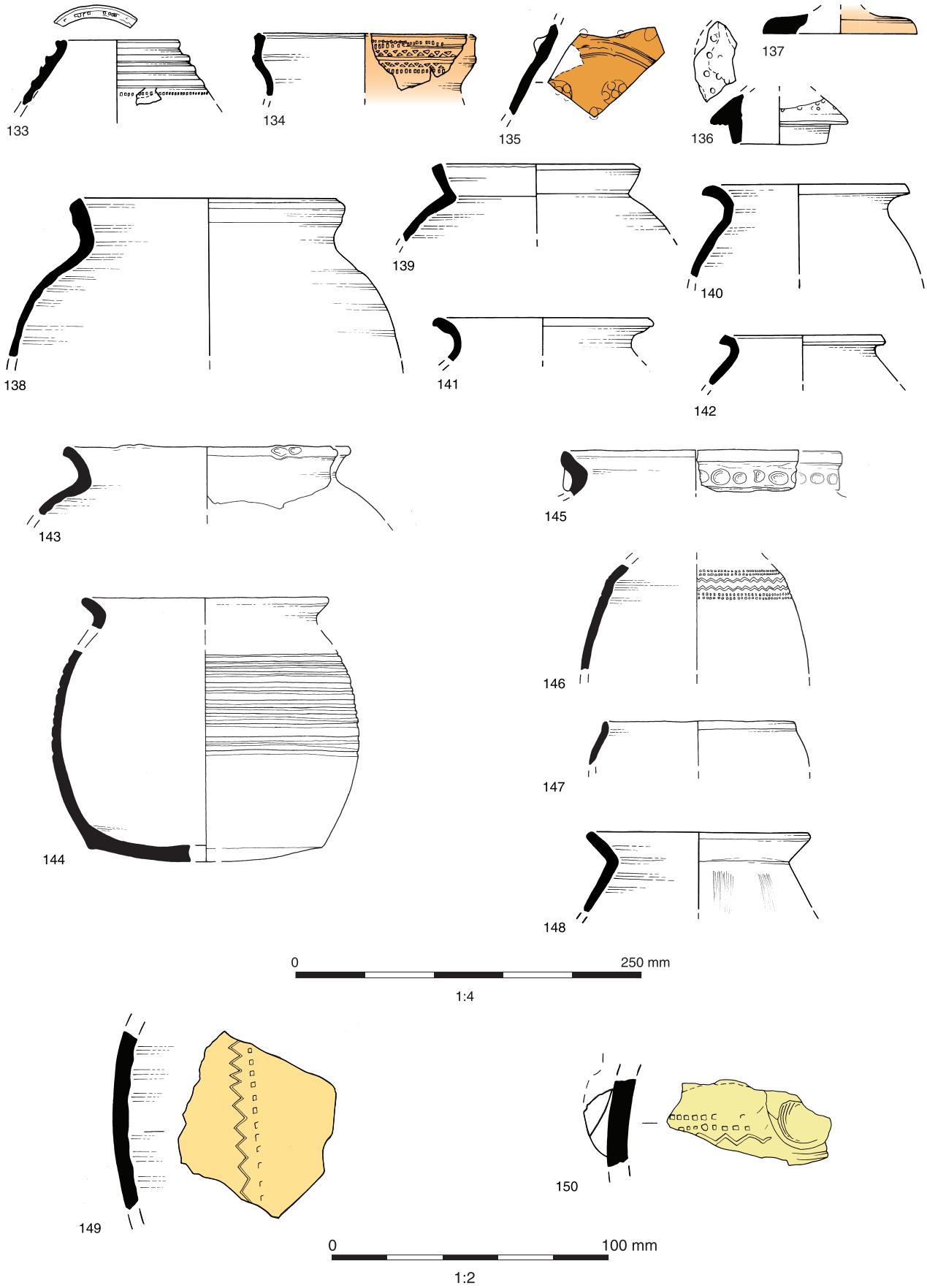


Fig. 7.17 Post-Roman pottery: MWW (133–7), MZM (138–147), UNID (148) and WWX (149–150)

115. Fabric MTE, Small delicate jar rim. Di 150 mm., Group NH8539, Context NH4186, Phase 5
116. Fabric MTE, Jar with triangular rim. Di 220 mm., Group NH8632, Context NH1364, Phase 5
117. Fabric MTE, Sub-collared jar rim. Wheel-turned? V coarse flint. Di 230 mm., Group NH8537, Context NH4170, Phase 6
118. Fabric MTE, Jar with thumbed rim. Elongated thumbing style. Di 200 mm., Group NH8542, Context NH4294, Phase 5
119. Fabric MTE, Jar profile with beaded/clubbed rim. Di 290 mm., Group NH8632, Context NH1364, Phase 5
120. Fabric MTE, Jar with stabbed dec on rim and combed dec on body. (Or possibly MAQ?). Di 230 mm., Group NH8576, Context NH2174, Phase 5
121. Fabric MTE, Cauldron (jar) rim with elbow handle. Di 220 mm., Group NH8620, Context NH6036, Phase 5
122. Fabric MTE, Cauldron (jar) with incised dec on handle and body. Di 190 mm., Group NH8575, Context NH2356, Phase 5
123. Fabric MTE, Bowl rim. Di 320 mm., Group DC7050, Context DC1095, Phase 5
124. Fabric MTE, Bowl with thumbed rim and combed dec on body. Di 250 mm., Group NH8633, Context NH1007, Phase 6
125. Fabric MWW, ?Spouted pitcher with crude rouletted dec on rim. Coarser orange-buff fabric. Unusually unglazed save for band of patchy greenish glaze along top of rim. Di 100 mm., Group NH8620, Context NH6051, Phase 5
126. Fabric MWW, ?Spouted pitcher with rouletted dec on rim and on body. Partially glazed over break – possibly a waster? Di 130 mm., Group NH8530, Context NH4328, Phase 4.2
127. Fabric MWW, Jar rim. Gr-yell glz. (just possibly N. French?). Di 114 mm., Group NH8556, Context NH3669, Phase 4.2
128. Fabric MWW, Spouted pitcher with flanged rim. Di 140 mm., Group DC7050, Context DC1448, Phase 5
129. Fabric MWW, Spouted pitcher. Simple everted rim. Complete spout. Di 130 mm., Group NH8538, Context NH4223, Phase 4.2
130. Fabric MWW, Spouted pitcher. Possible second or ?waster with glaze over broken spout. Di 130 mm., Group DC7050, Context DC1274, Phase 5
131. Fabric MWW, Spouted pitcher with rouletted dec and probably 3 handles. Di 150 mm., Group NH8596, Context NH2411, Phase 4.2
132. Fabric MWW, Spouted pitcher with inturned rim and external cordon (notched?) on shoulder. Thick yell-brown glaze all over. Di 150 mm., Group NH8530, Context NH4270, 4271, Phase 4.2
133. Fabric MWW, Spouted pitcher with inturned rim. Multiple shoulder cordons and crude rouletted dec on top of rim. Trace of applied spout/handle. Coarser orange-brown fabric with marl streaks. Di 90 mm., Group NH8530, Context NH4163, Phase 4.2
134. Fabric MWW, Unusual sub-collared jar rim with complex rouletted decoration. Di 160 mm., Group NH8596, Context NH2426, Phase 4.2
135. Fabric MWW, Sherd with curved applied strip and cinquefoil stamps, Group NH8560/NH8583, Context NH3090, 3532, Phase 5
136. Fabric MWW, Locking lid with stamped circles dec. Unglazed. Max Di 100 mm., Context DC1051, Phase 6
137. Fabric MWW, ?Lid or ?pedestal base fragment. Glazed on upper surface only. Di 110 mm., Group NH8596, Context NH2390, Phase 5
138. Fabric MZM, Jar rim. A3B rim form. Di 200 mm., Group DC7019, Context DC2004, Phase 4.2
139. Fabric MZM, Jar rim. A3B rim form. Di 150 mm., Group DC7050, Context DC1274, Phase 5
140. Fabric MZM, Jar. Simple everted rim. Di 150 mm., Group NH8543, Context NH3286, Phase 6
141. Fabric MZM, Jar rim. Thin-walled. Di 160 mm., Group NH8619, Context NH6155, Phase 5
142. Fabric MZM, Small jar with squared rim. Di 120 mm., Group NH8530, Context NH4381, Phase 4.2
143. Fabric MZM, Jar rim with grouped thumbing. Or reduced MMU? Di 210 mm., Group NH8530, Context NH4130, Phase 4.2
144. Fabric MZM, Jar profile with horizontal grooved dec. Fine-medium sandy pale grey fabric. Or MMU/import? Di 180 mm., Group NH8542, Context NH4177, Phase 5
145. Fabric MZM, Jar rim with applied thumbed strip on neck. Fine-medium sandy pale grey fabric. Or MMU/import? Di 190 mm., Group DC7023, Context DC2027, Phase 5
146. Fabric MZM, ?Jar or pitcher body with complex rouletted dec. Trace of applied feature. Or MMU?, Group DC7023, Context DC2027, Phase 5
147. Fabric MZM, ?Crucible or 'ginger jar' rim. Sooted internally. Di 140 mm., Group , Context DC2171, Phase 5
148. Fabric UNID, Unidentified jar. Probably a late Saxon regional or Continental greyware import. Vertical knife-trimming externally. Di 160 mm., Group NH8554, Context NH3491, Phase 5
149. Fabric WWX, Winchester-style ware. White-slipped sherd with rouletted dec., Group DC7007, Context DC1376, Phase 4.2
150. Fabric WWX, Winchester-style ware. White-slipped sherd with rouletted dec.and handle stub, Group DC7007, Context DC1376, Phase 4.2

BUILDING MATERIALS

Roman ceramic building material *by Cynthia Poole and Ruth Shaffrey*

The assemblage of 6788 fragments of Roman tile (806 kg) is dominated by brick and undiagnostic flat tile (Table 7.21; Fig. 7.18). Brick, flat tile, tegulae, imbrices, box flue and tesserae were identified but only a single probable voussoir. No complete example of any type was found and complete lengths or widths were rare. The fabric series established for the site was linked to the Winchester type series devised by Foot (1994). The digital report (*Digital Section 7*) includes full descriptions of the fabrics and tile forms.

The bricks include a complete bessalis and evidence of pedalis, lydion, sequipedalis and possibly bipedalis bricks. One brick with considerable variation in thickness may be a solid voussoir. A few tegulae mammatae were also identified. Roofing included tegulae with standard flange and cutaway forms, rectangular flanges being most common and with two or three finger grooves alongside the flange, a common feature on

Winchester tiles. The imbrices included a small number of thicker fragments, which may indicate the use of ridge tiles.

Flue tile consisted predominantly of box flue with typical combed keying, whilst one of the two with knife scoring was a half box flue tile (Fig. 7.18, no. 4). A single possible voussoir with combing on adjacent surfaces was identified (Fig. 7.18, no. 5). Tesserae mostly measured between 20 and 30 mm suggesting they derived from plain tessellated pavements.

Markings on the tiles include in addition to the keying on the flue tiles, a small number of tally marks, animal imprints (mostly dog) and a range of signature marks. The latter include both combed and finger marks, mostly forming simple arcs together with a number of less common patterns (Fig. 7.18, nos 1–3). Similar signatures have been found at The Brooks (Foot 1994), Brading villa, Isle of Wight (Tomlin 1987, 99) and at the villas of Houghton Down, Grateley and Dunkirt Barn (Cunliffe and Poole 2008) to the north-west of Winchester.

Production and distribution

The tile fabrics and characteristics have much in common with the ceramic building material found in Winchester at The Brooks site, which has been analysed in detail by Foot (1994) in relation to patterns of production and distribution. Although the fabrics were not recorded in the same detail, they support the differences in early and late varieties consistent with those from The Brooks site.

Foot (1994) concluded that the source area for tile reaching Winchester was to the south or south-east on the Tertiary clays of the Hampshire Basin. He places the source of his group 1 (equivalent to much of Group E) in the area of Bishop's Waltham close to the Roman road from Chichester to Winchester. The tiles in this group were of much better finish and quality than later phase material with knife trimmed edges a notable feature. His group 2 tiles (equivalent to many of the Group E subtypes and fabric B) are linked to the kiln at Braxells Farm, which lies about 4 km from the Group 1 tilery. The combed signatures on bricks are exclusively associated by Foot with this group and at NH/CC have been found in fabrics E1 and E2 and in deposits of Phase 2.4 or later. Foot has linked the micaceous group to the Alton/Farnham area, but only a very small quantity (fabric D1) of this was identified from the site all in Phases 2.3 and 2.4 or later.

The assemblage broadly supports Foot's conclusions but the preservation is much poorer and varieties more limited than The Brooks material, and as a result comparison of characteristics cannot be made for all forms or fabrics.

Table 7.21: Roman ceramic building material quantified by weight and fragment count

Form	*Weight (g)*	*% of assemblage by wt*	*Fragment count*	*% of assemblage by count*
Flue incl. voussoir	7619	0.9	90	1.3
Imbrex	47649	2.5	529	7.8
Tegula	90025	0.8	599	8.8
Flat tile	62759	11.2	942	13.9
Flat/indet	19943	7.8	362	5.3
Brick and brick/flat	531925	66.0	2487	36.6
Wall	4448	0.1	20	0.3
Tegula mammata	6553	0.4	14	0.2
Tessera	3223	3.9	92	1.4
Chipped disc	472	0.6	6	0.1
Indeterminate	31312	5.9	1647	24.3
Grand Total	805928	100.0	6788	100.0

The stratified groups

The character of the assemblage shows little change either spatially or temporally. Brick remains dominant throughout with smaller quantities of roofing and occasional tesserae and flue tile. The flue tile must certainly have been brought in from buildings outside the area of the excavation, as no buildings had any form of heating system or evidence of baths. Nor was any evidence of tessellated pavements found within any of the structures, suggesting these too derived from outside the area. There is no reason why one or more of the structures identified on site should not have been roofed with tile, but no one building appears to form a focus. All groups appear to be mixed dumps used as make-up or infill for levelling and yard surfaces brought in from several sources, including buildings that had heating systems and baths. Some such as the tegula mammata and knife scored flue tiles are early forms generally of 1st to early 2nd century date.

Although the assemblage is quite substantial, the quantity does not compare with the 3.7 tons from The Brooks site, where well preserved Roman town houses were found. Though it is tempting to try and assign material to individual buildings on site, the proportions of different forms both within the whole assemblage and individual groups do not conform with ones associated with definite buildings such as Northfleet Villa (Poole forthcoming) or Beauport Park (Brodribb 1979) where brick formed about a third of both assemblages, tegula *c* 35–40% and imbrex *c* 12%. The dominance of brick on this site has more in common with rural agricultural sites, often of low status, where brick or tegula tends to be recycled in hearths, ovens or similar structures. The brick hearth CC1567 and the burnt tile associated with Structure NH8516 suggest similar factors may have been at play on this site. The overall impression is of a very mixed assemblage derived from numerous sources, though the

Fig. 7.18 Illustrated Roman tile (1–5)

possibility that the brick does derive from the lining or cover of the channel CC1642 has been considered. However, Roman aqueducts are normally lined with mortar and the character of the assemblage in the channel is the same as that in the dark earth indicative of dumping of tile from buildings outside the excavation area.

Phase 2.1 (c AD 43–130/50)

All material assigned to this phase was found adjacent to the Roman street (Street CC1703) and apart from one structure formed a low density scatter across the area of fragments, which included tegula, imbrex and brick. The majority of the tile formed part of hearth CC1567. This was constructed of bricks made in fabrics C, E1, E2 and E3, three with signature marks and probably all pedales from their size.

A key research question is whether the conduit (CC1642) was lined with brick to form a covered culvert. The conduit construction (CC1850) consisted of flints set in mortar and its fill consisted of a robbing layer with mortar fragments (CC1642), overlain by dark earth deposits (CC7005). No tile was found in the construction levels nor in the primary fill. The material in the robbing deposits consisted of a variety of forms including tegula, imbrex, flue and voussoir, though dominated by brick. Some brick had mortar on the surfaces, or was burnt and some had a heavily worn surface or edge. Burning and heavy wear was also found on some of the other tiles. It is pertinent to note that one of the lower layers (CC1611) of the secondary fill is described as ashy silt with demolition debris. The assemblage found in the dark earth deposits forming the upper fill was similar to that in the underlying layers. The mix and character of forms, and the condition of the tile is not consistent with its use as the structure of a culvert.

One may conclude that a brick lining is unlikely, though some form of cover would be a reasonable supposition where the channel cuts across Street CC1703. No form of voussoir or vaulting tiles have been identified and if tile was used, it must be assumed that any covering arch was constructed of bricks set in mortar. This could certainly account for the exceptionally large quantity of brick surviving in Phase 2.4, but a timber or opus signinum cover are alternatives, though the evidence for opus signinum is lacking. Any additional height resulting from a vaulted cover needs to be considered in relation to road levels and the impact this would have where they cross.

The character of the tile in the channel does not stand out as significantly different to that in the other areas of the dark earth. Evidence of burning and ashy deposits in the channel suggest at least some of this material was brought in and dumped from elsewhere. This together with the preponderance of brick and reused tegula may suggest demolition debris from a hypocaust.

Phase 2.2 (c AD 130/50–270)

The burnt Structure NH8522 produced small quantities of brick, tegula and tesserae, with greater quantities in the overlying levelling deposits (NH8523) comprising brick, tegula, imbrex and tesserae. However, whether these represent demolition debris from the burnt building or material brought in from outside to level the area is uncertain, though there is nothing to distinguish this from all the other groups of tile.

Phase 2.3 (c AD 270–350/75)

Street deposits were a complete contrast in that Street CC1703 produced only two tiny fragments whilst Street NH8511/8513 produced 14.5 kg of brick and tile. This reflects the materials used for construction of the road surfaces, with clean flint gravel and pebbles used exclusively for the main Street CC1703, and more mixed materials used for the side Street NH8511/8513 which included tile mixed in with the metalling as well as in the interleaving accumulations of soil, where it may have been used to firm up more muddy hollows.

Many of the individual structures had relatively small quantities of tile associated with them all consisting of various combinations of brick, roofing, flue tile and tesserae. These groups do not indicate any constructional significance in relation to Structures CC7003, NH8521 and NH8517/8. Much of the tile associated with Structure NH8516 had been reused as posthole packing, whilst a large group from pit NH1413 contained heavily fired tegulae and brick, suggesting it derived from a demolished oven or flue.

The largest group came from Pit Group NH8524, which comprised dumps of varying size in pit and well fills, as well as an associated surface layer. There was seemingly little difference between material deposited in each pit with all containing a predominance of brick, together with smaller amounts of tegula and imbrex, a few tesserae and occasionally flue tile.

Illustration catalogue (Fig. 7.18)

1. Context NH1239: Signature mark: type 6. Tegula.
2. Context NH5182: Signature mark: type 10. Brick.
3. Context NH4718: part of signature on tile deliberately chipped to triangle (probably from tegula) for use as flooring or wall inlay.
4. Context NH1321: flue tile with knife scored keying
5. Context CC3368: voussoir with combed keying design – 'union jack' saltire in frame and small area of combing on adjacent side.

Post-Roman ceramic building material *by Cynthia Poole*

The assemblage of ceramic building material found in post-Roman contexts amounts to 4881 fragments (551,842 g), of which 792 fragments (79,305 g) are

medieval, post-medieval or modern, the remainder being residual Roman (4089 fragments, 472,537 g). The mean fragment weight (MFW) of the post-Roman tile is 100 g.

Ceramic building material was recovered from 94 features or layers, with pits producing two thirds of the assemblage. All material was recovered from secondary deposits with no direct relationship to primary structural features apart from some roof tile reused in a modern wall and in an Anglo-Norman foundation trench. The assemblage comprises predominantly roofing, brick and flooring of medieval date, together with small quantities of more modern material including brick, roofing, floor paviours and drainpipe. The forms are fully quantified by phase in Table 7.22. Nearly 50% by weight was found in modern (Phase 8) contexts, mainly layers rather than features. A small quantity (1%) found in prehistoric and Roman contexts is undoubtedly intrusive.

Several fabrics are the same or very similar to tile fabrics found at Southampton French Quarter (Poole in prep.). These resemble some of the contemporary pottery fabrics and complement the evidence from kiln sites such as Laverstock, which indicates that ridge tile and roof furniture was produced by potters. Coarse flint gritted fabrics used for producing chimney pots in Sussex (Dunning 1961) was most common at both Winchester and Southampton in the Anglo-Norman phase.

Roofing

A small quantity of curved and flanged tile was identified from Anglo-Norman and medieval deposits. These are similar to Roman tegula and imbrex in design and it is thought they were introduced by the Normans. The flat tile comprises plain fragments, of which a small number could be positively identified as peg tile by the presence of square and circular peg holes. One very crude example is of Anglo-Norman date. Some of the flat tile had splashes of glaze but all those with extensive areas of glazing are thought to be pieces of crested ridge tile (Fig. 7.19, nos 6–12). The ridge tile was glazed in shades of green, amber or brown. The crest was either triangular or pyramidal in form and included both cut and thumb pressed. It survived to some extent on 16 examples and as a scar sometimes with associated stab marks on a few.

Brick

Only a small amount of the brick has been definitely identified as of medieval origin. Much of it is post-medieval or modern. The only near complete brick came from Phase 5 well CC2049, which also produced the largest group of brick in a dump of post-medieval building rubble used as levelling during Phase 8.

Table 7.22: Quantification and forms of medieval and post-medieval tile by phase

		PH	*LRB*	*LRB (LC4)*	*LSAX*	*LSAX*	*LSAX*	*AN*	*Med*	*Mod*	*Unphased*	
Type	*Phase*	*1.3*	*2.3*	*2.4*	*4*	*4.1*	*4.2*	*5*	*6*	*8*	*U*	*Grand Total*
Brick	Nos		1		2		4	23	9	70	2	111
	Wt (g)		92		178		469	5623	1603	17768	68	25801
Drainpipe	Nos							2		2	1	5
	Wt (g)							31		102	97	230
Floor	Nos				7	1	2	5	15	6		36
	Wt (g)				832	95	335	525	2012	2515		6314
Roof: curving	Nos							2				2
	Wt (g)							89				89
Roof: flanged	Nos							2	7			9
	Wt (g)							175	310			485
Roof: flat	Nos		1		3	2	16	19	110	67	2	220
	Wt (g)		18		192	56	422	826	4032	4582	66	10194
Roof: peg	Nos			5	1		3	5	126	92		232
	Wt (g)			650	72		105	772	10146	13655		25400
Roof: ridge	Nos	1					1	2	55	2		61
	Wt (g)	19					24	66	3203	96		3408
Roof: ridge crested	Nos			1			2		69			72
	Wt (g)			31			160		6067			6258
Indet	Nos		2		4	1	4	19	6	7	1	44
	Wt (g)		68		124	20	42	511	104	262	8	1139
Total Sum of Nos		1	4	6	17	4	32	79	397	246	6	792
Total Sum of Wt (g)		19	178	681	1398	171	1557	8618	27477	38980	239	79318

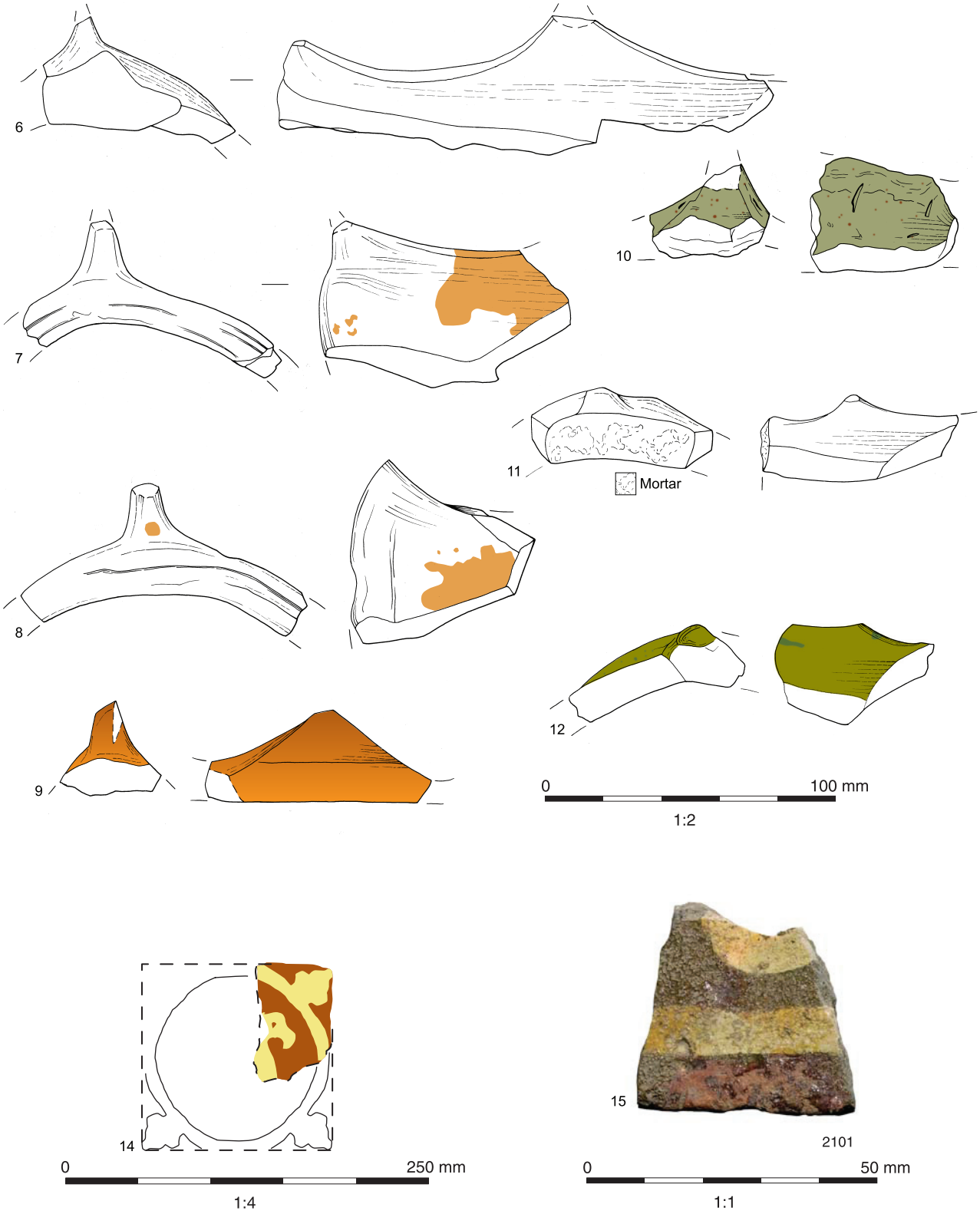


Fig. 7.19 Illustrated medieval tile (6–15)

Floor

Floor tile formed only 8% of the assemblage. Most of the medieval floor tile was plain glazed green or brown or unglazed and heavily worn, some from Anglo-Norman contexts but most from phase 6. Three fragmentary decorated bichrome tiles were found (Fig. 7.19, nos 13–14). One had a scoop cut in the base for keying. This had a pattern consisting of the head (facing R) of a spread eagle within a circle with trefoil at the angle. The position of the head suggests a double headed eagle, rather than a single headed eagle found on a very similar tile from the St George's street excavations in Winchester (Cunliffe 1964, fig. 56. 2). The decorated tiles normally date from the 12th–14th century and were often used by religious establishments, and are still visible in the floors of Winchester cathedral and the Hospital of St Cross.

Discussion

Medieval building material occurred in low density and was poorly preserved, perhaps reflecting the level of use of ceramic materials for building, roofing and floors, though other factors such as truncation of the excavation levels may have distorted the overall distribution observed. Brick is very poorly represented, suggesting buildings used timber as their main component. Where brick was present it was used in limited ways to provide greater strength or durability, or where fireproof materials were needed such as in fireplaces, hearths or ovens. Roofing is the most common material, comprising peg tiles and crested ridge tiles. An increase in the use of ceramic roofing to decrease fire risk was encouraged by most city authorities during the medieval period, but it is clear from the quantity found that only a limited number of buildings in the area used roof tile. The pattern needs to be viewed in conjunction with other building materials as documentary sources indicate slate from Devon and Cornwall was more prevalent in Winchester than roof tile (Hare 1991). There is also a notable absence of chimneys, louvers and finials, normally associated with higher status buildings, suggesting that those structures that did utilise tile did not house the most wealthy merchants of the city. Floor tile is sparse and was used in only a few residences. However, the decorated floor tiles appear to relate to specific plots utilising more tile, and so may indicate that the owners of certain properties were successful people wishing to display their wealth. It could also be argued that they derived from the Archdeacon's residence.

The distribution of tile across the site when related to individual properties suggests few properties used tile, as several produced none or only a few fragments. A number of properties which stand out as producing relatively more material in Phases 5 and 6 are BE 2, BE 5, and BW 3/BW 4. It is also noteworthy that those properties producing most ceramic building material also produced most stone flooring and roofing, indicating the more prestigious buildings were utilising a variety of materials.

Ceramic brick and tile was not normally in use before the Conquest, unless re-using Roman materials. Although some high status sites associated with the church or nobility may have had early access to these materials, it is unlikely that ordinary domestic properties were sufficiently wealthy to utilise ceramic tile. There were two possible establishments which, during the Anglo-Norman period, may have been the first to start using tile on any scale. These were centred on Properties BE 2–BE 3 and BW 3–BW 4. The evidence suggests the buildings were initially roofed with Anglo-Norman curved and flanged tiles, and some rooms were floored with plain floor tiles, probably during the 11th–12th century. Subsequently the roofs were refurbished during the 12–13th centuries with peg tiles and glazed crested tiles and some floors retiled with decorated encaustic tiles. At this stage a third property, BE 5, started using ceramic roofing and glazed, decorated floor tile.

Illustration catalogue (Fig. 7.19)

6. Context NH3234: medieval crested ridge tile: crest type 1
7. Context NH3234: medieval crested ridge tile: crest type 1c
8. Context NH3234: medieval crested ridge tile: crest type 1c
9. Context NH3234: medieval crested ridge tile: crest type 1c – applied crest spur
10. Context NH3234: medieval crested ridge tile: crest with stab marks at base (?type 5 or 6)
11. Context NH3234: medieval crested ridge tile: crest type 11
12. Context CC6013: medieval crested ridge tile: crest type 11c
13. Context NH3236: floor tile encaustic tile with bichrome decoration : head (facing R) of a spread eagle (probably double-headed) within a circle with trefoil at the angle. 13th-14th century.
14. Context CC2101 floor tile encaustic tile with bichrome decoration

Structural clay, fired clay and mortar

by Cynthia Poole

Structural and fired clay comprising 3261 fragments (37,366 g) with an overall mean fragment weight (MFW) of 11.5 g was recovered from 262 contexts; 1877 fragments (4986 g) were recovered from sieved samples. A third of the assemblage was recovered from Roman deposits, just under half from late Saxon contexts and about a fifth from medieval and later deposits. Minimal quantities were found in prehistoric contexts and amounts decreased after the Saxon period. The largest proportion (40%) was found in pit fills and the remainder was distributed through a wide range of other features and layers.

This report is derived from the detailed digital report (*Digital Section 5*).

Fabrics

Nine provisional fabrics were allocated during the assessment, of which one (H) is a pottery fabric. The remainder were placed in two broad groups: a sandy group (fabrics A, B and F) and a calcareous group (fabrics C, D, E and G). Pieces of mortar, cement and concrete were also noted. The fabrics are described in detail in *Digital Section 5*.

Forms

Oven and hearths

Oven and hearth fragments dominated the assemblage. Most probably represent domestic structures. Oven wall fragments supported on a wattle framework were most common and other less diagnostic structural elements may include perforated oven plate and hearth.

Industrial

A range of material representing industrial activity, probably bronze working, comprises furnace wall or lining (Fig. 7.20, no. 1), mould fragments (Fig. 7.20, nos 2–3) and possible crucible. The largest groups come from late Saxon and Anglo-Norman phases, indicating more intensive activity than in the Iron Age and Roman periods.

Wall/Structural

A few pieces may relate to building structure, although little constructional detail survives for any period. A few formless mortar fragments were found in late Saxon, Anglo-Norman and medieval contexts. Mortar/plaster characterised by a very flat smooth surface, occasionally with evidence of whitewash, is interpreted as wall render. One piece had a *c* 28 mm circular perforation, probably to hold a wooden dowel for the attachment of a fixture or fitting. The painted Roman wall plaster has been reported separately (see Biddulph, below).

Examples of wall daub or render in fabrics C, E and F, usually 30–40 mm thick, was identified from Roman, Saxon and medieval contexts. Some was thick render having flat surfaces both sides. A fragment of Roman daub with a combed surface was probably the impression of a combed tile rather than keying on the daub surface. The few, small fired clay fragments associated with burnt building Structure NH8522 were indistinct, with two surfaces at right angles, possibly the top or base of a wall panel. Surprisingly little wall daub was present, and this material may have been cleared and dumped elsewhere. The plaster from the burnt building has been reported separately and was not seen by the author. However, one fragment of fired clay in fabric C from Structure NH8522 was 22 mm thick and had two interwoven lath impressions,

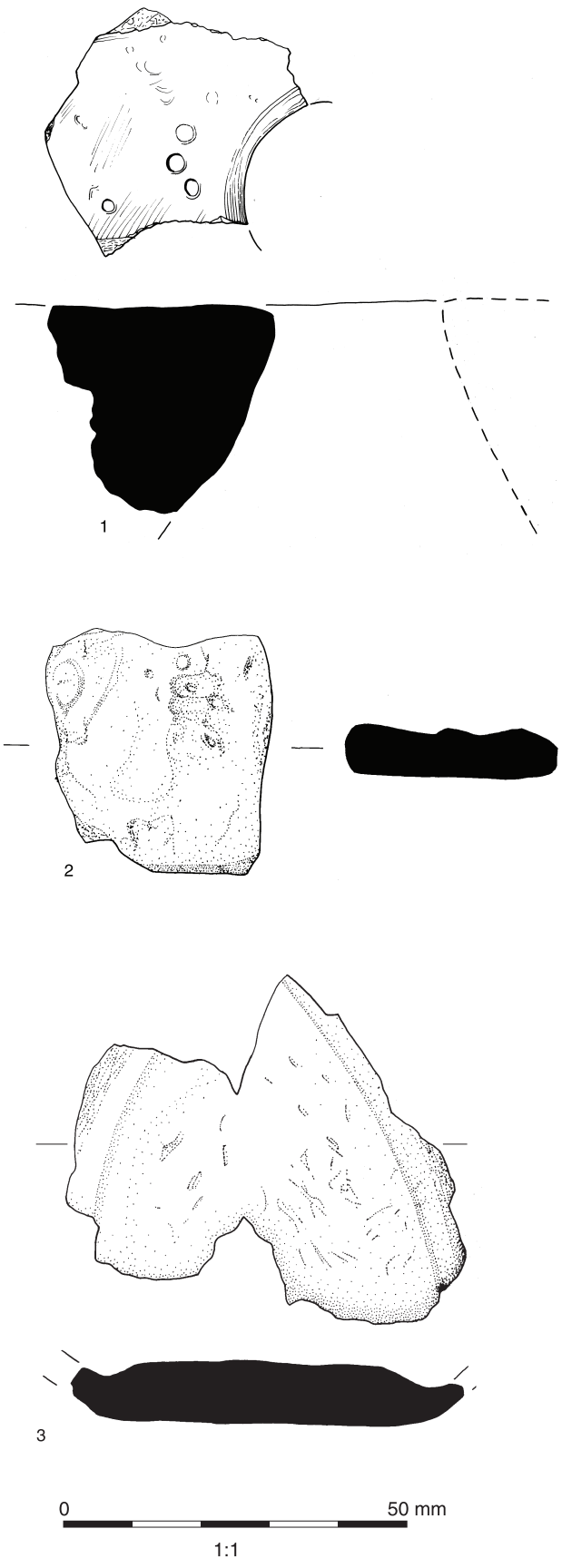


Fig. 7.20 Illustrated Fired clay (1–3)

both over 22 mm wide by *c* 6–7 mm thick, suggesting it derived from a ceiling or thin internal partition walls.

The medieval wall daub contained a very high density of coarse straw or hay added as a strengthening agent, typical of daub found in standing buildings (Graham 2004), but had no withy or lath impressions. Similar daub was found at in medieval levels at Southampton French Quarter (Poole http://library.thehumanjourney.net/44/1/SOU_1382_Specialist_report_download_F4.pdf).

Discussion

The Iron Age and Roman assemblage

The only significant pieces of fired clay from the Iron Age were a heavily fired small brick and a small vitrified fragment of furnace lining from postholes of Structure NH8502. These may indicate industrial activity, perhaps bronze-working, in the vicinity. The brick is unusual and its deposition in a posthole may reflect similar motivation to deliberate placing of pottery sherds, frequently refired, in the postholes of early Iron Age structures (Brown 2000).

The nature of Roman fired clay was consistent through all phases. Most from Phases 2.1 and 2.2 was non-diagnostic, probably derived from ovens or hearths. A few fragments of wall daub occurred in the area of Structures CC7003 and CC7006 and burnt building Structure NH8522. The group centred on Phase 2.3 Structure NH8521 was interpreted as wall daub representing material cleared and dumped from Phase 2.2 Structure NH8522. A little furnace lining associated with pit CC1556 occurred in Phase 2.3. Only in the later Roman period (Phases 2.3 and 2.4) did oven wall appear and dominate the assemblage. The majority is in sandy fabric F, with lesser quantities in fabric A and calcareous groups C and E. One large deposit in fabric C was associated with Structure CC7003.

During recording it was noted that much of the oven wall in fabric F, though from several contexts, had very similar characteristics: consistency of firing, wattles commonly stripped of bark and with diameters commonly larger than average and external thick white lime plaster wash. This almost certainly derives from a single building, centred on Structure NH8521. Groups of the same type were found in late Saxon deposits in the area of Properties BW 2 and BW 3, which overlie Structure NH8521, suggesting the later deposits were residual.

A similar pattern appears with oven structure in fabric A, which concentrated in the Roman period in the area of Structure NH8516, suggesting that the similar oven debris in fabric A found in features on Property SE2 was residual Roman. The limited spatial distribution of fabric A suggests it all derived from a single structure.

The Saxon-medieval assemblage

A comparison of Roman and post-Roman fabrics and forms produces a number of broad distinctions. Pieces indicative of industrial activity, including furnace structure, moulds and crucible are more prevalent in the post-Roman group. Most of the structural material related to buildings was also found in these later periods. The calcareous fabrics are more common compared to the Roman period, especially that used for oven wall.

Fired clay is sparse in late Saxon Phase 4.1, with small amounts of furnace and wall daub. In Phase 4.2 increasing quantities of industrial material appear, including furnace lining and wall and crucible, together with oven structure and some wall daub. Metalworking moulds were the only new form found in the Anglo-Norman phase. The association of furnace debris with oven wall at some properties suggests these are from related structures. The exterior surfaces of furnace walls would not be vitrified and could not be separated from structures used for lower temperature activities. This pattern continues into the Anglo-Norman and high medieval periods, though quantities noticeably decrease in the later phase. The similarity of assemblages from late Saxon to Anglo-Norman on many properties may indicate that much of the Anglo-Norman and medieval fired clay was residual Saxon. The general decline in quantities of fired clay through the medieval period certainly reflects changes in materials used for ovens, hearths or similar structures, with brick, tile and stone increasingly used, as well as a decrease in construction at surface or sub-surface levels. The fired clay from the individual properties is summarised below:

Property BE 1: Virtually all fired clay occurred in late Saxon (Phase 4) contexts. Diagnostic elements were oven structure and wall in fabric C and E and furnace lining.

Property BE 2: Most fired clay from Phases 4.2, 5 and 6 was indeterminate, apart from a little wall daub and render in Phase 4.2 and perforated furnace wall/lining in Phase 5.

Property BE 3: The only diagnostic material was furnace and crucible fragments from Phase 4 pit CC1063.

Property BE 4: Furnace lining occurred in Phases 4.1, 4.2 and 6. A group of mould fragments was discarded in pit CC2043 during Phase 5.

Property BE 5: Fragments of oven wall, furnace and crucible were found in Phase 4.2 in pits (CC6028, CC3184) and a posthole (CC6030).

Property BW 1: A few insignificant fragments of non-diagnostic fired clay occurred in Phases 4.2 and 5.

Property BW 2: Little material derived from the use of this property.

Property BW 3: Most structural clay was found in

Phase 5 with a small amount from Phase 6. Recognisable forms included wall daub, render and a substantial dump of oven wall in layer NH3098.

Property BW 4: A moderate density of fired clay—oven wall, a little furnace lining and wall daub—was found in late Saxon (Phase 4) and Anglo-Norman (Phase 5) phases

Property BW 5: A low density scatter of small mainly indeterminate fragments was found in Phase 4 and 5 contexts.

Property SE 1: Furnace lining, fuel ash slag and oven wall and possible oven plate predominantly occurred in Phase 5, though a small quantity was found in Phase 4.

Property SE 2: A moderate scatter of fired clay, mainly furnace lining, was found in Phase 4.2, and a few further pieces of furnace in Phase 5.

Property SE 3: Furnace lining dominates the assemblage in the late Saxon and Anglo-Norman period. One piece of furnace wall had a tuyère perforation (Fig. 7.20, no. 1). A hearth tile or large block of hearth floor occurred in Phase 5.

Catalogue of illustrated fired clay (Fig. 7.20)

1. Context CC1085: fired clay: fragment of vitrified furnace wall with perforation for tuyère.
2. Context CC2237: fired clay: fragment of metal-working mould
3. Context CC2115: fired clay: fragment of metal-working mould

Structural stone *by Ruth Shaffrey*

Phase 1: Prehistoric

A fragment of possible wall veneer of Paludina limestone, the only piece of structural worked stone recovered from a Phase 1 context (NH6507), was probably intrusive.

Phase 2: Roman

The wide variety of stone types represented in the small Roman assemblage includes both local and imported materials. Slabs of various types of shelly limestone, mainly from the Purbeck beds, were probably used for roofing, as evidenced by examples retaining original edges and perforation (eg NH4742, a soil above Structure NH8521). Other slabs were probably used as wall courses or in flooring, although none has significant wear except one roughly trapezoidal slab of Purbeck limestone (NH2619). Tooled fragments of shelly limestone and locally available chalk indicate that stone structures were located nearby.

More exotic imported stone took the form of thin slabs, probably best interpreted as wall veneer. One fragment of dark green and white marble is probably Campan Vert from the Hautes Pyrenees (fill CC2251 of pit CC2249). A pinkish variety of Yellow Lez Breccia from Lez, Haute Garonne, France (NH6160) came from a late Saxon pit NH6158 but is almost certainly residual from Roman activity. Although French marbles are generally less common than those from eastern Mediterranean areas, Campan Vert has been found at Silchester and Dorchester (Pritchard 1986, 187) and both varieties were found at Fishbourne palace (Cunliffe, 1971, 17). These marbles suggest that a high status Roman building with ornamental marble inlay, probably wall veneer, was located nearby. Both pieces were identified by Monica Price of Oxford University Museum.

Phase 4: Late Saxon

Most of the stone from late Saxon contexts is limestone slabbing, used either for roofing, (at least 3 kg) flooring (at least 1 kg) or as wall courses, although few (11 kg) retain distinguishing features. Deposits of this phase also produced four pieces of neat triangular limestone shapes with one worn face (eg NH1262). These may be the reused ends of pointed roof-stones, although similar shaped pieces of ceramic building material also occur. These triangular pieces may also have been used as large tesserae.

In addition, Late Saxon deposits produced a Purbeck marble slab, probably wall veneer, smoothed but not polished on both faces (NH4365). As there is currently no evidence for the use of Purbeck marble between AD 400 and 1100 (Blair 1991, 47), this presumably dates to the later part of the period or is residual Roman. Another fragment of wall veneer, an exotic piece of Yellow Lez Breccia from Lez, Haute Garonne, France (NH6160), is almost certainly residual from Roman activity (see Phase 2).

Saxon contexts produced very little imported stone, the structural stone being mainly chalk. Context NH3346 produced 17 blocks of soft chalk, most retaining tool marks on at least one face, and several are slightly curved. The predominance of chalk suggests the presence of mostly domestic structures nearby, as previous excavations highlighted a clear difference between the use of imported stone, such as Bath stone and Quarr, for large scale building projects and local sources of chalk and flint for domestic buildings (Biddle 1990, 318).

Phase 5: Anglo-Norman

Anglo-Norman contexts produced large quantities of structural material. The blocks and architectural fragments are mainly chalk, most of it quite soft. Many of the blocks have one or more dressed faces (NH3128) and two pieces of chalk voussoir were used to line well CC3043 (CC3044). The softer pieces were clearly from nearby outcrops, but some of the harder chalk (NH3236) was probably been imported and may be Beer stone from Devon, a hard chalk used in the cathedral (Anderson 1990, 309).

A number of other lithologies previously identified in Winchester were present, including Quarr stone (NH2107, NH2606, NH4447), a creamy coloured shelly limestone consisting of dissolved clam moulds surrounded by a strong calcite cement (Bishop 2001, 34). This was exploited until the main deposit was exhausted by the end of the 12th century (ibid., 167), and so the recovery of six fragments from Anglo-Norman and medieval contexts here is appropriate. It adds to at least 578 other pieces recorded in Winchester (Anderson 1990, table 52). In addition to Quarr stone there are other imported limestones, including a few blocks of Oolitic limestone, probably Bath or Portland stone. Neither limestone is common in Hampshire but both are known from Cathedral Green and Wolvesey Palace in Winchester (ibid., 311). Various other shelly limestones were also recovered. The structural stone includes some moulded architectural pieces that may be fragments of columns (NH3083 and NH3399).

The presence of imported building stone in Anglo-Norman contexts is in keeping with the major building projects which took place during that phase. Stone masons are known to have been more numerous in the 12th century than in later medieval Winchester (Keene 1985, 283) and, as a result, more private houses were built of stone than at a later date (ibid.).

A diamond-shaped white limestone fragment (NH2278, SF 959) and a fragment of Purbeck marble slab (NH5183) are both wall veneer. Purbeck marble was most intensively worked between 1250 and 1350 but was popular from about 1170 to 1550 (Blair 1991, 41) and is thought to have been worked on site at the Cathedral from the 13th century (Anderson 1990, 313).

As with Phase 4, a number of slabs were recovered. Some have only worked edges, suggesting they were utilised as courses in wall construction (NH3356), and one (NH4728) has mortar adhering. Others have worn surfaces, suggesting they were used as flooring, including some large stone tesserae in neat triangular shapes, each with one worn face (eg NH1194). Approximately 2.5 kg of these slabs are roof-stones (eg NH1395 reused as a whetstone and NH4742) while a further considerable number (7.7 kg) retain no evidence of working but are likely to have been used or intended for one of these functions. Most are limestone, probably Purbeck and one is a fragment of a moulded architectural piece (NH1155), probably from the top of a column.

In addition there are two pieces of more exotic stones. One thick slab of marble may be Campan Vert as seen in earlier phases and a second piece of probable wall veneer is of Sussex 'marble'. Both of these may be residual from Roman phases or may have come from Wolvesey Palace which has produced more fragments of exotic imported stone than other excavated sites in Winchester (Biddle 1990, table 54).

Phase 6: medieval

Medieval contexts produced a number of chalk and limestone blocks retaining tool marks, including several blocks of Quarr stone and Bembridge limestone (presumably brought in association with the Quarr stone), as well as oolitic limestone. As Quarr stone cannot have been obtained in any quantity from the quarry after the 12th century (see Phase 5), it must date to earlier activity and indeed one of the pieces was found in demolition layer NH4102. This context also produced a hard chalk hood mould. This use of stone probably relates to earlier larger scale building projects somewhere rather than the 13th- and 14th-century extensions made to the archdeacon's house.

Medieval contexts produced the bulk of the stone roofing material—15 kg in total. Most of the medieval stone roofing is slate (11 kg), probably imported from Devon or Cornwall. Slate was being shipped from the Devon ports to Southampton as early as the 12th century and over 800,000 slates were imported for the king's buildings at Winchester between 1171 and 1186 (Wood 1983, 295).

Other roof-stones, mainly Purbeck limestone and Pennant sandstone, were used. Tilers and slaters were quite common in Winchester (Keene 1985, 283) and slated roofs not out of the ordinary. Many properties produced some stone roofing material, but Properties BW 3 and BW 5 produced significantly more slates than other properties (6.6 kg and 4.5 kg respectively), suggesting that slate was used for roofing there.

Painted wall plaster *by Edward Biddulph*

A total of 251 fragments of Roman-period wall plaster were recovered. Three plaster fabrics were identified. Fabric 1 had a soft yellow-brown matrix filled with moderate to frequent chalk fragments, sand grains of varying size and straw or grass impressions. Fabric 2 had a white matrix, but was essentially similar to fabric 1 and should perhaps be regarded as a variant of it. Fabric 3 was a hard yellow-brown matrix filled with moderate chalk fragments, quartz pieces, smaller sand grains, crushed flint, and occasional black or red iron-rich grains.

Fabric 1 was commonest, followed by fabric 3, then fabric 2. The backs of some pieces had the impressions of reed or wattle rods, indicating that the plaster had been applied to reed bundles fixed to roof timbers or wattle and daub walls. The plaster generally survived on its mortar backing up to a thickness of 25 mm. A large fragment appeared to comprise two layers of plaster, each with an application of red-brown paint, suggesting that the room from which the fragment derived was re-plastered at least once. Different types of surface treatment were recognised. In some cases, the plaster was simply skimmed to form a surface. A

thin coat of white or colour paint could be applied directly to this surface for further refinement. Other pieces saw an application of colour paint on top of a white base paint.

Coloured washes or painted geometric or figurative designs were recorded on plaster from three groups. Traces of colour and patterning, usually applied on a white base, were seen on a few pieces from Structure NH8522 (Phase 2.3). Red- or orange-brown washes were recorded on some 25 fragments (three being on a fabric 3 mortar). Dark grey paint was seen on a further 17 pieces, one of these a little more decorative, featuring a light grey stripe sandwiched between darker grey stripes or panels. Group NH8523 (Phase 2.3), levelling over Structure NH8522, contained a single fragment, which had traces of a red-brown painted surface above a white undercoat on a fabric 1 mortar.

Pit Group NH8524 (Phase 2.3) contained plaster fragments that had a relatively wide range of decorative schemes, all on fabric 1 mortar. A small fragment of plaster was painted turquoise. No edges were seen, but the fragment may be part of a border. Another fragment was decorated with a red-brown stripe or panel and a sphere-like motif on a white background. Traces of a red-brown wash bordered by a dark grey stripe or panel were seen on other pieces.

The fragments do not allow decorative schemes to be fully reconstructed, but the evidence points to panels painted orange- and red-brown and grey bordered by light grey stripes in Structure NH8522, and red-brown panels in Group NH8523. The scheme was more complex in Pit Group NH8524, involving red-brown, grey and turquoise borders and perhaps a floral or rounded pattern. The decoration on the plaster from groups NH8522, NH8523 and NH8524 suggests that the buildings they belonged to served a domestic function. Wall paintings would be appropriately placed in areas used for social gatherings and entertaining, for example, a dining room, bath suite or reception area. The plain walls of groups NH8516 and NH8521 might indicate lower status, although given the very small amount recovered from those groups, it is uncertain to what extent the plaster is representative of the overall decoration.

TOOLS, EQUIPMENT, PRODUCTS AND EVERYDAY OBJECTS

Iron Age coin *by Philip de Jersey*

A single Iron Age coin (SF NH1263) was recovered from Phase 1.3 subsoil deposit NH4390. This is a base silver unit attributed to the Cotswolds tribe of the Dobunni. Although in relatively poor condition, enough of the reverse design is visible to confirm its identification. The weight, the presence of some silver and the relatively unstylized cock's head below the horse all suggest a date early in the Dobunnic uninscribed series, perhaps *c* 40 BC. The class A silver units stand at the head of a long series of silver coinage, probably beginning *c* 50 BC; this coin is thus likely to date between *c* 50–40 BC. Coins of the Dobunni are relatively rare finds in Hampshire, with only 15 examples recorded in the Celtic Coin Index. Of these nine were recovered in excavations at Hayling Island temple, including three silver units also of class A. This coin is therefore a somewhat unusual find from Winchester.

Roman coins *by Paul Booth*

Some 305 Roman coins were recovered from the site, most dating to the late 3rd and 4th centuries. The assemblages are summarised in Table 7.23 using the revised period numbering scheme of Reece (eg 1991) and then grouped into four wider coin loss phases (A to D, Reece 1973, 230–1). A fuller report and detailed identifications are presented in the digital report (*Digital Section 2*).

The earliest coin is a Claudian copy *as* of Minerva type (SF417). This is not particularly well preserved, but is clearly a 'clumsy copy' in the terms of Kenyon's recent discussion of other examples from Winchester (2008, 120), equivalent to grade C in his discussion of the material from Colchester (Kenyon 1987, 27). Another *as* is almost certainly of Domitian, while other early Roman coins include a *sestertius* of Trajan.

An *as* of later 1st-century date (SF1517b) was fused to a *sestertius* of Faustina II, one of five coins dated to the reign of Marcus Aurelius. Three of the four late 2nd-early 3rd century coins were *denarii*, two of them plated, one (SF1762) probably of Geta, the other (SF1135) not closely identified. The unplated *denarius* was of Julia Mamaea. The fourth coin in this group was a *sestertius* of Severus Alexander (SF1820).

Regular issues of period 13 include one of Gallienus (Dianae Cons Aug) and one of Tetricus I (Hilaritas Augg). Regular *antoniniani* were relatively scarce, though corrosion made some attributions questionable. Single issues of Salonina (uncertain reverse type), Postumus (Laetitia), Gallienus (Apolloni Cons Aug) and Claudius (Pax Aug), and two of Victorinus (Pietas Aug), fall into this category. Twelve or thirteen coins of the Tetrici, however, were all assigned to the 'irregular radiate' group, along with three further coins each of Claudius and Victorinus. These were placed in period 14. Other (mostly regular) issues of this period include an *antoninianus* of Carausius (Laeti Ti Aug), a *quinarius* of Allectus (Virtus Aug, galley type), one of Probus (Spes Aug), eight of Carausius and three of Allectus. The irregular coins assigned to this period include two based on Consecratio types of Claudius II and one of Tetricus II (?Pax Aug).

Early 4th century coins were fairly well-represented, though at least two were assigned to this period on their general characteristics rather than

specifically identifiable features. One coin of AD 326 (SF1340), has an unusual variant on the reverse legend, which reads CONSTAN/TINAS/ANG below the wreath, rather than CONSTAN/TINUS/AUG. The more numerous coins of AD 330–348 are mostly unremarkable. A minimum of 12 of these 51 coins are probably irregular issues, amongst which a small mule (SF1759a) of a standard obverse right-facing imperial head (otherwise illegible) with a victory reverse of Constantinopolis type is notable. The other irregular types of this period were Urbs Roma, Gloria Exercitus 2 standards (3), Gloria Exercitus 1 standard (6) and an uncertain reverse type. Other coins of this period single examples of Pax Publica and Victoriae dd Augg q NN.

A FEL TEMP REPARATIO (Phoenix on globe) coin of AD 348–350 is the only regular issue from period 18 (AD 348–364). All but one of the other 11 coins assigned to this period are small pieces dominated by Fel Temp Reparatio fallen horseman types, the remaining coin, also irregular, being of Victoriae DD NN Aug et Cae(s) type. Another group of four small coins from a Phase 2.3 deposit (NH2290) might also have been minims of this period on the basis of their size (8–11 mm) and general character, but had no other identifiable features and were assigned to a general late 3rd–4th century category.

Issues of the House of Valentinian (period 19) were relatively numerous and divided between the principal common types of this period, Securitas Reipublicae (13), Gloria Romanorum (8) and Gloria Novi Saeculi (1). Two coins of period 20 are also present, both Vot XV Mult XX issues of Gratian. Ten coins are assigned with varying degrees of confidence to the final period (21), including coins of Victoria Auggg type, one being attributable to Arcadius.

Table 7.23: Quantification of Roman coins by issue period and phase

		Northgate House (NH)			*Discovery Centre (CC)*		
Date	*Reece Period*	*Total coins*	*Phase total*	*% of coins assigned to phase*	*Total coins*	*Phase total*	*% of coins assigned to phase*
-41	1						
41–68	2/3				1		
69–96	4				1		
41–96	2-4	1					
96–117	5	1					
117–138	6						
138–161	7						
161–180	8	5					
180–192	9						
193–222	10	1					
222–238	11	2					
193–238	10/11	1					
238–260	12						
Other Phase A		4	15	6.4	2	4	8.5
260–275	13	21			4		
275–296	14	80 (59)			14 (10)		
Phase B			101	43.2		18	38.3
296–317	15	8					
317–330	16	8			4		
Other Phase C		2	18	7.7		4	8.5
330–348	17	51			8		
348–364	18	12					
364–378	19	22			8		
378–388	20	2					
388–402	21	7			3		
Other Phase D		7	101	43.2	2	21	44.7
3–4C		20			2		
uncertain		1					
TOTAL		256	235		49	47	

Mints

Too few of the 3rd century coins could be attributed to mints to make discussion worthwhile. The 4th-century coins (including probable as well as certain attributions) are quantified by mint in Table 7.24.

These present a fairly typical pattern of mint distribution, comparable to recent analyses of material from the northern suburbs and sites on the defences of Winchester (Davies 2008, 132, 134). The same range of mints is represented (with the exception of Amiens, missing from the present sites), and in broadly similar proportions and with broadly similar principal trends, in line with fairly well-established patterns. The main trend is the decline in the importance of Trier after the middle of the 4th century. In the present sites, in slight contradiction to the pattern shown by Davies, there are no identified Trier coins at all after AD 348, though this may be exaggerated by the paucity of mintmarks identified on the coins of period 21. Only one such coin was attributed to a mint, in this case Lyons, which also produced one of the two period 20 coins (the other was not attributed).

Table 7.24: Numbers of 4th-century coins attributed to mints

Mint	*Northgate House*		*Discovery Centre*		
	300–364	*364–402*	*300–364*	*364–402*	*Total*
London	2		1		3
Trier	23		5		28
Lyons	9	6	1	1	17
Arles	2	5		3	10
Rome	1				1
Aquileia		1		1	2
Siscia	1	1		1	3
Thessalonica	1				1
Total	39	13	7	6	65

Chronology, context and residuality

The Discovery Centre site had the longer Roman occupation sequence, starting at least in the 2nd century, whereas the Northgate House site appears to have seen little activity before the middle of the 3rd century. This is reflected in the coin list from that site, although the Discovery Centre, with the longer sequence, does not have a significantly higher representation of early Roman coins. The significance of the single Claudian copy at this site is uncertain, but the relative proximity of this findspot to the small concentration of these coins at Victoria Road (Kenyon 2008) may be relevant, although it should also be noted that the Discovery Centre piece was clearly redeposited as it occurred in a late Roman context. Indeed only one of the four 1st–2nd century coins from this site was in a remotely contemporary context (SF500 from context 1667). The situation at Northgate House was broadly similar, with two early coins occurring in contexts of Phase 2.2, though it is likely that the individual context dates were later than those of the coins themselves

At Northgate House some 11 late Roman coins were recorded from the top of the natural subsoil, presumably deriving from later deposits which interfaced directly with that layer, while the 1st–2nd century *as* from the Discovery Centre and an *as* and *sestertius* from Northgate House, mentioned above, were the only coins from either site in contexts of Phase 2.1 and Phase 2.2 respectively. The broad phasing scheme employed for the Roman period makes meaningful discussion of coin loss in relation to it rather difficult, particularly for Phase 2.3, which spans a hundred years from the beginning of the last third of the 3rd century. Deposits of this phase produced 54 Roman coins, while those of the final Roman Phase, 2.4, contained 100 coins.

A broad range of coins was present in these deposits, including two presumably intrusive coins of AD 364–378 in Phase 2.3. These apart, the relative scarcity of coins of period 17 in this phase is notable. By contrast, these coins made up a large proportion of the assemblage in Phase 2.4 contexts, while coins of subsequent periods demonstrate that the sequence did indeed run right to the end of the 4th century if not beyond. A large proportion of the Phase 2.4 assemblage, however, was still composed of later 3rd century coins. It is not possible to determine if the range of earlier coins in these latest contexts simply reflects a substantial degree of redeposition or if some of this material remained in circulation. Reece (2002, 57) has argued, for example, that some 'barbarous radiates' remained in use until AD 330, but this would not explain their frequency in later contexts. The character of these contexts, with a high proportion of 'dark earth' deposits, might be a better explanation for the mixed groups of coins, with a high likelihood that they will contain residual material. A recently examined sequence of dark earth deposits associated with the forum at Cirencester, however, contained only 10 coins (out of a total of 193) which were of later 3rd century date, all the rest being certainly or probably dated after AD 330 (Booth 2008), so this suggests a rather different pattern of deposition compared to that in the present sites. All the latest (ie period 21) coins stratified in 'contemporary' deposits were from Northgate House. The 56 coins from the six contexts concerned (2034, 4428, 4688, 4696, 4718 and 6059) were grouped together to see if they demonstrated a pattern of loss any different from that already discussed. The figures suggest that a slightly higher proportion of the later coins, from period 18 onwards, occurred in these contexts in comparison to the generalised Phase 2.4 group, but this would be expected and there was still a fairly broad spread of earlier material with no suggestion of the presence of a 'tight' late 4th century assemblage in these contexts.

General discussion

In total, the Northgate House/Discovery Centre assemblage forms a good group which can be compared with other evidence from Winchester. This comparison is based on the very useful discussion of the coin evidence from sites in the extramural areas and on the defences of Roman Winchester recently published by Davies (2008), set alongside the summary totals for three main groups of coins from other Winchester sites published by Reece (1991, 20).

The principal conclusion of Davies' analysis concerned the ratio of coins of Reece's Phases B and D. The occurrence of a high proportion of coins of Phase D is generally considered to be a 'rural' characteristic, while a high proportion of Phase B coins is typical of the larger urban centres of Roman Britain. As would be expected, therefore, most of the Winchester groups considered by Davies fell into the latter category. Nevertheless it was notable that while the material from the northern suburb was grouped in this way, the assemblages from the eastern and western suburbs were both distinctly 'rural' in character (Davies 2008, 132). The group from the eastern suburbs, however, was small (only 35 coins) and the extent to which it can be regarded as representative is unclear. Overall, the coins from the north-west quarter of the walled town are consistent with the urban trend and although the Phase B:D ratio differs slightly between Northgate House and the Discovery Centre, being more weighted in favour of Phase D in the latter site, both fall firmly in this group.

These comparisons are expressed graphically in Figure 7.21, which draws on data presented by Davies (2008) in his figure 73 and listed by Reece (1991, sites 20–22). This shows clearly the slightly unusual (but small) group from the town defences (Davies 2008, 128) and the 'rural' (but also small) groups from the eastern and western suburbs. Lankhills has been added to underline the extreme contrast provided by a late Roman cemetery group. This collection combines the material from the 1967—72 excavations (Reece 1979) and that from work carried out by OA from 2000–2005 (Booth 2010).

Post-Roman coins *by Martin Allen*

Identifications

SF 1211: coin 1 Anglo-Saxon 'sceat', ?Series K (Type 32a), North 1994, 63, no. 89, 0.06 g (fragment).

This fragment can be tentatively identified as a Series K sceat on the basis of the long cross on the obverse, which is similar to the cross before the bust in Series K, and the faint traces of a beaded arc on the reverse, which might be the arc of the 'wolf-headed serpent' of Type 32a. Series K has been dated *c* 720–730/740, but use of such secondary sceattas continued until the introduction of broad pennies into southern England in the 760s and 770s (Grierson and Blackburn 1986, 184–9, discusses the chronology of sceattas). A probable *terminus post quem* for this coin is *c* 770.

SF 223 Alfred (871–899) to Eadgar (957/9–975), round halfpenny. ?Winchester mint; three fragments (0.13 g, 0.02 g and 0.01 g).

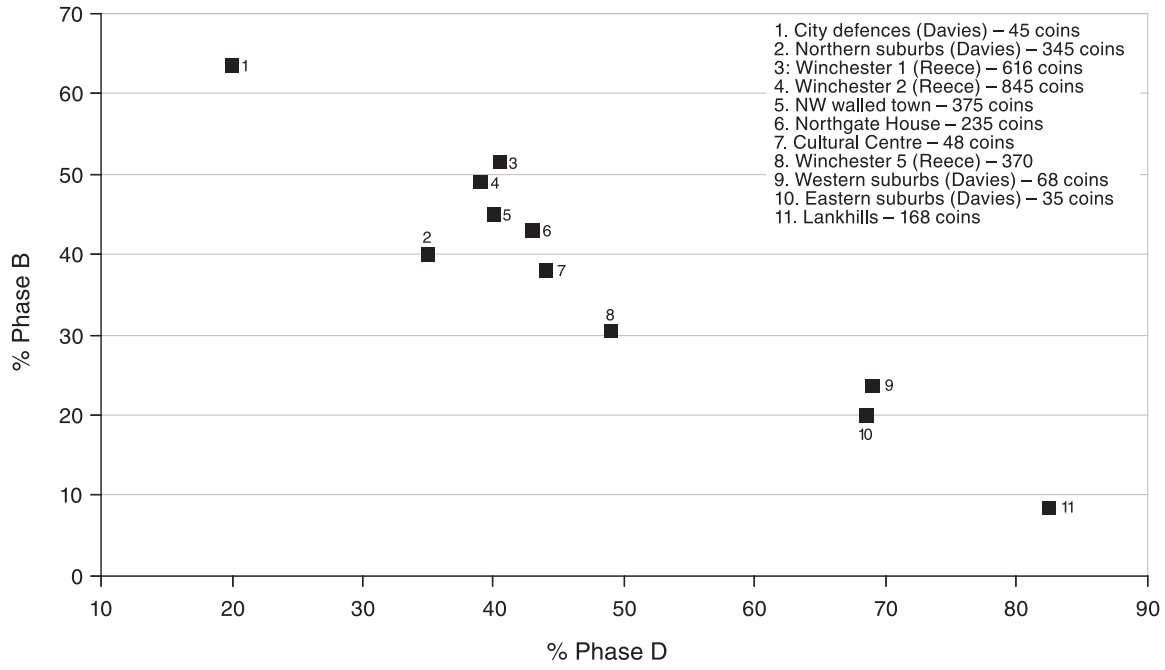


Fig. 7.21 The proportions of coins in Reece's phases B and D (after Davies 2008, fig. 73, with additions)

These fragments seem to be from a previously unrecorded type of halfpenny struck between the 880s and Eadgar's reform of the coinage in *c* 973. The obverse of this new type has a normal Circumscription Cross design of an inscription in an outer circle around a central small cross. The letter X of REX is visible on the obverse of the largest of the three fragments. The design on the reverse seems to have four limbs of a cross radiating from a central pellet, with a small cross pattée at the end of each limb of the cross (visible on one terminal on the largest fragment and on another terminal on the second fragment). One limb of the cross without its terminal is visible on the smallest fragment. In one angle of the cross (on the second fragment) is the letter I, and in another angle (on the largest fragment) is T. The reverse inscription might be tentatively reconstructed as WINT or PINT, referring to Winchester (*Winton*).

The closest comparison for this new type on previously recorded halfpennies is a type showing two vertical limbs radiating from a central pellet, with a small cross pattée at the end of each limb and WIN horizontally across the field. This type is known from a coin of Eadwig (955–959) in the Fitzwilliam Museum (North 1994, 146, no. 740/3, Pl. 12, 11) and a coin of Eadgar found in London no later than 1842, which is now lost (Blunt 1961, 44, 46–7, Pl. III, 14–15; Blunt *et al.* 1989, 204, 206, Pl. 25, 395). Halfpennies of the mid 10th century are often copied from or were inspired by earlier issues of Alfred and Edward the Elder (899–924) (Blunt *et al.* 1989, 202–4), and it is possible that this Winchester find is a new type from the reign of Alfred or Edward the Elder, analogous to Alfred's pennies of Winchester with PIN in a vertical line on the reverse (North 1994, 126, no. 647).

SF 1211: coin 2 Athelstan (924–939), penny, Circumscription Cross type (*c* 928–939), North 1994, 134, nos 671–2, uncertain mint and moneyer, 0.49 g (eleven fragments).

Most of these fragments do not have a legible inscription, but three of the largest fragments have visible portions of an obverse inscription of Athelstan's Circumscription Cross type (E_, EL and X TOT respectively), and the full inscription can be reconstructed as E_EL[STAN RE]X TOT [BRIT].

Hoard evidence indicates that coins of Athelstan survived in circulation in relatively large numbers until Eadgar's reform of the coinage in *c* 973 (Blunt 1974, 51–5). A probable *terminus ante quem* for the deposition of this coin is the end of Eadgar's reign in 975, when it may be assumed that the recoinage of pre-reform coins was effectively complete.

SF 1055 Cnut (1016–1035), Pointed Helmet type, *BMC* xiv, Hildebrand G, North 1994, 168, no. 787, London, moneyer Edric, 0.79 g (broken into two pieces). The inscription on the obverse is +CNVT RECX:· and on the reverse is +EDRIC ON LVNDEN [N and D ligated].

Cnut's Pointed Helmet type is conventionally dated to *c* 1023–1029, although the precise chronology of the coinage of Cnut is uncertain. The Pointed Helmet type was replaced by the Short Cross type of *c* 1029–1035, and 1035 can be suggested as a probable *terminus post quem* of this coin. A date later than 1035 cannot be entirely ruled out however, as the Pointed Helmet type occurs in some English hoards after 1035 (Allen 2006, 515–17). Pointed Helmet is the second most numerous type in the Wedmore hoard (deposited *c* 1043), which contained large numbers of obsolete coins apparently retained as savings, and it last appears as a very minor residual element in English hoards in the 1060s and 1070s. Thus a date as late as the 1070s is possible, although unlikely.

Significance

Coin 223, which is probably a new type of halfpenny from the Winchester mint in the late 9th or 10th century, is an important discovery for the study of Anglo-Saxon numismatics and the history of Winchester. The datings of coins 223 and 1055 do not conflict with the suggested datings of their contexts (3466 and 3364) to the 9th–12th centuries, but they might provide more precise chronologies of the contexts.

The two coins from context 4095 (1211: coins 1 and 2) are significantly earlier than their context, which is the upper fill of a small pit of the 11th–12th centuries, and they may be not be primary deposits.

Objects of metal, glass, shale and worked bone

by H E M Cool, with a contribution by Paul Booth

The excavations at Northgate House and the Discovery Centre produced just under 1500 items of metalwork, glass, worked bone and other skeletal material. This is a substantial body of material which can throw light on both the occupation on the site and on Winchester more generally. The city has been well-served by small finds' publication which allows this group to be put in context. In 1990 the late Saxon and later finds from the 1961 to 1971 excavations were published (Biddle 1990), and the small finds from all the excavations in the suburbs and defences between 1972 and 1986 were published whilst this material was being worked on (Rees *et al.* 2008). Whilst these are very valuable and informative works, the lack of any site narratives or information on other categories of finds for these sites makes full evaluation of them difficult. Northgate House and the Discovery Centre provide the first opportunity to set a large small finds assemblage from Winchester within its full context. This obviously enables a better appreciation of them to be gained, but it has also meant that for the first time that we are probably seeing the full range of items such as worked bone and antler from the city. This category of material was heavily exploited to make objects during the late Saxon and Anglo-

Norman periods, and some of them are easy to confuse with unworked animal bone. It is only after that category of material has been fully examined, as here, that one can be sure that all the items have been made available to the small finds specialist.

A large body of material such as this naturally leads to a large report and so the presentation of this has been split into two parts. This section in the printed volume provides a brief overview of the assemblage and draws attention to some of the more important items that have been recovered. The full report including the catalogue entries, typological discussion and many of the tables summarising certain aspects of the data are available in the digital files (*Digital Section 3*). The parts should be seen as complementary and full supporting evidence for points made here is presented in the digital report.

The independently-dated finds reflect occupation in two main periods. The Roman period is well represented with material ranging in date from the mid 1st century into the 5th century. There is then a gap of several centuries with nothing in the assemblage suggesting early to mid Saxon occupation. Late Saxon and Anglo-Norman activity of the 10th to 12th century is strongly represented but items belonging to the 13th century or later are rare. Table 7.25 compares the independently dated Roman and later assemblages by function excluding items such as hobnails for which there is no later equivalent, vessel glass and nails.

The smaller size of the Roman assemblage is almost certainly the result of the nature of the excavations and the mitigation strategies that were followed. In the Roman vessel glass assemblage, for example, one of the earliest fragments (no. 40) was found in a late Saxon context probably because it is a fragment from a robust pillar moulded bowl and is precisely the sort of item that survives in a recognisable form in a residual context. An urban site that has deep blue pillar moulded bowls might be expected to have a range of other mid 1st century vessels but only one is represented (no. 42), presumably because the early contexts that might have produced them were not excavated. Certainly late Roman material is much better represented than that of the 1st and 2nd centuries. The Roman finds thus only provide a partial picture of the nature of the activity in this area at that time. For the late Saxon and Anglo-Norman periods, by contrast, a much fuller and more richly textured picture emerges.

Table 7.25: Small finds: A comparison of the Roman and later assemblage by function. The items are assigned by typological date. Nails, hobnails and vessel glass are excluded.

Function	*Roman*	*Late Saxon to Medieval*	*Total*
Personal	30	33	63
Toilet	3	3	6
Textiles	7	31	38
Household	-	12	12
Recreation	2	3	5
Weighing	1	7	8
Writing	-	3	3
Transport	-	22	22
Structural	7	14	21
Tools	6	44	50
Fasteners	24	72	96
Agricultural	-	2	2
Military	4	2	6
Religion	1	2	3
Industrial	4	19	23
Total	89	269	358

The Roman period

The Roman finds assemblage is a fairly typical one for an urban site but a particularly interesting aspect is the evidence indicating a military presence in the vicinity in the later 2nd to 3rd centuries. The items that suggest this are two very similar divided bow brooches from Phase 2.3 contexts (nos 3 and 4) and the strap fitting no. 97. The brooches belong to a type (Hull Type 189; see Bayley and Butcher 2004) in use at the end of the 2nd century and into the 3rd century. By that time the majority of the population of southern Britain had stopped wearing bow brooches. This is well demonstrated by looking at the brooch assemblage from the Winchester suburb and defences sites which only produced a single later 2nd to 3rd century knee brooch compared with 41 1st to 2nd century forms (Rees *et al.* 2008, 38 no. 42). Bow brooch wearing continued within military communities, which is why the presence of these two brooches alone would have been sufficient to raise the possibility of a military involvement. This is supported by the strap mount no. 97 from a Phase 2.4 context in the Discovery Centre area. The combination of asymmetrical openwork decoration with the integral rivet and washer is typical of the sort of strap fitting used in the 3rd century by the military (Bishop and Coulston 2006, 182, 190).

These are not the only pieces of evidence for the military at Winchester during the late 2nd and 3rd centuries. At Victoria Road a strap-end was found in an early to mid 3rd century context and a brass inlaid iron scabbard slide of 3rd century form was also recovered (Rees *et al.* 2008, 173 nos 934, 939). In discussing the latter a very similar slide was noted as having come from the unpublished Biddle excavations at Ashley Terrace in 1964. It is also known that there is another divided bow brooch from one of the Biddle excavations, as Webster cited it as comparanda when publishing a brooch from Caerleon (Webster 1992, 112). This body of military material is probably best interpreted as indicating the presence of detachments of the army on policing duties.

A find worthy of special comment is the set of bone weaving tablets (no. 37) found in a floor level

of Structure NH8520 which was constructed after the late 3rd century. This consisted of four square tablets, each with six holes and a triangular multi-perforated plate. In Roman Britain, triangular tablets are the most common form. Square ones appear to be a later introduction with the earliest securely dated example being one from Wroxeter in a 3rd century context (Mould 2000, 131 no. 172). The context of this set supports a late date as does the example from Victoria Road found in a mid to late 4th century well fill (Rees *et al.* 2008, 76 no. 363). The fifth element of the set, the triangular plate, is a particularly welcome addition. These have occasionally been found before but their function has been uncertain. The plate shows the typical wear patterns that weaving tablets acquire around their perforations. This feature, together with the association of the plate with the set of four tablets, indicates that such items can now be seen as part of a specialised weaving apparatus.

Weaving tablets were used to produce narrow bands of densely woven fabric which had a variety of uses. These bands formed the starting point for lengths of fabrics woven on a warp-weighted loom (Walton Rogers 2007, 27–8), and richly decorated examples could be used as decorative edging sewn onto garments whose cloth had been woven on a larger loom (see Walton Rogers 2007, 89–97 for examples). Weaving tablets were also used to form the selvedges (finished edges of fabric) on lengths of fabric woven on larger looms where the weft threads were those used on the larger loom with the small tablets governing the warp threads (Wild 1970, 74). In Britain when sets are found, they regularly consist of four plates, and it may be significant that Wild (ibid.) has hypothesised that some tubular selvedges that were tablet woven may have needed four tablets to create. The association of the triangular plate with the four weaving tablets here might, however, suggest that this set was not being used in this way. The fact that the tablets have six holes, rather than the more normal four, also places this set apart.

The mention in the *Notitia Dignitatum* of a state weaving works at *Venta* in Britain (Rivet and Smith 1979, 492) has often led in the past to a link being made between any textile equipment found in Winchester and this establishment (see for example Clarke 1979, 369). So it is perhaps worth drawing attention to the paucity of textile working equipment that has been recovered from both these excavations and the ones on the suburb and defences sites (Rees *et al.* 2008, 75–6). The amount recovered is even smaller if Stephens (2008) is correct and bone needles are in fact hairdressing aids. A set of weaving tablets is an item that would have been as much at home in a domestic work basket as the industrial confines of a state weaving works. There is some evidence that attitudes towards the production of textiles may have been changing in the 4th century. Certainly implements associated with weaving start to be deposited in female graves in a way that had not been seen before, and the shale industries of Dorset started producing lathe-turned spindle whorls (eg Lankhills: Booth *et al.* 2010). Where found in graves, these whorls tend to be associated with women of high status judged from their grave furnishings. The late square weaving tablets should probably be seen against this domestic background, and the presence of this set need have no connection with any industrial establishment.

The 4th century finds from the site have several features that are worthy of special note. Amongst the vessel glass assemblage there is a fragment (no. 57) that comes from a vessel with indented and trailed decoration. This is rarely observed in Romano-British 4th century assemblages but is one that has been noted as being characteristic of contemporary glass in the north of Gaul (Arveiller-Dulong *et al.* 2003, 156). This is not the only possible import from that area in the glassware of 4th-century Winchester. The Brooks produced one certain example of an indented truncated conical beaker and the body fragment no. 58 from these excavations might possibly be from another. This is another late 4th to 5th century form, uncommon in Britain but present in the cemetery at Épiais-Rhus (Vanpeene 1993, 50 no. 81, pl XVIII). A late-4th century grave at the Lankhills School cemetery also produced an indented beaker, this time additionally decorated with spiral trails (Harden 1979, 215 no. 51, fig. 27). This is a rare form everywhere, but might be another candidate to be an import. Excavations by Oxford Archaeology at Lankhills produced a glass tettine (Booth *et al.* 2010), another form that is regularly found in 4th-century cemeteries in north Gaul but which otherwise is unknown from 4th-century Britain. A pattern is thus starting to emerge from the Winchester sites that suggests in the late 4th century part of Winchester's glass was being supplied from the glass-houses in northern Gaul.

Another welcome aspect of the assemblage is the presence of several items that indicate occupation during the late 4th century and into the 5th century. These include the fastener of a bone bracelet (no. 28), a polychrome glass counter (no. 60) and a terminal of a spur (no. 98). All of these items can be paralleled amongst the grave goods at the Lankhills School cemetery (Clarke 1979, Booth *et al.* 2010), and Northgate House/Discovery Centre area may well be one of the areas where the people buried there lived.

Finally one context, the fill of pit CC3330, is of special interest. As well as the shale table leg (see below), it contained one of the substantially complete divided bow brooches (no. 4), a very unusual figured mount (no. 94) and a large number of hobnails indicative of at least one shoe. Whilst this could be casual rubbish disposal, it is an unusual group and it might be possible that some element of structured deposition was taking place. Shoes were sometimes used in these rituals.

Shale table leg fragment by Paul Booth

Cess pit CC3330, phased to the late Roman period, produced part of a shale table leg (SF322). The fragment is *c* 215 m long including a tenon 23 mm high and represents between approximately one third and one half of the length of the original object. The surviving piece is split approximately up the middle of the leg but is otherwise in good condition. The upper part of the leg has a marked internal concavity while the outer face is more gently bowed out and then in. There is linear moulding on the side of the leg on the lower part of the fragment, but there is no indication of the animal head decoration typical of the better known examples of this type. The concavity on the inner face is more normally seen about halfway up table legs with the animal head feature, rather than at the top, as here. An almost identical table leg was found in the centre of Winchester in a demoltion deposit associated with the forum, dated to the 4th century or later (Denford 1988). The exact form of these legs seems a little unusual in comparison with the examples discussed by Liversidge (eg 1955, 37–47) and further finds listed by Lawson (1975, 268).

The late Saxon to medieval finds

As noted in the introduction there is a clear absence of material belonging to the early to mid Saxon period followed by an explosion of material that can be dated to the 10th to 12th centuries. The paucity of material belonging to the 13th century and later is very well demonstrated by the incidence of 'sewing' pins and lace tags. Had there been considerable occupation on the site in the high medieval period, it could have been expected that these would be common especially on sites excavated under modern conditions with sieving taking place. 'Sewing' pins were in use from the 13th century onwards in Winchester (Biddle and Barclay in Biddle 1990, 560–71), and were clearly being used in very large quantities as dress accessories by the 14th century. Lace tags were also an important part of dress from the 14th century onwards. Only two 'sewing pins' (nos 132–3) and one lace tag (no. 150) were recovered from Northgate House and the Discovery Centre, graphically illustrating the change of occupation type after the 12th century. It is noticeable that the items that can be assigned later dates are dress fittings, precisely the sort of item that can be expected to be the subject of casual loss rather than formal rubbish disposal. There are, for example, a buckle (no. 139) and strap ends and mounts (nos 145, 147) of 14th-century date and two examples of the fine wire accessories common in the 16th and 17th centuries.

The 10th to 12th century assemblage of small finds is divided between a large number of functions (see Table 7.25). Some categories of finds are very well represented such as equipment for manufacturing textiles (nos 157–88), items related to weighing items (nos 211–7) and those connected with transport (nos 221–39). The fasteners section includes numerous items connected with security (nos 297–310) as well as a large number of the somewhat enigmatic riveted mounts whose precise function is unknown (nos 311–33). The personal ornaments include a wide range of items including simple utilitarian iron buckles (nos 135–8), the pin of a silver annular brooch (no. 122) and two hooked tags (nos 139–40). There are also items such as a chess piece (no. 208), styli (nos 218–20) and arrowheads (nos 371–2) which point to quite specialised activities taking place. A notable find was a bone spatula with a very distinctive style of figurative incised decoration (no. 198) which is the seventh example to have been found in Winchester (Collis and Kjølbye-Biddle 1979). From a typological point of view many of these items provide valuable insights into categories of finds they belong to. These aspects are considered at length in the digital report (*Digital Section 3*).

Many of the objects recovered came from pit fills and so it seems reasonable to assume that they may have been in use in the properties on which they were found rather than representing brought-in rubbish or levelling material. The finds thus also provide an opportunity to explore whether the different properties were being used for different functions, and it is this aspect that will be explored here. It can be achieved more easily for some properties than others as, to a certain extent, the number of finds reflects the footprint of the excavation. Properties BE 1–3, for example, produce approximately half the number of finds that Properties BW 2–5 do, reflecting the different areas dug. The total numbers of objects from the different properties can be seen in *Digital Section 3, Table 7*.

Naturally, residuality needs to be taken into consideration given the underlying Roman occupation and the fact that pit digging is likely to have disturbed the early layers. It is possible, though, to assess the proportion of securely identified Roman finds in the assemblages belonging to Phase 4 and later on each property. The figures are given *Digital Section 3, Table 8* and from that it is clear that it is not a uniform problem. Both Properties BW 1 and BW 6 have no identifiable Roman items. In Properties BW 2, BW 4, SE 2 and SE 3, the level of residuality is between 3% and 5%. In Properties BE 4, BW 3 and SE 1 the level is between 11% and 16%. In Properties BE 2, BE 5 and BW 5 it is between 20% and 24%. The highest amount of residuality is in Properties BE 3 (33%) and BE 1 (36%). As noted, the number of items associated with each property varies. Of the properties least affected by residuality from the Roman period (16% or less), BE 4, BW 2, BW 3, BW 4 and SE 1 have large assemblages of more than 50 items, SE 2 and SE 3 have 20 and 32 items respectively, and BW 1 and BW 6 have less than 10 items each. In what follows these figures have to be kept in mind, but certainly in the case of Properties BE 4, BW 2, BW 3, BW 4 and SE 1 where there are large

assemblages with relatively little residuality, the assemblages should be reflecting the activities going on in them.

The relatively large numbers of items that have quite specific functions (tools associated with the manufacture of textiles, padlocks, balances, horseshoes) can be used to structure the enquiry. The relatively homogeneous date range of the finds makes it moderately easy to extract assemblages from the different properties which exclude most of the residual Roman material and the items that clearly belong to the 13th century and later. We also have the advantage that during the 10th to 12th centuries the use of the area appears to be domestic and secular. The dataset is thus much simpler with regard to both chronology and site type than the one relating to the 1961–71 excavations which Barclay, Biddle and Orton explored in their pioneering work on assemblage composition (Biddle 1990, 42–73). It might also be suspected that the assemblages considered there may have included a component of residual material that has been excluded here.

Table 7.26 shows the incidence of selected items with specific functions. These are shown as both absolute numbers and percentage of the property total once allowance has been made for residual material. Percentages on such small numbers can be misleading but here it allows a rapid comparison across properties. To aid interpretation the properties identified as originally having relatively large assemblages with low levels of residuality are shown in red.

The textile equipment can be divided into a variety of different categories. There are fibre preparation tools such as the teeth from wool combs and flax heckles (nos 157–8); a large number of spindle whorls of different forms (nos 159–73); tools used in weaving such as pin beaters (no. 174), picker-cum-beaters (nos 175–6) and eyed weaving tools (nos 177–84) and miscellaneous other items of which the tenterhook no. 185 is the most notable. The distribution is summarised in *Digital Section 3, Tables 10 and 11*. As can be seen from Table 7.26 here, tools for the production of cloth occur on all of the ten properties with more than ten items and on one of the properties with less than that. Excluding the last mentioned property, they form between 6% and 27% of the total. It is noticeable that the properties at the lower end of the range (BE 1, SE 1) have only spindle whorls whilst that at the top (Property BW 4) has tools for the whole range of production (fibre preparation, yarn spinning, cloth weaving). The size of the assemblage does not necessarily influence this. Property BE 4, the most prolific one, has only two categories of these tools (yarn spinning, cloth weaving). Both of these were properties with a low level of residuality where it seems reasonable to assume the pit contents are reflecting the activities in them. So the pattern suggests there might have been a degree of specialisation and localisation in the process. Spinning would have been a regular task which could be carried out everywhere as a woman can easily carry a spindle around with her. Fibre preparation and weaving are more static tasks and would appear here to have been carried out on a smaller number of properties.

The presence of shod horses appears to be a regular feature of the properties, so the absence of any on Property BW 4 is noteworthy. There is clear evidence of a blacksmith at work on this property as evidenced by a tanged punch (no. 274) and a rotary whetstone (see Shaffrey below and Starley below). Presumably this is a smith making items such as knives. Certainly this property had the highest incidence of iron blade fragments of all the properties. The presence of blacksmithing and cloth manufacture on this property would have made it a hive of industry, if the activities were taking place at the same time.

Table 7.26: Selected categories of finds from the different properties. Figures in red reflect properties with relatively low levels of residuality. The total figure reflects the assemblage once probable residual material has been removed.

Property	*Cloth production*		*Horseshoes*		*Padlocks*		*Balances*		*Total*
	No.	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*	*No. Finds*
BE1	1	8	-	-	-	-	-	-	12
BE2	2	15	1	8	1	8	2	15	13
BE3	2	18	1	9	-	-	-	-	11
BE4	5	11	3	7	4	9	1	2	44
BE5	2	29	-	-	-	-	-	-	7
BW1	-	-	-	-	-	-	-	-	1
BW2	5	22	2	8	1	4	-	-	23
BW3	4	19	1	5	2	10	-	-	21
BW4	6	27	-	-	2	9	-	-	22
BW5	2	10	4	19	1	5	1	5	21
BW6	-	-	-	-	-	-	-	-	1
SE1	1	7	2	14	-	-	2	14	14
SE2	-	-	-	-	-	-	-	-	4
SE3	1	16	-	-	-	-	-	-	17

An interesting feature of the assemblage was the large quantify of security fittings. These consisted primarily of barrel padlocks and their keys, but there were also two keys for fixed locks, one of the latter (no. 307) being an example of a rare form that appears to be a local development. Security fittings were also a regular find during the 1961–71 excavations in the city centre (summarised in *Digital Section 3 Table 19*). It might be tempting to think that properties where there are relatively large numbers of them might have had some special concerns over security. Inspection of Table 7.26 though suggests that security was a widespread concern in late Saxon Winchester. The high number in Property BE 4 falls into a regular pattern when considered against the background of all finds from all properties. There are ten properties with more than ten items and padlocks and their fitting occur on six of these, with the BE 4 pattern being proportionately the same as that on Properties BE 2, BW 3 and BW 4.

Balances were also relatively common. There were four equal-armed balances with fixed arms (nos 211–3, 216) as well as a suspension fork (no. 217) that might have come from a balance of that type or from a folding balance. Balances such as these are a common feature of late Saxon and Anglo-Norman assemblages. At Winchester there is the opportunity to consider the numbers recovered across a relatively large number of sites where occupation of this date occurs, and this is done in *Digital Section 3 Table 12*. When this is done it can be seen that these balances have been found regularly, but interrogation of the data does suggest that the number found during these excavations might be somewhat exceptional. An interesting question arises as to what these little balances were used to measure. Presumably they were common because people had a need to weigh small items regularly. Possibly they distrusted the coinage of the period as it may be doubted that many people would have needed to measure small quantities of other expensive items such as spices or precious or semi-precious metals and stones. An interesting feature of Table 7.26 here is that there is not a close association between the padlocks and their fittings and the balances. Whatever was being weighed was not felt to be in great need of security.

Something similar could be seen in the contemporary houses at Brook Street. Padlocks occurred regularly and, especially in the case of Building XII, in some numbers (see *Digital Section 3, Table 19*). Balances in contrast were restricted to Building IX/X (Biddle 1990, 922–4). From these excavations it is also noticeable that no weighing equipment was found on Property BW 4. Does this indicate that the industrial activities there did not need the ability to weigh small items such as coinage? Though the textile production might have been for domestic use, one would have thought a smith making items such as knives would have been likely to engage in commercial transactions. If the balances were used to check coinage, their absence from this property is interesting given the numbers from the others. Whether their principal use was to check coinage seems open to question. Certainly there is no obvious link between the incidence of coinage and the incidence of balances on any of the Winchester sites. So, at present, we are no closer to knowing quite why so many balances were needed.

Several of the less common items recovered from the excavations can also be put in context by reference to Table 7.26. The presence of two arrowheads (nos 371–2) from Property BW 2 is noteworthy as arrowheads were not particularly common finds in 10th to 12th century contexts within the 1961–71 excavations. In the city centre there was one from the castle bailey in a late 11th century context, three from scattered properties in Brook Street and a large one thought to be appropriate for large game from a mid 12th-century context at Wolvesey Palace (Goodall in Biddle 1971, nos 3990–91, 3995A, 396–7). Those from the castle and Wolvesey Palace clearly indicate a use amongst military and aristocratic milieus in the Anglo-Norman period, and so the recovery of two from this property, one of them in an Anglo-Norman context, is of some interest. The other finds include spindle whorls for the preparation of yarn but no other textile equipment. Shod horses were present and there was a concern for security, but there were no balances. It has to be said, therefore, that nothing else from the property suggested that its inhabitants were any more socially elevated than those in the neighbouring properties.

Property BE 2 where the decorated scoop no. 189 was found had a well furnished assemblage where balances were well represented, but again nothing else that marks it as particularly out of the ordinary. It has been suggested that they might have had a liturgical function (Kjølbye-Biddle in Biddle 1990, 830), though when they were first discussed it was noted that all but one came from a domestic context and a household function was preferred (Collis and Kjølbye-Biddle 1979, 382–3). The context of no. 189 would suggest that a domestic use was likely, as would the wear patterns that can be seen on it.

The excavations have also produced a small number of what might be considered within this assemblage to be, if not luxury items, then things that are a little out of the normal pattern, possibly indicative of a more leisured existence. There is a small concentration of these on Property BE 3 during Phase 6 which produced both the chess piece no. 208 and the mount from a more elaborate casket than normal (no. 200). Possibly by chance the same property produced one of the only two vessel glass fragments found (no. 195) from a Phase 5 context. In some circumstances vessel glass can be taken as indicative of a high-status site. The chess piece could have been contemporary with the Phase 5 occupation as could the mount. The only items of semi-precious metal, the silver brooch pin no. 122, came from Property SE1 in a Phase 6 context. Another elaborate casket fitting (no. 203) had come from the same property in a Phase 5 context.

Summary catalogue of small finds (Figs 7.22–7.32)

A full catalogue is presented in the digital report (*Digital Section 3*).

Roman

Personal Ornaments

Brooches

1 **Strip bow brooch**; bow and foot fragment. Copper alloy. Ctx CC1383. SF CC196. (ID 1342) Phase 5 BE3.
2 **Trumpet brooch (Fig. 7.22)**; complete apart from tip of pin. Copper alloy. Ctx NH6507. SF NH1650. (ID 591) Phase 1.3.
3 **Divided bow brooch (Fig. 7.22)**; in two fragments, parts missing. Copper alloy with white metal coating. Ctx NH1353. SF NH924. (ID 807).
4 **Divided bow brooch (Fig. 7.22)**; in two pieces, missing pin. Copper alloy. Ctx CC3331. SF CC331. (ID 1344) Phase 2.3.
5 **Penannular brooch (Fig. 7.22)**; complete. Copper alloy. Ctx CC2325. SF CC281. (ID 1528) Phase 4.2 BE 4.

Hair pins

6 **Hair pin**. Bone. Ctx NH1428. NH SF156. (ID1560). Phase 2.3.
7 **Hair pin (Fig. 7.22)**. Bone. Ctx NH2619. SF NH998. (ID 183) Phase 2.3.
8 **Hair pin**. Bone. Ctx NH1385. Sf NH133. (ID 1564) Phase 2.3.

Beads

9 **Bead**. Translucent deep blue glass. Ctx CC1762. (ID1581). Phase 2.1.
10 **Bead**. Translucent emerald green glass. Ctx NH4718, SF NH1358.(ID 570) Phase 2.4.
11 **Bead**. Green/blue cloudy glass. Ctx NH1270. (ID1578). Phase 2.4.
12 **Bead**. Jet. Ctx NH7589. (ID 1582). Phase 4 BW5.

Bracelets

13 **Bracelet**; fragment. Copper alloy. Ctx NH3236. (ID 534). Phase BW 3.
14 **Bracelet (Fig. 7.22)**; fragment. Copper alloy. Ctx CC1680. SF CC498 (ID 1355) unphased.
15 **Bracelet**; fragment. Copper alloy. Ctx CC1579. SF CC478. (ID 1374) Phase 2.4.
16 **Bracelet**; three fragments. Copper alloy. Ctx CC109. SF CC7. (ID 1521) Unphased.
17 **Bracelet**; three fragments. Copper alloy. Ctx NH1260. SF NH104. (ID 801) Phase 2.3.
18 **Bracelet**; three fragments. Copper alloy. Ctx NH5059. SF NH1438. (ID 126) Phase 2.4.
19 **Bracelet**; fragment. Copper alloy. Ctx NH2208, SF NH832. (ID 585) Phase 4.1 BW5.
20 **Bracelet**; fragment. Copper alloy. Ctx NH3539. (ID 116) Phase 5.
21 **Bracelet**; fragment. Copper alloy. Ctx U/S. SF NH1410 (ID 146).
22 **Bracelet**; fragment. Copper alloy. Ctx NH u/s. SF NH1439. (ID 536).
23 **Bracelet**; fragment. Copper alloy. Ctx NH4694. SF NH1324. (ID 524) Phase 2.4.
24 **Bracelet**; fragment. Copper alloy. Ctx NH1204, SF NH76. (ID 802) Phase 4.2 SE2.
25 **Bracelet**; two fragments. Copper alloy. Ctx CC1435. SF CC427. (ID 1373) Phase 5 BE2.
26 **Bracelet (Fig. 7.22)**; fragment. Lead or other white metal alloy. Ctx NH3587. Sample NH234. (ID 363) Phase 4.1 BW4.
27 **Bracelet (Fig. 7.22)**; fragment. Copper alloy. Ctx NH4696. SF NH1330. (ID 148) Phase 2.4.
28 **Bracelet fastener (Fig. 7.22)**, chipped at one end. Copper alloy. Ctx CC1459. Sf CC441. (ID 1359) Phase 5 BE3.

Finger ring

29 **Finger ring**. Copper alloy. Ctx NH7517. SF NH1782.(ID 565) Phase 2.3.

Ear ring

30 **Ear ring**. Copper alloy. Ctx NH4394, sample NH266. (ID 561) Phase 4.2 BW2.
31 **Ear ring (Fig. 7.22)**. Copper alloy. Ctx CC408, SF CC5. (ID 1520) Unphased.

Hobnails

32 **Hobnails** (28). Iron. Ctx CC3331, SF CC395, Sample CC328. (ID 1533) Phase 2.3.
33 **Hobnails** (95). Iron. Ctx CC3331, SF CC1113, Sample CC328. (ID 1305) Phase 2.3.

Toilet equipment

34 **Chatelaine tool (Fig. 7.22)**; complete. Copper alloy. Ctx NH3314. SF NH1026. (ID 579) Phase 5 BW3.
35 **Nail cleaner**; complete but broken in two. Copper alloy. Ctx NH2228. NH253. (ID 1527) Phase 4.2.
36 **Unguent bottle**; cylindrical neck fragment. Blue/green glass. Ctx CC1762, SF CC869. (ID 1399) Phase 2.1.

Textile equipment

37 **Set of weaving tablets (Fig. 7.23)**. Bone. Ctx NH5208. SF NH1493. (ID 178) Phase 2.3.
38 **Needle**. Bone. Ctx NH3371. (ID 1503) Phase 6.
39 **Needle**. Bone. Ctx NH1398. SF NH154. (ID 1565) Phase 2.4.

Household equipment

40 **Pillar moulded bowl**. Ctx CC469, SF CC203. (ID 1419) Phase 4.2 BE4.
41 **Pillar moulded bowl**. Ctx CC1740, SF CC862. (ID 1389) Phase 2.1
42 **Body fragment**. Ctx CC3160, SF CC389. (ID 1393) Phase 2.4.
43 **Bowl**; rim fragment. Ctx NH2444, SF NH1508. (ID 172) Phase 2.4.
44 **Cylindrical cup**; rim fragment. Ctx NH6061, SF NH1645. (ID 168) Phase 1.3.
45 **Bowl or jar**; rim fragment. Ctx CC1580, SF CC460. (ID 1403) Phase 2.4.
46 **Jug** (?); body fragments. Ctx CC2193, SF CC682. (ID 1391) Phase 2.1.
47 **Base fragment**. Ctx CC1611, SF CC466. (ID 1394) Phase 2.3.
48 **Base fragment**. Ctx CC1459, SF CC1459. (ID 1413) Phase 5 BE3.
49 **Bottle.** Ctx NH2384, SF NH909. (ID 161) Phase 4.2 BW5.
50 **Bottle**. Ctx NH6151, SF NH1677. (ID 159) Phase 5 SE1.
51 **Prismatic bottle**. Ctx NH6059. SF NH1666. (ID 164) Phase 2.4.
52 **Prismatic bottle**. Ctx CC1689, SF CC476. (ID 1390) Phase 2.2.
53 **Hemispherical cup**. Ctx CC1579, SF CC457. (ID 1398) Phase 2.4.

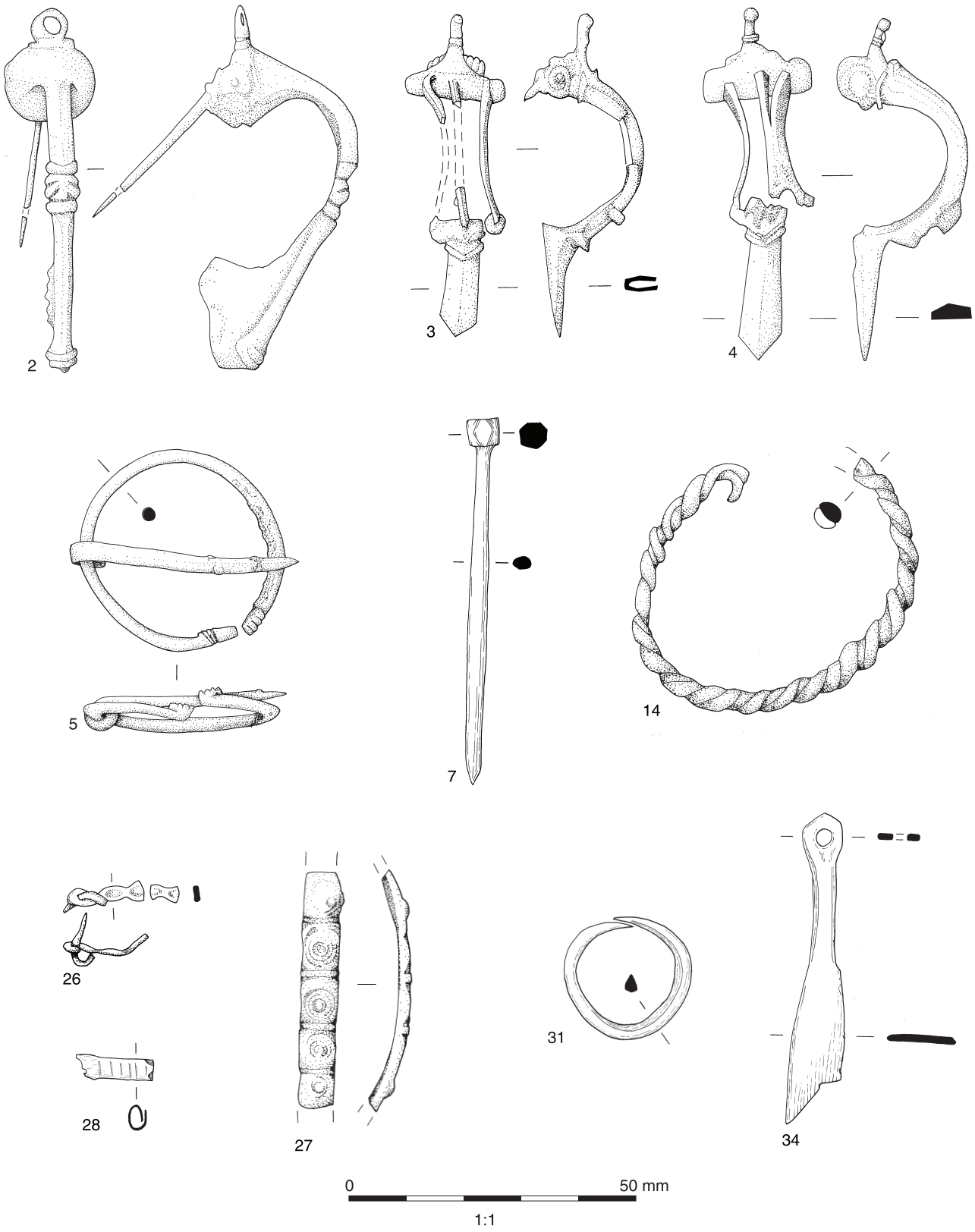


Fig. 7.22 Roman personal items

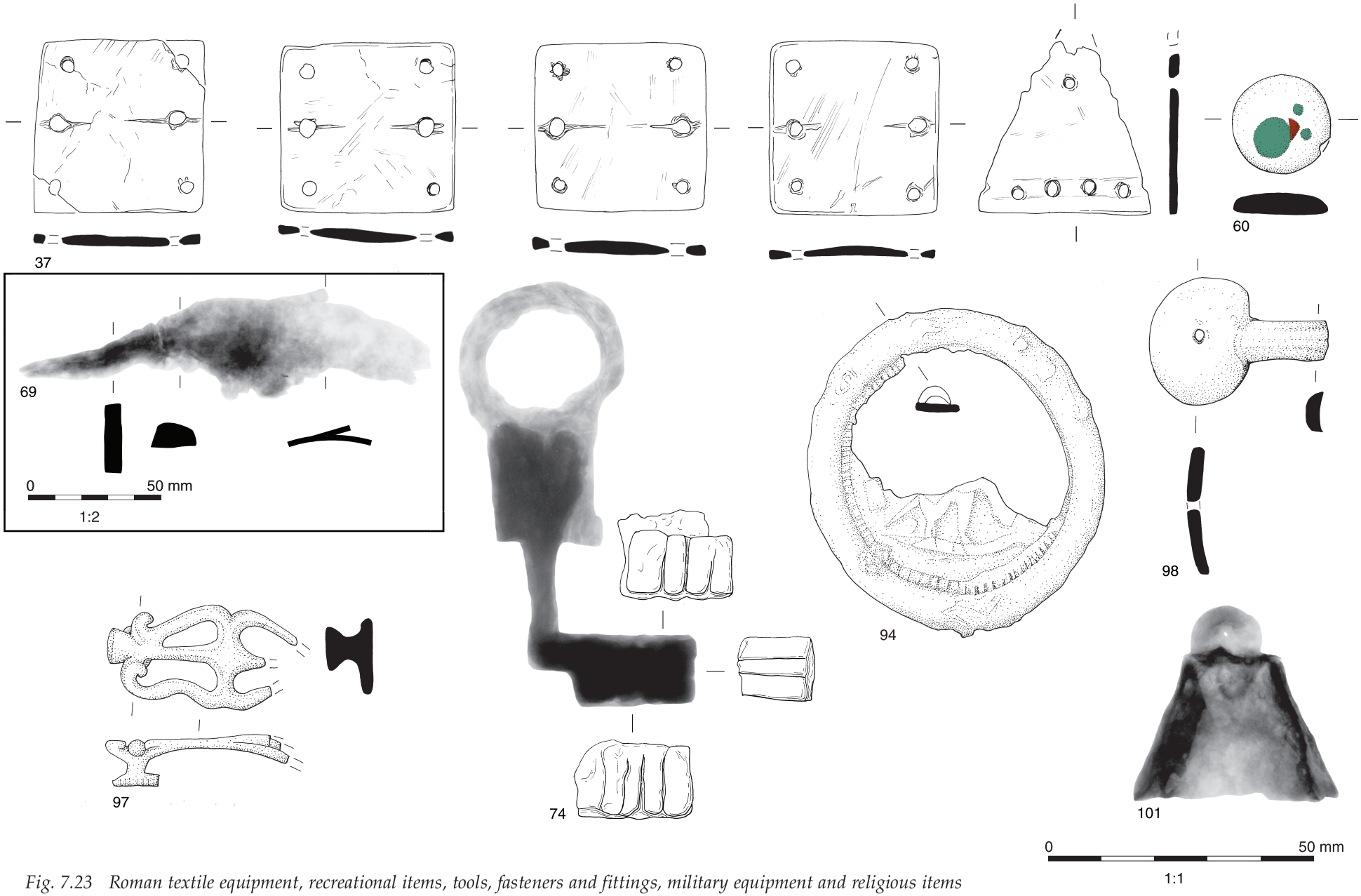


Fig. 7.23 Roman textile equipment, recreational items, tools, fasteners and fittings, military equipment and religious items

54 **Truncated conical beaker**, rim fragment. Ctx NH2216, SF NH916. (ID 169) Phase 4.2.
55 **Beaker**; base fragment. Ctx NH4282, SF NH1254. (ID 163) Phase 2.4.
56 **Base fragment**. Ctx NH5108, SF NH1456. (ID 171) Phase 5 SE1.
57 **Body fragment**. Ctx NH2398, SF NH913. (ID 155).
58 **Body fragment**. Ctx NH5094, SF NH1435. (ID 167) Phase 6.

Recreation items

59 **Counter**. Bone. Ctx NH1566. SF NH237. (ID 1566) Phase 2.3.
60 **Counter (Fig. 7.23)**. Glass. Ctx CC2315. CC NH294. (ID 1433) Phase 6.

Weighing equipment

61 **Weight?** Lead alloy. Ctx NH4390. (ID 961) Phase 1.3.

Structural finds

62 **Hinge pivot?.** Iron. Ctx NH2000, SF NH801. (ID 223) Phase 2.3.
63 **Strap hinge**; fragment. Iron. Ctx NH7521, SF NH1822. (ID 417) Phase 2.3.
64 **Window glass**. Ctx CC1405. SF CC859. (ID 1410) Phase 4.2 BE2..
65 **Window glass**, 2 fragments. Ctx CC1277. SF CC163. (ID 1425) Phase 6 BE3.
66 **Egyptian blue**. Ctx CC1579. SF CC504. (ID 1432) Phase 2.4.

Tools

67 **Trowe**l; fragment. Iron. Ctx NH7018, SF NH1702. (ID 415) Phase 2.3.
68 **Spoon bit (?).** Iron. Ctx NH1383, SF NH177. (ID 940) Phase 2.3.
69 **Tool ? (Fig. 7.23)** Ctx NH2622, SF NH1505. (ID 301) Phase 2.3.
70 **Utilised tine**. Antler. Ctx CC1611. SF CC554. (ID 1436) Phase 2.3.
71 **Handle**. Bone. Ctx CC1579. SF CC564. (ID 1438) Phase 2.4.
72 **Handle**. Bone. Ctx NH1395; SF NH208. (ID 1576) Phase 2.3.
73 **Handle (?).** Bone. Ctx CC1630. (ID1568), Phase 2.4.

Fasteners and fittings

74 **Slide key (Fig. 7.23)**. Iron. Ctx NH1265, SF NH110 (ID 800) Phase 4 SE3.
75 **Conical-headed studs** (2). Copper alloy. Ctx NH2589. SF NH1510. (ID 562). Phase 2.2.
76 **Conical-headed stud**. Copper alloy. Ctx NH2589. SF NH989. (ID 129) Phase 2.2.
77 **Conical-headed stud**. Copper alloy. Ctx NH2589. SF NH1511 Ctx NH2589 SF NH1511 (ID 551). Phase 2.2.
78 **Conical-headed stud**. Copper alloy. Ctx CC1410. SF CC428. (ID 1372) Phase 2.3.
79 **Dome-headed stud**. Ctx NH2562. SF NH983. (ID 543) Phase 2.3.
80 **Dome-headed (?) stud**. Copper alloy. Ctx NH2589. SF NH1523. (ID 560) Phase 2.2.
81 **Dome-headed stud**. Copper alloy. Ctx NH1410. SF NH430. (ID 1375) Phase 2.3.
82 **Flat-headed stud**. Copper alloy. Ctx NH4767. SF NH1371. (ID 569) Phase 2.3.
83 **Flat-headed stud**. Ctx NH7418. SF NH1773. (ID 564) Phase 2.3.
84 **Hollow-headed stud**; head fragment. Copper alloy. Ctx NH u/s. SF NH68 (ID 815).
85 **Stud**. Copper alloy. Ctx NH2589. SF NH1513. (ID 124) Phase 2.2.
86 **Stud**. Copper alloy. Ctx NH2034. SF NH954. (ID 133) Phase 2.4.
87 **Stud**. Copper alloy. Ctx NH2034. SF NH960. (ID 130) Phase 2.4.
88 **Pottery repair**. Lead alloy. Ctx NH6059, SF NH1662. (ID 960) Phase 2.4.
89 **Pottery repair**? Lead alloy. Ctx NH6059, SF NH1664. (ID 959) Phase 2.4.
90 **Ferrule**. Iron. Ctx NH5186, SF NH1479. (ID 311) Phase 2.3.
91 **Loop-headed spike**. Iron. Ctx NH1413 SF NH136. (ID 797) Phase 2.3.
92 **Split pin**. Iron. Ctx NH3745. (ID 449) Phase 2.4.
93 **Staple**. Iron. Ctx NH1313, SF NH115. (ID 770) Phase 2.3.
94 **Mount (Fig. 7.23)**. Copper alloy and iron. Ctx CC3331, SF CC323. (ID 1522) Phase 2.3.
95 **Openwork mount**; nine fragments. Copper alloy. Ctx CC3331 SF CC332. (ID 1350) Phase 2.3.
96 **Mount**. Copper alloy. Ctx NH1486 SF NH155. (ID 812) Phase 2.3.

Military equipment

97 **Strap mount (Fig. 7.23)**; one end missing. Copper alloy. Ctx CC1579. SF CC473. (ID 1381) Phase 2.4.
98 **Spur (Fig. 7.23)**; one arm. Copper alloy. Ctx NH2221 SF NH829. (ID 546) Phase 5 BW5.
99 **Buckle plate**. Copper alloy. Ctx CC1592, SF CC446. (ID 1363) Phase 2.3.
100 **Buckle plate or strap end**. Copper alloy. Ctx NH6061, Sf NH1645. (ID 144) Phase 1.3.

Religious items

101 **Bell (Fig. 7.23)**. Iron. Ctx NH1175, SF NH166. (ID 925) Phase 2.3.

Industrial by-products

102 **Sprue? (Fig. 7.24)** Copper alloy. Ctx NH2444. SF NH957. (ID 544) Phase 2.4.
103 **Cylindrical moile**, fragment. Ctx NH6061, SF NH1614. (ID 154) Phase 1.3.

Miscellaneous

104 **Shank**; fragment. Bone. Ctx CC3371. SF CC336. (ID 1448) Phase 2.1.
105 **Shank**; fragment. Bone. Ctx NH1415. NH sf139. (ID1562). Phase 2.3.
106 **Shank**; fragment. Bone. Ctx NH9543. (ID1563). Phase 2.3.
107 **Shank**; fragment. Bone. Ctx NH1426. SF NH153 (ID1574). Phase 2.3
108 **Shank**; fragment. Bone. Ctx NH2239. SF NH839. (ID 1500) Phase 2.3.
109 **Shank.** Bone. Ctx NH1316. NH sf119. (ID1561). Phase 2.4.
110 **Shank**; fragment. Bone. Ctx NH2269. (ID1571). NH2269. (ID1571). Phase 5 BW4.
111 **Shank**; fragment. Bone. Ctx NH3286 : SF NH1021. (ID 184) Phase 6 BW3.
112 **Shank**; fragment. Bone. Ctx NH2129. SF NH827. (ID 1501) Phase 6 BE5
113 **Spike**. Iron. Ctx NH6061, SF NH1613. (ID 439) Phase 1.3.

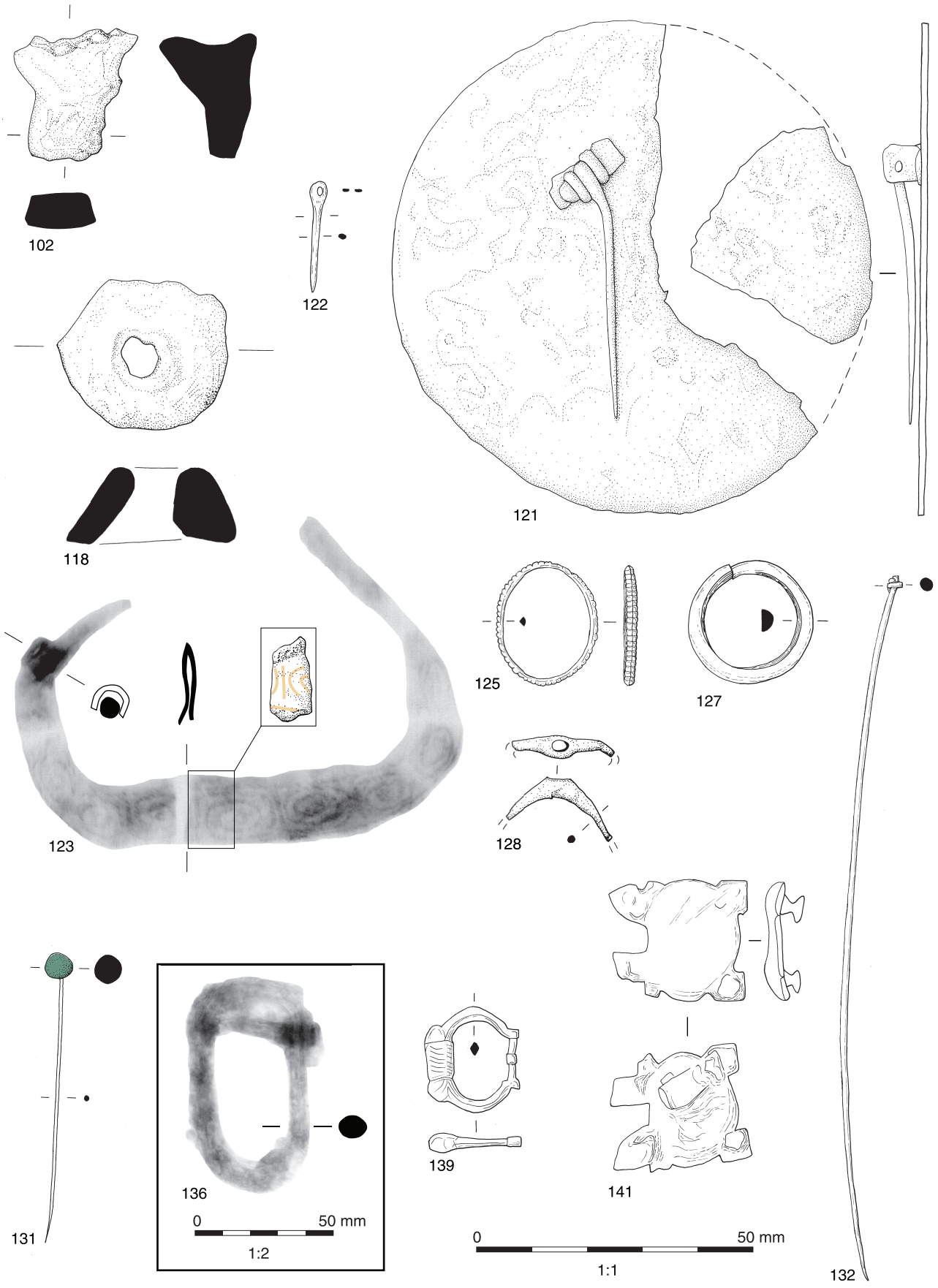


Fig. 7.24 Roman industrial by-products and miscellaneous items, and post-Roman personal equipment

114 **Spike**. Iron. Ctx CC1687 SF CC566 (ID 1116) Phase 2.3.
115 **Spike**. Iron. Ctx CC1630 SF CC491. (ID 1204) Phase 2.4.
116 **Ring**. Iron. Ctx NH6061. (ID 486) Phase 1.3.
117 **Ring**. Iron. Ctx NH6059, SF NH1603. (ID 39) Phase 2.4.
118 **Weight (Fig. 7.24)**. Lead alloy. Ctx NH2039, SF NH936. (ID 963). Phase 2.4.
119 **Bar**. Bone. Ctx NH1522. SF NH142. (ID 1567) Phase 2.1.
120 **Fragment.** Bone. Ctx CC1630. (ID1568), Phase 2.4.

Late Anglo-Saxon to Medieval

Personal equipment

Brooch
121 **Disc brooch (Fig. 7.24)**. Copper alloy. Ctx NH4398, SF NH1267. (ID 825) Phase 4.2 BW1.
122 **Brooch or buckle pin**. Silver. Ctx NH5095, SF NH1448. (ID 567) Phase 6 SE1
123 **Brooch**? **(Fig. 7.24)** Iron. Ctx NH7667, SF NH1803. (ID 402) Phase 4 BW6.
124 **Brooch**? Iron. Ctx NH1109, SF NH197. (ID 779) Phase 4.2 SE2.

Rings
125 **Finger ring (Fig. 7.24)**. Copper alloy. Ctx NH1210. SF NH72 (ID 816) Phase 4.2 SE2.
126 **Ring**, Bone. Ctx NH4369. (ID1573). Phase 4.2 BW2.
127 **Ring (Fig. 7.24)**. Bone. Ctx CC1357. SF CC936. Sample CC137. (ID 1468) Phase 4.2 BE2.
128 **Finger ring (Fig. 7.24)**. Gilded copper alloy. Ctx NH3224. SF NH1013. (ID 581) Phase 6 BW3.

Hooked tags
129 **Hooked tag**. Iron. Ctx CC2290, SF CC1013, Sample CC251. (ID 1289) Phase 4.2 BE4.
130 **Hooked tag**. Copper alloy. Ctx CC3084, SF CC392, sample CC309. (ID 1387) Phase 5 BE5.

Pins
131 **Dress pin (Fig. 7.24)**. Copper alloy broken wire shank, globular dark green spherical glass head. Ctx NH2027, SF NH809. (ID 141) Phase 5 BW4.
132 **'Sewing pin'**. Copper alloy. Ctx NH3234. SF NH1059. (ID 588) Phase 6 BW3
133 **'Sewing pin'**. Copper alloy. Ctx CC1296. SF CC169. (ID 1334) Phase 6 BE3.

Beads
134 **Bead.** glass. Ctx CC3050, SF CC1115. (ID 1463) Phase 5 BE5.

Buckles and strap fittings
135 **Buckle**; complete. Iron. Ctx CC1022, SF CC114. (ID 1121) Phase 4 BE1.
136 **Buckle (Fig. 7.24)**; complete. Iron. Ctx CC2256, SF CC260 (ID 1088) Phase 4.2 BE4.
137 **Buckle frame**? Iron. Ctx NH2534, SF NH965. (ID 286) Phase 4.2. BW5.
138 **Buckle**. Iron. Ctx CC2051, SF CC612. (ID 1111) Phase 5 BE4.
139 **Buckle frame (Fig. 7.24)**. Copper alloy. Ctx CC u/s, SF CC311 (ID 1345)
140 **Buckle plate**. Copper alloy. Ctx NH6081, SF NH1623. (ID 121) Phase 5 SE1.
141 **Buckle plate (Fig. 7.24)**. Copper alloy. Ctx CC2172, SF CC687, Sample CC216. (ID 1388) Phase 5 BE4.
142 **Buckle pin**. Copper alloy. Ctx NH1148, SF NH60 (ID 804) Phase 4 SE3.
143 **Buckle pin**. Copper alloy. Ctx CC3118, SF CC309. (ID 1348) Phase 4.2 BE5.
144 **Buckle pin**; fragment. Iron. Ctx CC2142, SF CC642. (ID 1266) Phase 6 BE4.
145 **Strap end**. Copper alloy. Ctx NH4102, SF NH1215 (ID 587) Phase 6 BW2.
146 **Bar mount**. Copper alloy. Ctx NH2374. SF NH958. (ID 131) Phase 4.2.
147 **Bar mount**. Copper alloy. Ctx NH3236. SF NH1014. (ID 589) Phase 6 BW3
148 **Mount**. Copper alloy. Ctx CC3178, SF CC312. (ID 1346) Phase 6 BE4.
149 **Strap guide**. Copper alloy. Ctx NH4297. (ID 115) Phase 4.2. BW2.

Other dress fittings
150 **Lace chape**. Copper alloy. (ID 810) Phase 6 SE3.
151 **Wire fastener**. Copper alloy. Ctx CC3183. SF CC314. (ID 1349) Phase 6 BE4.
152 **Wire accessory (Fig. 7.25)**. Copper alloy. Ctx CC3276. SF CC1116. Sample CC325. (ID 1471) Phase 6 BE5
153 **Pendant**. Copper alloy. Ctx CC2235; CC259. (ID 1526) Phase 6 BE 4

Toilet equipment

154 **Single-sided composite comb (Fig. 7.25)**. Antler. Ctx NH3433, SF NH1079. (ID 177) Phase 4.2 BW4.
155 **Single-sided composite comb**. Antler. Ctx NH4174. SF NH1225. (ID 187) Phase 4.2 BW2.
156 **Tweezers (Fig. 7.25)**; complete. Copper alloy. Ctx NH2276. SF NH866 (ID 676) Phase 5 BW5.

Textile equipment

157 **Comb tooth (Fig. 7.25)**. Iron. Ctx NH3225, SF NH1018. (ID 513) Phase 4.2 BW 4.
158 **Heckle or comb tooth (Fig. 7.25)**. Iron. Ctx NH2516, SF NH963. (ID 522) Phase 4.1 BW 5.

Spindle whorls
159 **Spindle whorl**. Bone. Ctx NH4535. SF NH1292. (ID 174) Phase 4.1 BW2.
160 **Spindle whorl**. Bone. Ctx NH4148. SF NH1223. (ID 179) Phase 4.2 BW2.
161 **Spindle whorl**. Bone. Ctx NH4146. SF NH1238. (ID 173) Phase 4.2 BW2.
162 **Spindle whorl**. Bone. Ctx NH 4034. (ID 423) Phase 4.2 BW2.
163 **Spindle whorl**. Bone. Ctx NH4322. SF NH1288. (ID 180) Phase 4.2 BW2
164 **Spindle whorl**. Bone. Ctx NH4584. SF NH1295 (ID 181) Phase 5 BW3.
165 **Spindle whorl**. Bone. Ctx NH3222. (ID 418) Phase 5 BW4
166 **Spindle whorl**. Bone. Ctx NH2575. (ID 424) Phase 4.2 BW 4.
167 **Spindle whorl**. Bone. Ctx NH2577. SF NH975. (ID 175) Phase 6 BW4.
168 **Spindle whorl**. Bone. Ctx CC1354. SF CC567. Sample CC134. (ID 1442) Phase 4.2 BE2.
169 **Spindle whorl**. Bone. Ctx CC2247. (ID1558). Phase 4.2 BE4
170 **Spindle whorl**. Bone. Ctx CC2247. SF CC270. (ID 1451) Phase 4.2 BE4.

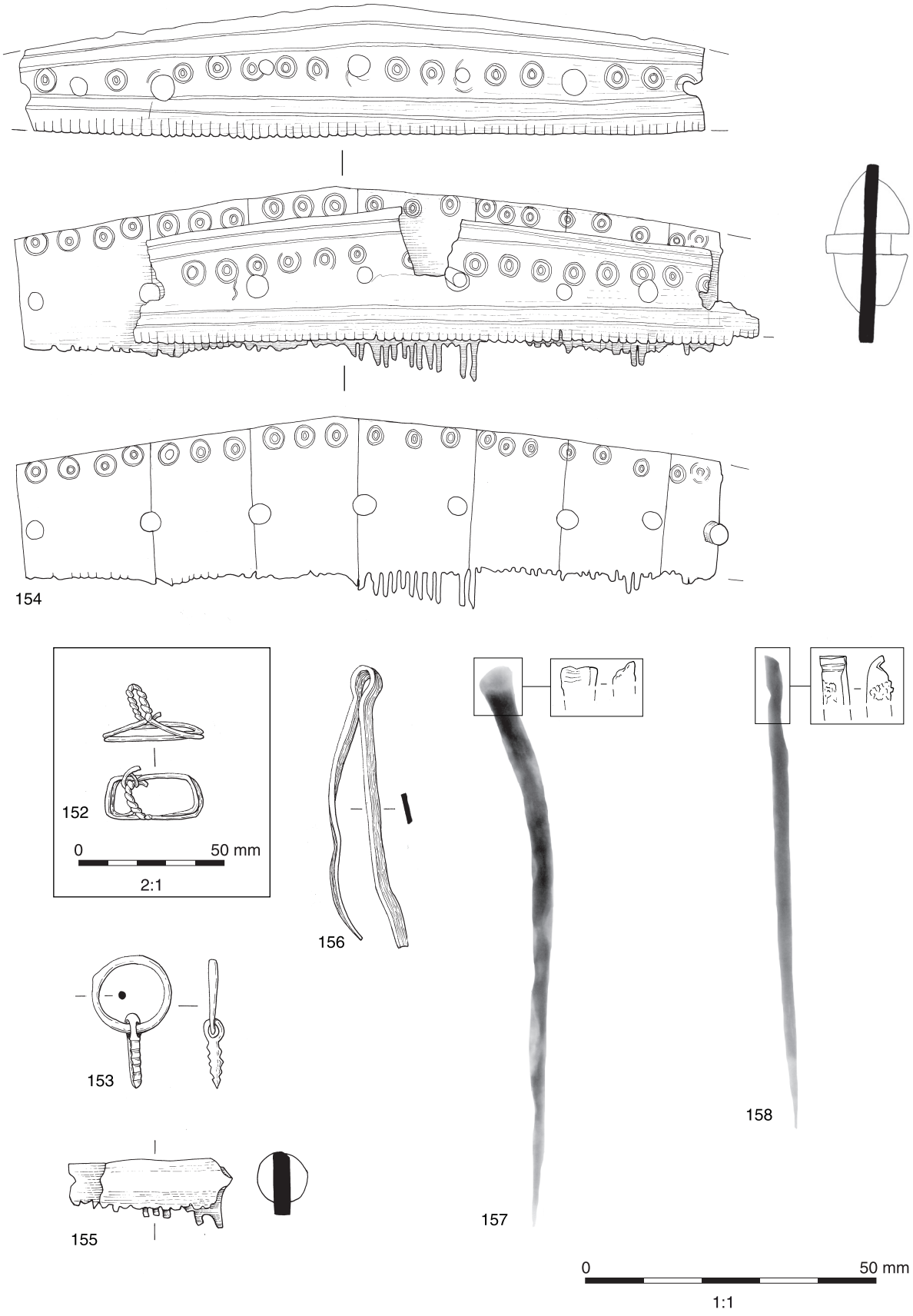


Fig. 7.25 Post-Roman personal items and textile equipment

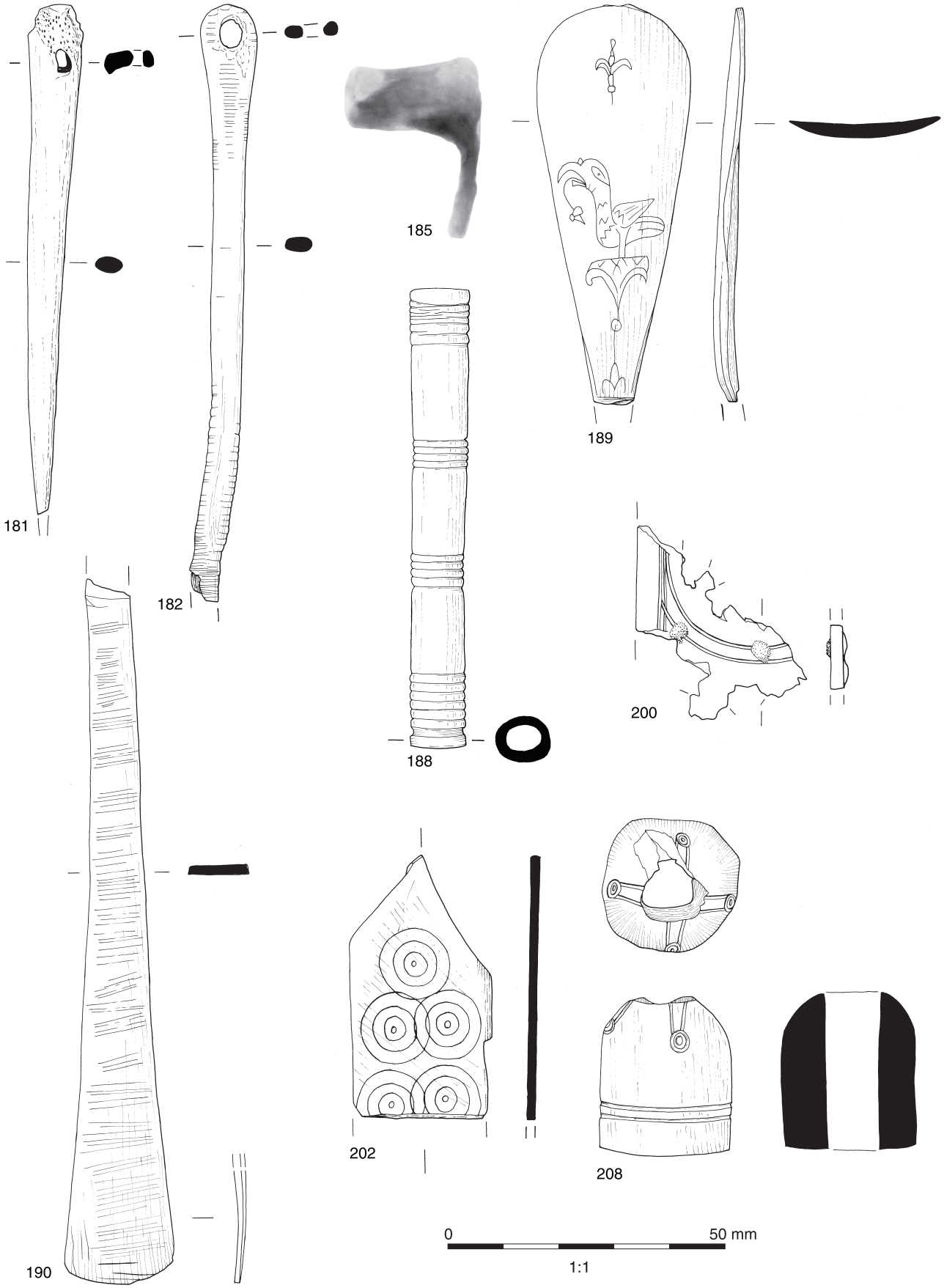


Fig. 7.26 Post-Roman textile equipment, household items, fittings and recreational equipment

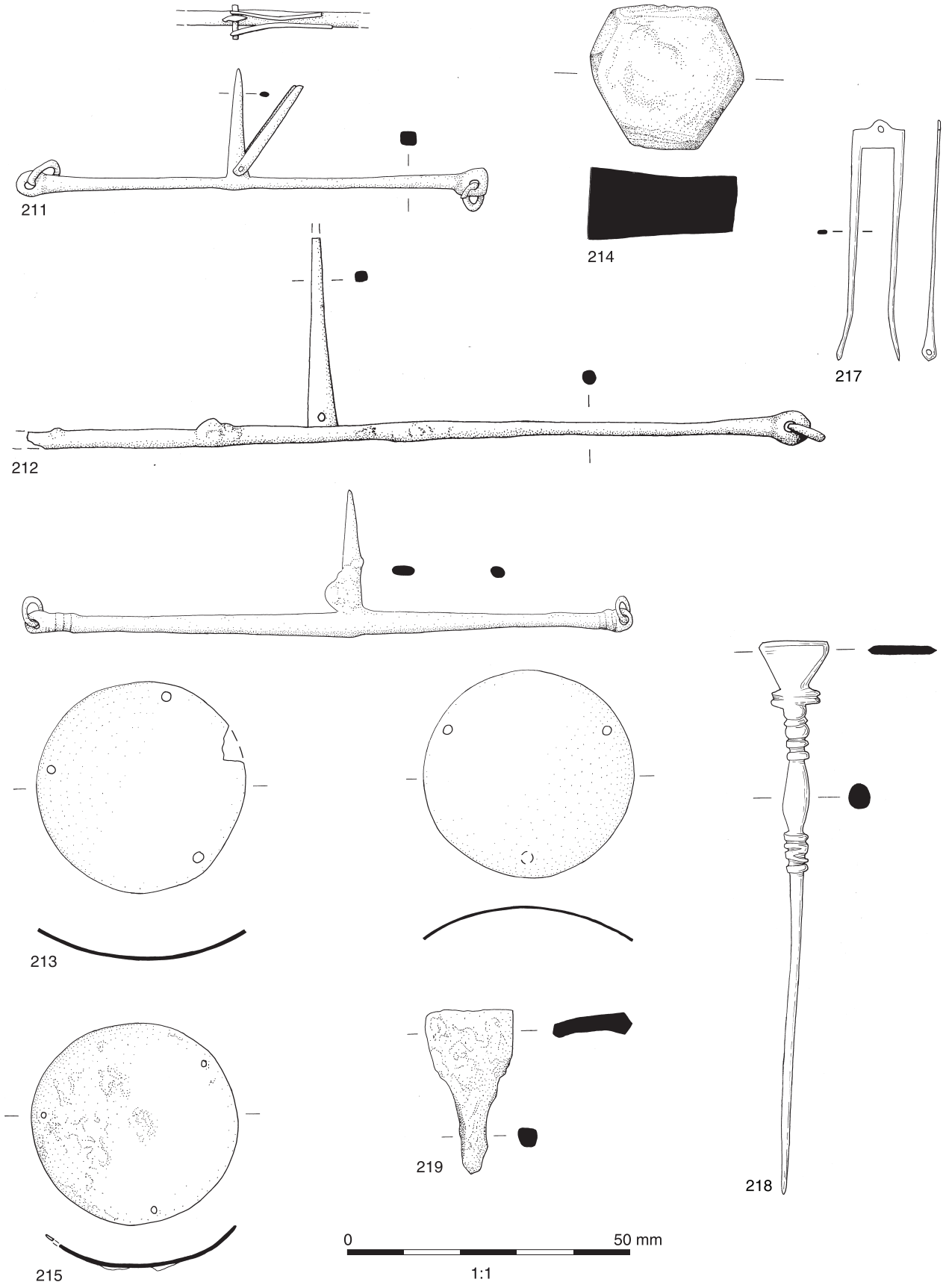


Fig. 7.27 Post-Roman weighing and writing equipment

171 **Spindle whorl**. Bone. Ctx CC2004. SF CC204. (ID 1452). Phase 4.2 BE4.
172 **Spindle whorl**. Bone. Ctx NH4697. SF NH1327. (ID 421) Phase 4.1 SE3
173 **Spindle whorl**. Bone. Ctx NH2577. SF NH975. (ID 175) Phase 6 BW4.

Weaving tools
174 **Pin beater**. Bone (? Ivory). Ctx CC2228. SF CC606. (ID 1449) Phase 4.2 BE4.
175 **Picker-cum-beater**. Bone. Ctx NH3314. SF NH1034. (ID 1502) Phase 5 BW3.
176 **Picker-cum-beater**? Bone. Ctx NH8001. SF NH1900. (ID 185). Phase 8.
177 **Eyed weaving implement**. Bone. Ctx NH3532. SF NH1098. (ID 1505) Phase 5 BW4.
178 **Eyed weaving implement**. Bone. Ctx CC1535. SF CC444. (ID 1439) Phase 5 BE3.
179 **Eyed weaving implement**. Bone (? Fibula). Bone. Ctx CC2157. SF CC243. (ID 1435) Phase 5 BE3.
180 **Eyed weaving implement**. Bone. Ctx CC2288, SF CC275. (ID 1434) Phase 4.2 BE4.
181 **Eyed weaving implement (Fig. 7.26)**. Bone. Ctx CC2157. SF CC243. (ID 1447) Phase 5 BE4.
182 **Eyed weaving implement** (?) **(Fig. 7.26)**. Bone. Ctx CC3021. SF CC304. (ID 1453) Phase 5 BE5.
183 **Eyed weaving implement**. Bone. Ctx CC3276, SF CC339. (ID 1441) Phase 6 BE5
184 **Eyed weaving implement**. Bone. Ctx NH u/s. SF NH1360. (ID 1504) Unphased.

Other
185 **Tenter-hook**(?) **(Fig. 7.26)**, fragment. Iron. Ctx NH2044, SF NH828. (ID 278) Phase 5 BW5.
186 **Needle**. Iron. Ctx NH3126, SF NH1004. (ID 495) Phase 6 BW3.
187 **Bobbin**. Bone. Ctx NH1364. SF NH124. (ID1577). Phase 5 SE3.
188 **Bobbin (Fig. 7.26)**. Bone. Ctx NH3286. (ID 425) Phase 6 BW3

Household items
189 **Spatula/spoon (Fig. 7.26)**. Bone. Ctx CC1354. SF CC568. (ID 1459) Phase 4.2 BE2.
190 **Spatula (Fig. 7.26)**. Bone. Ctx CC1577. SF CC447. (ID 1461) Phase 4 BE3.
191 **Spatula**. Iron. Ctx NH3068. (ID 681) Phase 6 BW3.
192 **Flesh hook**. Iron Ctx NH2570, SF NH974. (ID 519) Phase 5 BW4
193 **Flesh hook**; fragment. Iron. Ctx CC2328, SF CC623. (ID 1242) Phase 6 BE4.
194 **Vessel**; 5 broken fragments very heavily corroded. Copper alloy. Ctx NH3561. SF NH1117. (ID 593) Phase 5 BW4.
195 **Body fragment**. Potash glass. Ctx CC1345, SF CC418.(ID 1412) Phase 5 BE3.
196 **Body fragment**; potash glass now reduced to dust. Ctx CC1307. SF CC867. (ID 1405) Phase 6 BE2.

Box and furniture fittings
197 **Mount**. Ctx NH3094. (ID 182) Phase 5 BW4.
198 **Mount**. Bone. Ctx NH2250. (ID1572). Phase 5 BW5.
199 **Mount** ?. Bone. Ctx CC1345, SF CC420. (ID 1443) Phase 5 BE3.
200 **Mount (Fig. 7.26)**. Bone. Ctx CC1281. SF CC508. (ID 1462) Phase 6 BE3.
201 **Mount**. Bone. Ctx CC1281. SF CC507. (ID 1444) Phase 6 BE3.
202 **Mount (Fig. 7.26)**. Bone. Ctx CC2328, SF CC608. (ID 1507) Phase 6 BE4.
203 **Mount**. Antler. Ctx NH5128. (ID 189). Phase 5 SE1
204 **Mount**. Bone. Ctx NH5168. (ID 1570) Phase 5 SE1.
205 **Box fitting**. Iron. Ctx NH2243, SF NH848. (ID 237) Phase 5 BW4.
206 **Chest mount**; fragment. Iron. Ctx NH2353, SF NH9000. (ID 87) Phase 5 BW5
207 **Box mount** (?). Copper alloy. Ctx NH3539. SF NH1112. (ID 577) Phase 5 BW4.

Recreational equipment
208 **Chess piece (Fig. 7.26)**. Bone. Ctx NH4046. Sf NH1207. (ID 186) Phase 6 BW3.
209 **Skate**. Bone. Ctx NH9666 (ID1557). Phase 5 BW5.
210 **Skate.** Bone. Ctx NH5044. (ID1552). Phase 6 SE1

Weighing equipment
211 **Equal-armed balance (Fig. 7.27)**. Copper alloy. Ctx CC1525. SF CC439. (ID 1354) Phase 4.2 BE2.
212 **Equal-armed balance (Fig. 7.27)**. Copper alloy. Ctx CC1138. SF CC149. (ID 1523) Phase 6 BE2.
213 **Equal-armed balance (Fig. 7.27)**. Ctx CC2126. SF CC2250. (ID 1524) Phase 4.2 BE 4.
214 **Weight**. Lead alloy. Ctx NH3340. SF NH1045. (ID 964) Phase 4.2 BW3.
215 **Scale pan (Fig. 7.27)**. Copper alloy sheet. Ctx NH2099. SF NH819. (ID 592) Phase 6. BW5
216 **Equal-armed balance**. Copper alloy. Ctx NH5132. SF NH1462. (ID 568) Phase 5 SE1.
217 **Balance fork (Fig. 7.27)**. Copper alloy. Ctx NH5120. SF NH1469. (ID 674) Phase 5 SE1.

Writing equipment
218 **Stylus (Fig. 7.27)**; in three fragments. Copper alloy. Ctx NH2071. SF NH814 (ID 590). Phase 5 BW5.
219 **Stylus (Fig. 7.27)**; head only. Copper alloy. Ctx CC1261. SF CC162 (ID1336). Phase 4 BE3.
220 **Stylus (Fig. 7.28)**. Iron. Ctx NH6061, SF NH1644. (ID 42) Phase 1.3.

Transport equipment

Horseshoes
221 **Horseshoe** (Clark Type 1); Iron. Ctx NH6061, SF NH1636. (ID 40) Phase 1.3.
222 **Horseshoe** (Clark Type 1); fragment. Iron. Ctx NH4281, SF NH1244. (ID 314) Phase 5 BW2
223 **Horseshoe** (Clark Type 2); fragment. Iron. Ctx NH4181. SF NH1227. (ID 55) Phase 5 BW2.
224 **Horseshoe** (Clark Type 1); complete. Iron. Ctx NH3167, SF NH1006. (ID 736) Phase 6 BW3.
225 **Horseshoe** (Clark Type 1); fragment. Iron. Ctx NH2292, SF NH879. (ID 282) Phase 4.1 BW5.
226 **Horseshoe** (Clark Type 1); fragment. Iron. Ctx NH2208, SF NH831. (ID 241) Phase 4.1 BW5
227 **Horseshoe** (Clark Type 2); arm fragment. Iron. Ctx NH2070. (ID 639) Phase 5 BW5,
228 **Horseshoe** (Clark Type 2); arm fragment. Iron. Ctx NH2107. (ID 463) Phase 5 BW5
229 **Horseshoe** (Clark Type 1) **(Fig. 7.28)**; half extant. Iron. Ctx NH5054, SF NH1453. (ID 290) Phase 4.2 SE 1.
230 **Horseshoe** (Clark Type 2) **(Fig. 7.28)**; half. Iron. Ctx NH5046, SF NH1441. (ID 302) Phase 6. SE1
231 **Horseshoe** (Clark Type 2); fragment of arm. Iron. Ctx CC1464, SF CC431. (ID 1207) Phase 5 E2.
232 **Horseshoe**; arm fragment. Iron. Ctx CC1384, SFCC415. (ID 1210) Phase 5 BE3.

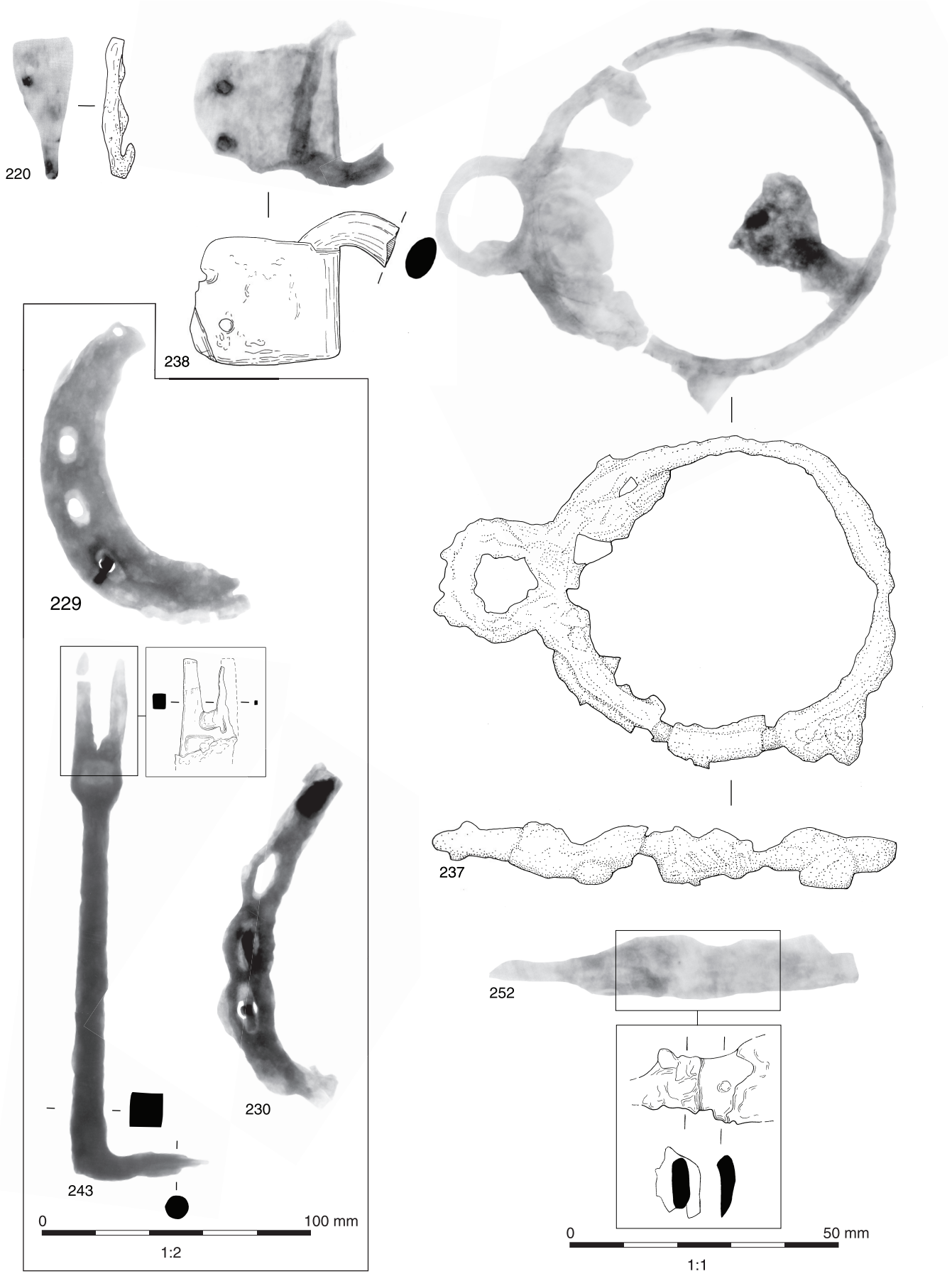


Fig. 7.28 Post-Roman writing equipment, transport items, structural finds and knives

233 **Horseshoe**; arm fragment. Iron. Ctx CC3254, SF CC318. (ID 1136) Phase 4.2 BE4.
234 **Horseshoe** (Clark Type 3); arm fragment. Iron. Ctx CC2132, SF CC235. (ID 972) Phase 5 BE4.
235 **Horseshoe**; arm fragment. Iron. Ctx CC2061, SF CC2061. (ID 1104) Phase 5 BE4.
236 **Horseshoe nails** (3); Iron. Ctx CC1096, SF CC808. (ID 1531) Phase 5 BE 1.

Other fittings
237 **Bridle fitting? (Fig. 7.28)** Iron. Ctx NH3301, SF NH 1036. (ID 499) Phase 4.2 BW4
238 **Strap junction (Fig. 7.28)**. Iron. Ctx NH3395, SF NH1069. (ID 746) Phase 5 BW3.
239 **Prick spur**?; fragment. Iron. Ctx CC2382 SF CC293. (ID 1156) Phase 4.2 BE4

Structural finds
240 **Double spiked loop**. Iron. Ctx CC2289, SF CC276. (ID 1160) Phase 4.2 BE4.
241 **T Clamp**. Iron. Ctx CC2265. SF CC277. (ID 1154) Phase 6 BE4.
242 **Hinge pivot**. Iron. Ctx NH5094. (ID 103) Phase 6 SE1.
243 **Hinge pivot (Fig. 7.28)**. Iron. Ctx NH1057 SF NH191. (ID 888) Phase 4.2 SE2.
242 **Hinge pivot**. Iron. Ctx NH1257, SF NH232. (ID 884) Phase 4.2 SE2.
243 **Structural fitting**. Iron. Ctx NH1007, SF NH50. (ID 877) Phase 6 SE2.
244 **Hinge pivot?.** Iron. Ctx NH8020. (ID 709) Phase 6 BW1.
245 **Masonry clamp**. Ctx NH4124 SF NH1217. (ID 208) Phase 6 BW 1.
246 **Staple?.** Iron. Ctx NH 4020, SF NH1200. (ID 191) Phase 6 BW2.
247 **Split pin**. Iron. Ctx NH4130. Ctx NH 4130. (ID 215) Phase 4.2 BW2.

Knives and tools
248 **Blade**; fragment. Iron. Ctx NH4094, SF NH1214. (ID 216) Phase 4.2 BW2.
249 **Blade**; fragment. Iron. Ctx NH4164, SF NH1237. (ID 315) Phase 4.2. BW 2.
250 **Blade**; fragment. Iron. Ctx NH4130. SF NH1293. (ID 62) Phase 4.2 BW2
251 **Knife**; complete. Iron. Ctx NH3363, SF NH1063. (ID 487) Phase 4.2 BW 3.
252 **Knife (Fig. 7.28)**; fragment. Iron. Ctx NH3356, SF NH1057. (ID 492) Phase 5 BW 3.
253 **Blade**; fragment. Iron. Ctx NH3476, SF NH1088. (ID 740) Phase 4.1 BW3.
254 **Blade**; fragment. Iron. Ctx NH3105, SF NH1121. (ID 68) Phase 5 BW3
255 **Blade**; fragment. Iron. Ctx NH3033. (ID 111) Phase 5 BW3.
256 **Knife (Fig. 7.29)**; fragment. Iron. Ctx NH3236. (ID 483) Phase 6 BW3
257 **Knife**; fragment. Iron. Ctx NH3672, SF NH1130. (ID 193) Phase 4.1 BW4
258 **Blade**; fragment. Iron. Ctx NH3672, SF NH1131. (ID 201) Phase 4.1 BW4
259 **Blade**; fragment. Iron. Ctx NH2026, SF NH808. (ID 271) Phase 6 BW 4.
260 **Knife**; complete. Iron. Ctx NH2366; SF NH901. (ID 824) Phase 4.2 BW5.
261 **Knife**; fragment. Iron. Ctx NH2208, SF NH831. (ID 240) Phase 4.1 BW5.
262 **Blade**; fragment. Iron. Ctx NH7506, SF NH1800. (ID 464) Phase 5 BW5.
263 **Blade**; fragment. Iron. Ctx CC1154, SF CC576, sample CC111. (ID 994) Phase 4 BE1.
264 **Knife**; complete. Iron. Ctx CC1354, SF CC807. (ID 1236) Phase 4.2 BE2.
265 **Handle**; fragment. Bone. Ctx CC1144. SF CC157 (ID 1437). Phase 6 BE2.
266 **Knife (Fig. 7.29)**; fragment. Iron. Ctx CC2003, SF CC202. (ID 1070) Phase 4.2 BE4.
267 **Knife**; fragment. Iron. Ctx CC2126, SF CC229. (ID 1095) Phase 4.2 BE4.
268 **Knife**. Iron. Ctx NH2278, SF NH871. (ID 114) Phase 5 BE4
269 **Blade**; fragment. Iron. Ctx CC2288, SF CC280. (ID 1155) Phase 4.2 BE4.
270 **Blade**, fragment. Iron. Ctx CC2246, SF CC269. (ID 1105) Phase 4.2 BE4.
271 **Knife**, fragment. Iron. Ctx CC3013, SF CC303. (ID 1145) Phase 5 BE5.
272 **Knife**; complete. Iron. Ctx NH5107, SF NH1454. (ID 285) Phase 5 SE 1.

Iron tools
273 **Auger(?) (Fig. 7.29);** fragment. Iron. Ctx NH4052; SF NH1208. (ID 207) BW3.
274 **Tanged punch (Fig. 7.29)**. Iron. Ctx NH2106, SF NH823. (ID 247) Phase 4.2 BW4.
275 **Tanged knife?** Ctx NH7506. (ID 404) Phase 5 BW 5.
276 **Socketed axe-head**; complete. Iron. Ctx CC2380, SF CC291. (ID 1151). Phase 4.2 BE4.
277 **Bladed tool (Fig. 7.29)**; fragment. Ctx CC2458, SF CC602. (ID 979) Phase 4.2 BE4.
278 **Tanged implement**. Ctx CC2310 SF CC274. (ID 1157) Phase 5 BE4.
288 **Chisel edged tool**. Iron. Ctx NH6161. SF NH1680. (ID 7). Phase 4.2. SE1

Modified bone tools
289 **Socketed point**. Bone metapodia. Ctx NH1126. (ID 1551). Phase 4.2 SE2.
290 **Socketed point**. Bone – sheep/goat tibia. Ctx CC2027. (ID1556). Phase 5 BE4
291 **Socketed point**. Bovine metatarsal? Ctx NH7510. (ID 427) Phase 5 BW5.
292 **'Lucet'**. Bone. Ctx CC1064 SF CC475. (ID 1454) Phase 4 BE 3.
293 **Utilised bone**. Cattle metatarsal. Ctx NH1450. SF NH188. (ID1555). Phase 5 SE3
294 **Utilised bone**. Cattle metatarsal. Ctx NH1450. SF NH188. (ID1554). Phase 5 SE3
295 **Utilised bone**. Bone, metatarsal ? Ctx NH1407 (ID 1553). Phase 5 SE3.
296 **Modified proximal end of metatarsal**? Bone. Ctx CC2256. SF CC605. (ID 1450) Phase 4.2 BE4.

Fasteners and fittings

Locks and keys
297 **Padlock bolt (Fig. 7.29)**. Iron. Ctx NH4281, SF NH1245. (ID 304) Phase 5 BW2.
298 **Padlock case** ? Ctx NH3325. SF NH1044. (ID 728) Phase 5 BW3.
299 **Padlock bolt**. Iron. Ctx NH3016. (ID 100) Phase 5 BW3.
300 **Barrel padlock (Fig. 7.30)**. Iron. Ctx NH3094. (ID 52) Phase 5 BW4.

Fig. 7.29 Post-Roman knives, tools, fasteners and fittings

301 **Padlock key**. Iron. Ctx NH2534. SF NH964. (ID 92) Phase 4.2 BW5.
302 **Padlock bolt** ? Iron. Ctx NH2243, SF NH848. (ID 238) Phase 5 BW4.
303 **Padlock key (Fig. 7.30)**. Iron. Ctx CC1525, SF CC443. (ID 1211) Phase 4.2 BE2.
304 **Barrel padlock**. Ctx CC2161, SF CC244. (ID 971) Phase 4.2 BE4.
305 **Barrel padlock casing (Fig. 7.30)**. Iron. Ctx CC3254, SF CC319. (ID 1128) Phase 4.2 BE4.
306 **Lock fitting**? Iron. Ctx CC2003, SF CC200 (ID 1075) Phase 4.2 BE4
307 **Key**. Iron. Ctx CC3389, SF CC356. (ID 1182) Phase 4.2 BE4
308 **Padlock bolt**. Iron. Ctx CC2238, SF CC262. (ID 1093) Phase 5 BE4.
309 **Padlock key (Fig. 7.30)**. Iron. Ctx CC2027, SF CC271. (ID 1107) Phase 5 BE4.
310 **Key (Fig. 7.30)**. Iron. Ctx CC3237, SF CC347. (ID 1133) Phase 4.2 BE5.

Riveted bone mounts

311 **Riveted mount (Fig. 7.30)**. Bone. Ctx CC1022, SF CC154. (ID 1455) Phase 4 BE1.
312 **Riveted mount**. Bone. Ctx CC1354. SFCC483. (ID 1457) Phase 4.2 BE 2.
313 **Riveted mount**. Bone. Ctx CC1365, SF CC551. (ID 1458) Phase 4.2 BE 2.
314 **Riveted mount (Fig. 7.30)**. Bone. Ctx CC2004. SF SF CC223. (ID 1456) Phase 4.2 BE4.
315 **Riveted mount**. Bone. Ctx CC2171, SF CC607. (ID 1460) Phase 5 BE4.
316 **Mount**? Bone. Ctx CC2163. (ID 1569) Phase 4.2 BE4
317 **Riveted mount**. Bone. Ctx NH4322. (ID 1547) Phase 4.2 BW2.
318 **Riveted mount**. Bone. Ctx NH4322. (ID 1546) Phase 4.2 BW2
319 **Mount or roughout**. Bone. Ctx NH4322. (ID 1548) Phase 4.2 BW2
320 **Riveted mount**. Bone. Ctx NH1365, (ID1534) Phase 4.2. BW3
321 **Riveted mount**. Bone. Ctx NH4594, SF NH1299. (ID 176) Phase 5 BW3.
322 **Riveted mount**. Bone. Ctx NH 2399, Sample NH173. (ID 431) Phase 4.2 BW 5.
323 **Mount**. Bone (large mammal rib). Ctx NH1156; SF NH65. (ID1536). Phase 4.2. SE 2.
324 **Riveted mount**. Bone. Ctx NH1450. SF NH188. (ID1540). Phase 5 SE3.
325 **Riveted mount**. Bone. Ctx NH1407. SF NH184. (ID1542). Phase 5 SE3.
326 **Riveted mount**. Bone (large mammal rib). Ctx NH1340. (ID 1544). Phase 5 SE3.
327 **Riveted mount**. Bone (large mammal rib). Ctx NH1407. (ID1541). Phase 5 SE3.
328 **Riveted mount**. Bone. Ctx NH1340. (ID1545). Phase 5 SE3.
329 **Riveted mount**. Bone. Ctx NH1342, (ID1538) Phase 5, SE 3.
330 **Mount**. Bone (large mammal rib). Ctx NH1340. (ID 1543). Phase 5 SE3
331 **Mount**. Bone. Ctx NH1450; SF NH188. (ID1536). Phase 5. SE 3.
332 **Riveted mount (Fig. 7.31)**. Bone. Ctx NH3159. SF NH1005. (ID 422) Phase 8
333 **Riveted mount**. Bone. Ctx NH7593, (ID1535) Phase 8.

Studs

334 **Flat-headed stud**. Copper alloy. Ctx NH3103. SF NH1040. (ID 578) Phase 5 BW3
335 **Flat-headed stud**; head only. Copper alloy. Ctx NH3236. SF NH1016. (ID 580) Phase 6 BW3.
336 **Conical-headed stud**. Copper alloy. Ctx NH2263. SF NH849. (ID 140) Phase 5 BW4.
337 **Stud**; fragmented. Copper alloy. Ctx NH2353, SF NH907. (ID 553) Phase 5 BW5
338 **Flat-headed stud**. Copper alloy. Ctx CC1218. SF CC158. (ID 1337) Phase 5 BE2.
339 **Flat-headed stud**. Iron. Ctx CC2467 SF CC1030 (ID 1300) Phase 5 BE4.
340 **Rivet**. Copper alloy. Ctx NH1222. SF NH87. (ID 819) Phase 4.2 SE2

Other items

341 **Mount (Fig. 7.31)**. Copper alloy. Ctx CC1303, SF CC189. (ID 1331) Phase 4 BE1.
342 **Angle bracket**. Iron. Ctx CC1349, SF CC409. (ID 1205) Phase 4 BE1.
343 **Staple**; 2 examples. IronCtx CC1027, SF CC104. (ID 1039) Phase 4 BE1.
344 **Split pin**. Iron. Ctx CC1254, SF CC185. (ID 1027) Phase 5 BE1.
345 **Mount**. Copper alloy. Ctx CC1090. SF CC142. (ID 1338) Phase 5 BE3.
346 **Mount**. Copper alloy. Ctx CC2095 SF CC665. (ID 1370) Phase 5 BE4.
347 **Chain loop**? Iron. Ctx CC2178 SF CC1004. (ID 1324) Phase 4.2 BE4.
348 **Staple**. Iron. Ctx NH2278, SF NH868. (ID 228) Phase 5 BE4
349 **Hook fragment**. Iron. Ctx CC2097, SF CC217. (ID 1089) Phase 6 BE4.
350 **Finial (Fig. 7.31)**. Iron. Ctx NH8049. (ID 112) Phase 6 BW1.
351 **Angle binding**. Ctx NH4328, SF NH1247 (ID 206). Phase 4.2 BW2.
352 **Staple**. Iron. Ctx NH4085, SF NH 1233. (ID 73) Phase 4.2 BW2.
353 **Split pin and loop (Fig. 7.31)**. Iron. Ctx NH4025, SF NH1202. (ID 65) Phase 6 BW2.
354 **Chain**, broken link. Iron. Ctx NH4369, SF NH261. (ID 359) Phase 4.2 BW2.
355 **Staple**. Iron. Ctx NH3507, SF NH1109. (ID 197) Phase 4.1 BW 3.
356 **Staple**. Iron. NH3354, SF NH1065. (ID 502) Phase 5 BW3.
357 **Staple**. Iron. Ctx NH3105, SF NH1122. (ID 328) Phase 5 BW3.
358 **Staple**. Iron. Ctx NH3105, SF NH1122. (ID 328) Phase 5 BW3.
359 **Looped pin**. Iron. Ctx NH3105, SF NH1119. (ID 321) Phase 5 BW 3.
360 **Mount**. Copper alloy. Ctx NH2106. SF NH821. (ID 545) Phase 4.2 BW 4.
361 **Chain (Fig. 7.31)**. Iron. Ctx NH2241, SF NH 850. (ID 259) Phase 5 BW 4.
362 **Washer; fragment**. Iron. Ctx NH6204, sample NH374. (ID 625) Phase 4 SE1.
363 **Stapled hasp**. Iron. Ctx NH5114, SF NH1458. (ID 313) Phase 5 SE1.
364 **Suspension hook**. Iron. Ctx NH5046, SF NH1428. (ID 337) Phase 6 SE1
365 **Openwork mount; fragment**. Copper alloy. Ctx NH6095, SF NH1651. (ID 143) Phase 5 SE1.

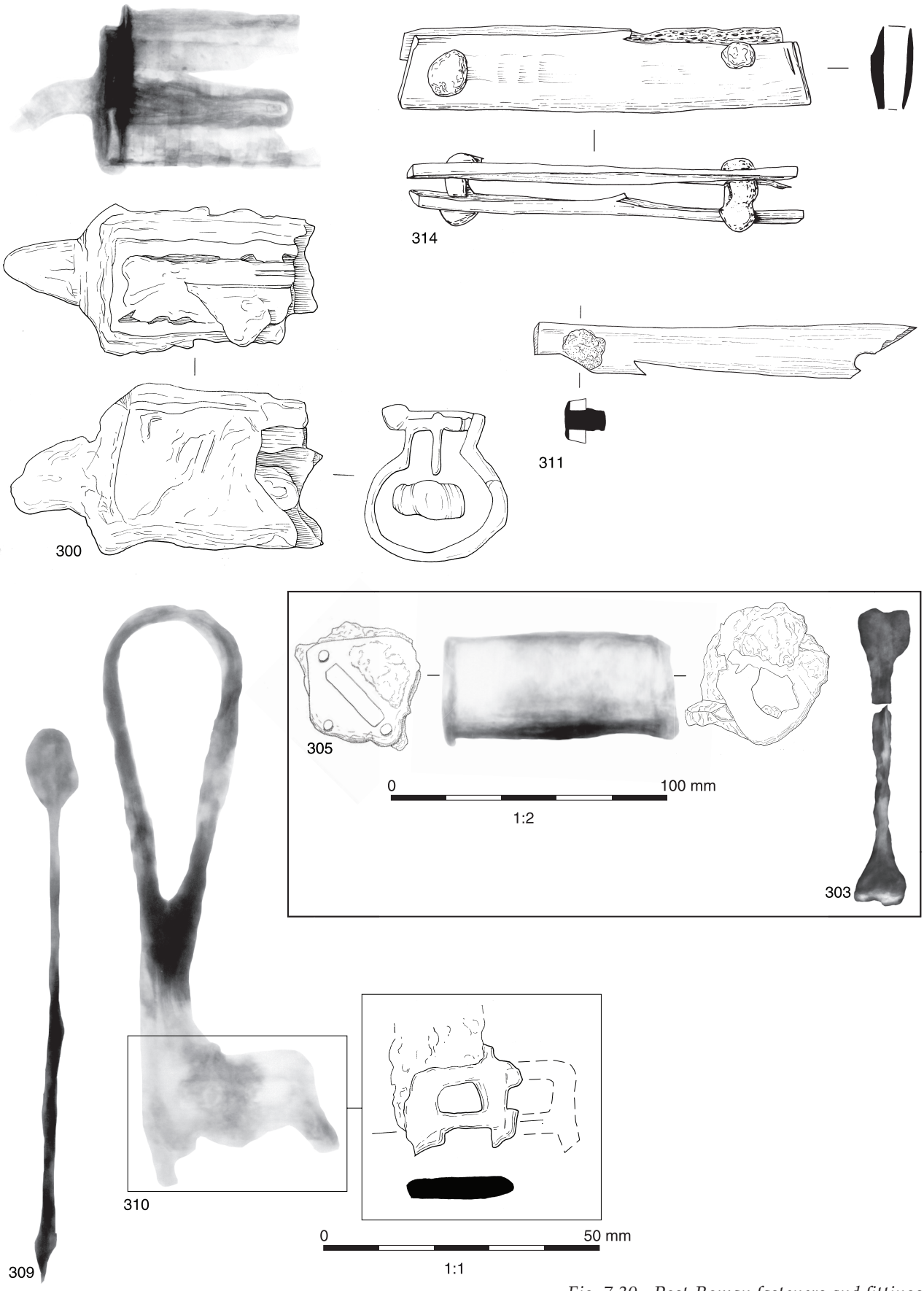


Fig. 7.30 Post-Roman fasteners and fittings

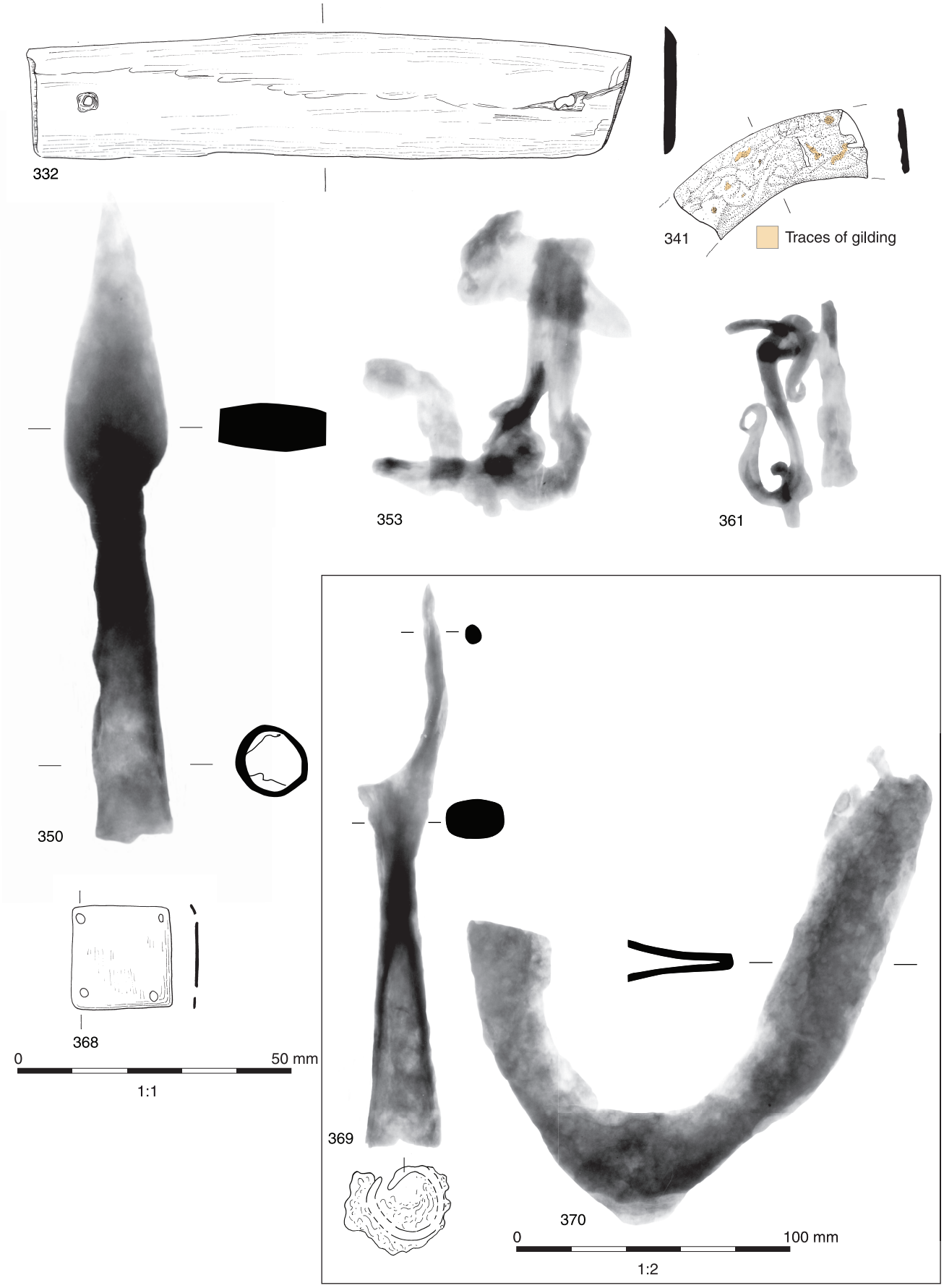


Fig. 7.31 Post-Roman fasteners and fittings, agricultural and horticultural equipment

366 **Binding; fragment**. Iron. Ctx NH1264, SF NH99. (ID 883) Phase 4 SE3.
367 **Suspension fitting**. Iron. Ctx NH8027. (ID 106) Phase 5.
368 **Mount (Fig. 7.31)**. Copper alloy. Ctx NH8044. SF NH1901. (ID 120) Phase 6.

Agricultural and horticultural equipment

369 **Fork (Fig. 7.31)**. Iron. Ctx NH9554. (ID 113) Phase 4 BW5.
370 **Spade shoe (Fig. 7.31)**. Iron. Ctx CC2265 SF CC279, (ID 1162) Phase 6 BE4.

Hunting and Military Equipment

371 **Arrowhead (Fig. 7.32)**. Iron. Ctx NH4095, SF NH1213. (ID 196) Phase 4.2 BW 2.
372 **Arrowhead (Fig. 7.32)**. Iron. Ctx NH4186, SF NH1248. (ID 198) Phase 5 BW2.

Religious items

373 **Figurine (Fig. 7.32)**; fragment. Copper alloy. Ctx NH1062 SF NH193. (ID 805) Phase 5 SE2.
374 **Bell clapper (Fig. 7.32)**. Iron. Ctx NH2027. (ID 721) Phase 5 BW4.

Industrial and craft by products

375 **Working waste**. Antler. Ctx NH4714. SF NH1338. (ID 428) Phase 4.1 BW2.
376 **Rough-outs**. Bone. Ctx NH4322. (ID1549) Phase 4.2 BW2
377 **Rough-out**. Bone. Ctx NH4425. SF NH1283. (ID 1506) Phase 4.2 BW2.
378 **Working waste**. Bone. Ctx NH3286. SF NH1023. (ID 426) Phase 6 BW 3.
379 **Working waste**. Bone. Ctx NH2114. (ID 188) Phase 4.2 BW4.
380 **Rough-out**. Bone. Ctx NH3168. (ID1558). Phase 4.2. BW4
381 **Working waste**. Bone. Ctx NH2323. (ID 1550). Phase 5 BW5.
382 **Rough-out**. Bone. Ctx NH1513. SF NH163. (ID1575) Phase 4 SE3.

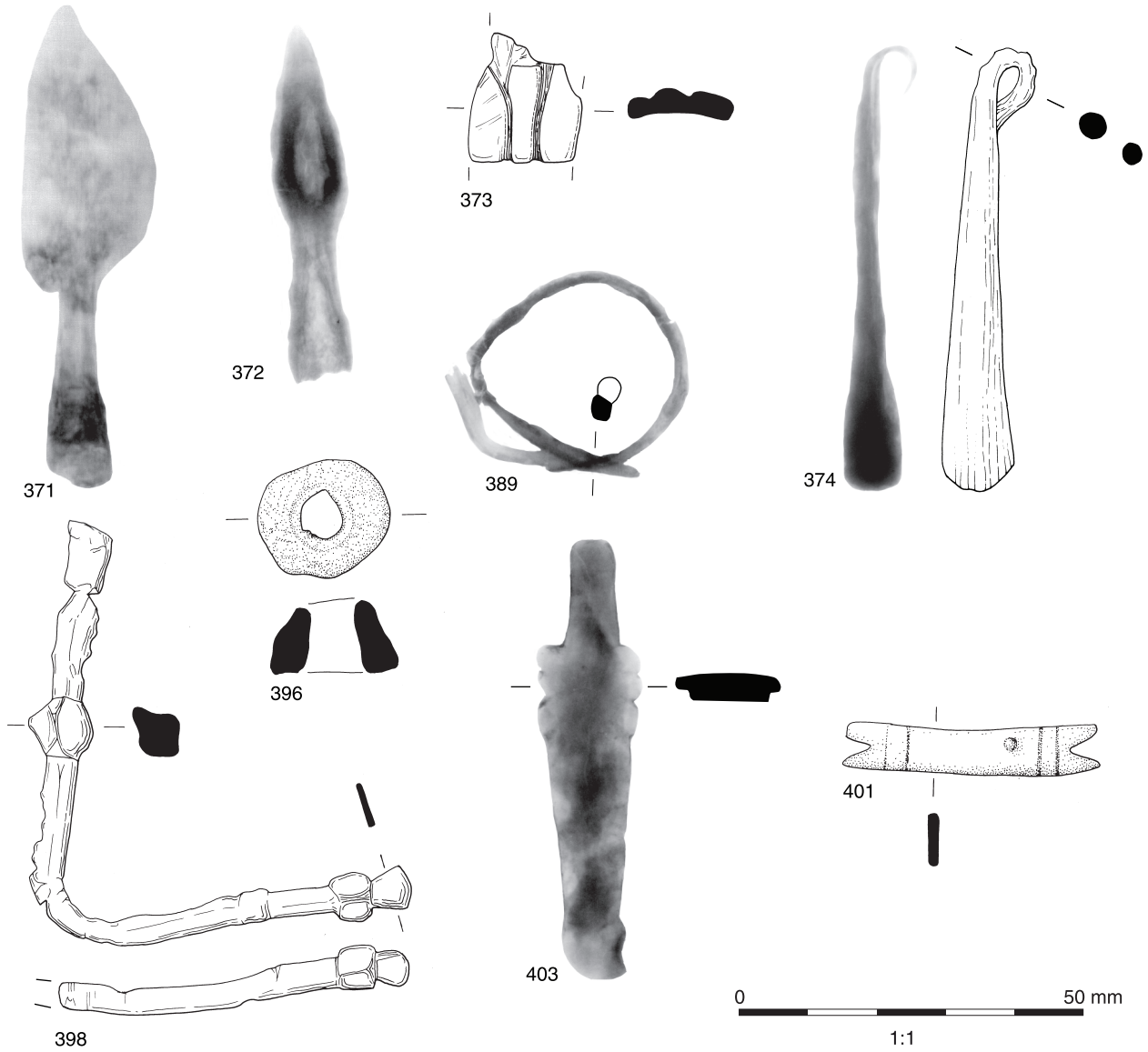


Fig. 7.32 Post-Roman hunting and military equipment, religious items and miscellaneous items

383 **Rough-out**. Ctx CC1362. SF CC555. (ID 1446) Phase 4.2 BE2
384 **Working waste**. Antler tine. Ctx CC3219, SF CC340. (ID 1440) Phase 6 BE5.
385 **Working waste**. Bone. Ctx CC3277. (ID1539) Phase 6 BE5

Miscellaneous

386 **Ring**. Iron. Ctx 2116. (ID 723) Phase 4.2 BW4
387 **Penannular ring**. Copper alloy. Ctx NH4085. SF NH1231. (ID 528). Phase 4.2 BW2.
388 **Ring**. Copper alloy. Ctx NH4075. SF NH1209. (ID 575) Phase 6 BW2
389 **Ring (Fig. 7.32)**. Iron. Ctx NH3353, SF NH1054. (ID 743) Phase 5 BW3.
390 **Ring**. Copper alloy. Ctx NH3286. SF NH1029. (ID 128) Phase 6 BW3.
391 **Spiral ring**. Iron. Ctx NH3467, SF NH1089. (ID 303) Phase 5 BW4.
392 **Ring; fragment**. Iron. Ctx NH2023 SF NH962. (ID 83) Phase 4.2 BW5.
393 **Ring; segment**. Copper alloy. Ctx NH5051. SF NH1421. (ID 539) Phase 6. SE1.
394 **Ring**. Iron. Ctx CC2003, SF CC201. (ID 1072) Phase 4.2 BE4.
395 **Weight**. Lead alloy and stone. Ctx NH4425, SFNH1281. (ID 968) Phase 4.2 BW2.
396 **Weight (Fig. 7.32)**. Lead alloy. Ctx NH4133, SF NH1221 (ID 826) Phase 4.2 BW2.
397 **Spike**. Iron. Ctx NH3354, SF NH1048. (ID 742) Phase 5 BW3.
398 **Implement (Fig. 7.32)**. Lead alloy. Ctx NH3246, SF NH1015. (ID 970) Phase 5 BW4.
399 **Antler beam**. Ctx NH2628. (ID 429) Phase 4.2 BW4.
400 **Point**. Iron. Ctx NH2241, SF NH847. (ID 232) Phase 5 BW4.
401 **Notched bar (Fig. 7.32)**. Copper alloy. Ctx NH7606, SF NH1766. (ID 563) Phase 5 BW6.
402 **Cast plate fragment**. Copper alloy. Ctx CC3029, SF CC366. (ID 1352) Phase 5 BE5.
403 **'Blade' (Fig. 7.32)**. Iron. Ctx NH1014. SF NH169. Phase 6 SE2.

Worked stone objects *by Ruth Shaffrey*

Prehistoric (Phase 1)

A single large saddle quern of Lodsworth Greensand was recovered from early Iron Age pit fill NH6183. It is quite worn with only one surviving original edge. Lodsworth Greensand saddle querns of early date are relatively uncommon although a late Bronze Age example was found during the Danebury Environs project at Longstock, New Buildings (Cunliffe and Poole 2000, 69). The only other stone item from the prehistoric phase is an unworked but possibly utilised flint sphere.

Roman (Phase 2)

A single whetstone was recovered from Roman Phase 2.3 context NH2608; it is a typical slab of probable Pennant sandstone. Approximately five querns were recovered from Roman contexts, including three examples of Lodsworth Greensand plus numerous small weathered Lava quern fragments. Both Lava and Lodsworth Greensand rotary querns are typical of Roman assemblages in this region. A single probable millstone fragment of Lodsworth Greensand was found in an Anglo-Norman context but is almost certain to be evidence of Roman milling because the main focus of Lodsworth Greensand quern production is early Roman (Peacock 1987). A number of quern fragments deposited in Saxon contexts may also be residual Roman material. Lodsworth Greensand rotary querns consistently measure between 300 and 450 mm diameter and millstones are rare with only four known examples, including this one. Winchester is located towards the western edge of the Lodsworth Greensand distribution and is the only known millstone in that area (Peacock 1987).

Roman contexts produced an assortment of other worked stone including a single undecorated shale bracelet fragment, a small flint sphere, and a fragment of Purbeck marble mortar. A single object found in dark earth is made of Cornish Greenstone (Fig. 7.34, no. 7). It is quite small and resembles a mace head but has been much altered; the edges are facetted and the item has been well used. It is similar to, though smaller than, known cushion stones (eg Butler and van der Waals 1966) but may have been used as a metal smithing tool (Roe pers. comm.).

Two processors include a pebble with extensive wear on one side, suggesting it was used as a rubber (SF 505). The second is an extremely well used mixing slab/mortar (Fig. 7.36, no. 13) with both faces worn very smooth and highly concave.

Late Saxon (Phase 4)

Eleven whetstones were recovered from late Saxon contexts in Properties BE 1, BE 2, BE 4, BW 1, BW 2, BW 4 and BW 6. Four are primary whetstones, three are rotating and four are hones. The primary whetstones utilise the greatest variety of lithologies including quartzite, possible Kentish Rag and sandstone. The rotating whetstones are made only of Pennant sandstone while the hones utilise Pennant and other sandstones.

The non-rotating whetstones and hones vary in design, some being small neat hand held items, occasionally with extensive use wear. These small varieties include SF 230, which is unusually tapered and heavily worn on all sides with the end also worn through use (Fig. 7.35, no. 10). Both faces of one Pennant sandstone slab shaped hone are worn concave through extensive use and are encrusted with iron deposits.

Late Saxon contexts produced single examples each of quern fragments of Lodsworth Greensand, Millstone Grit and sandstone, plus five contexts containing lava quern fragments. There were no spatial patterns to the quern distribution, with single quern fragments from inside the boundaries of Properties BE 2, BE 4, BE 5, BW 2 and SE 1 and two inside Property BE 1.

Saxon contexts also produced a plain bun-shaped chalk spindle whorl (Fig. 7.33, no. 4) and a chalk vessel, probably a lamp. The lamp is flat bottomed with curved but almost vertical sides and flat but crudely shaped inside.

Anglo-Norman (Phase 5)

Twelve whetstones were recovered from Anglo-Norman contexts in Properties BE 1–3, BW 3–5 and SE 1. Of these, four are primary whetstones, two rotating, and the remainder are hones. Of two fragments of Norwegian Ragstone (micaceous schist), one is a primary whetstone (Fig. 7.34, no. 8) and the other an unfashioned but utilised piece of the same stone. The rotating whetstones and the remaining primary whetstones are sandstone, probably Pennant sandstone and Kentish Rag. One of the rotating whetstones has wear on both circumference and main faces indicating it was used for more than one purpose.

A number of quern fragments were recovered from Anglo-Norman contexts but, as with earlier phases, no patterning of quern fragment deposition was observed. Five contexts produced lava quern fragments, all weathered and mostly very small. Two sandstone quern fragments were also recovered. A millstone fragment of Lodsworth Greensand came from Property BE 3 (NH1150, SF 58). The presence of a millstone fragment in pit NH1149 is an indication of a mill somewhere in the vicinity, although probably not on the actual site, and almost certainly relating to the Roman occupation.

Ten other items of worked stone were recovered from Anglo-Norman contexts. These mainly represent either industrial or domestic activity. A single mudstone counter in Property SE 1 is a recreational object. This property also produced a single crudely-made chalk lamp (Fig. 7.33, no. 1). Stone lamps are not common and, although its presence is noteable, it is made of chalk, a locally available material and is not of good quality, which suggests domestic rather than high status use.

All the stone spindle whorls in Properties BW 3, BW 4 and SE 1 are made of chalk, but they do vary in design. A whorl from BW 3 is plain, two from BW

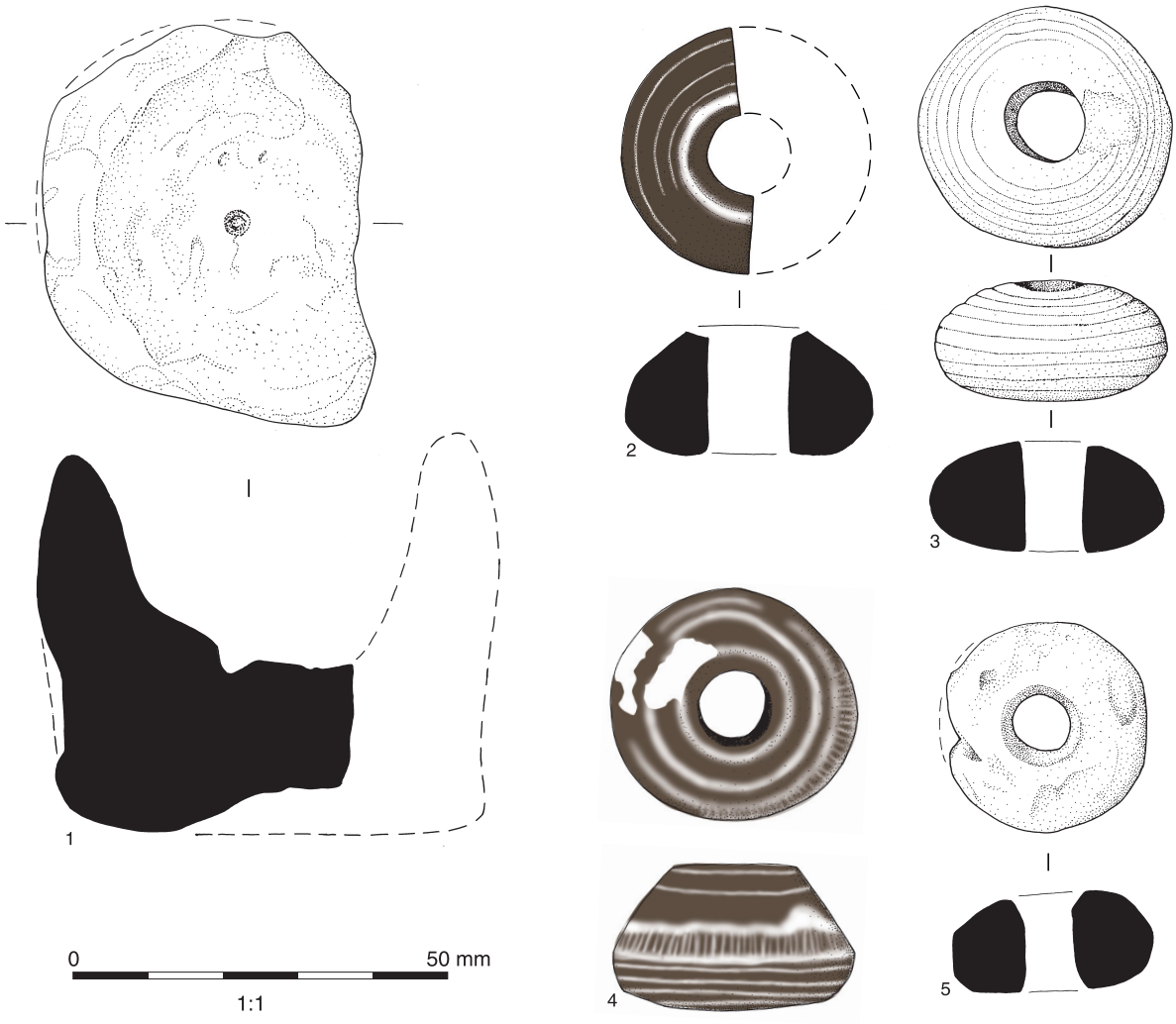


Fig. 7.33 Worked stone (1–5)

Fig. 7.34 Worked stone (6–8)

4 and SE 1 are incised with rings around the circumference, and the fourth (BW 3) is incised with short vertical lines around the circumference (Fig. 7.33, no. 4). As with earlier excavations, there are more spindle whorls from Anglo-Norman contexts than medieval, a decline probably related to the introduction of the spinning wheel (Keene 1985, 300). A single chalk loom weight is evidence for weaving.

Medieval (Phase 6)

Eight whetstones were recovered from medieval contexts in properties BE 3–5, BW 2 and BW 3. Three of these are primary types, one is a rotating whetstone and four are hones. The primary whetstones are made of Norwegian Ragstone, Kentish Ragstone and quartzite and all the other hones are made of sandstone, including Pennant sandstone. The whetstones vary in shape but mostly seem to represent personal and domestic use and continue the theme of tools being well used (eg SF 1060, worn on all sides and now quite bulbous (Fig. 7.35, no. 11).

Three other pieces of worked stone recovered from medieval contexts include a chalk spindle whorl, a possible marble and a disc fragment which may be part of a floor stone. The spindle whorl, in keeping with those from Anglo-Norman contexts, is made of chalk and has linear decoration around the circumference.

Discussion

The Pennant sandstone, Kentish Rag and other sandstones used for the non-rotating whetstones and hones are typical of urban assemblages of Roman-medieval date. Twelve properties in total produced whetstones or hones but no one property produced numbers high enough to indicate the presence of a workshop.

The small numbers of Norwegian Ragstone whetstones reflects the generally early date of the excavated archaeology as this material became popular from the later 13th century and was not common during the Saxon period (Moore 1978, 70, Ellis and Moore 1990, 283). Of the three Norwegian Ragstone whetstones from these excavations two have not been neatly shaped but show evidence of extensive use. They may have resulted from breakage or are left over fragments from production of larger items (Ellis and Moore 1990, 280). They support the idea that the raw material was brought to Winchester and further production happened within the town (Ellis and Moore 1990, 280, quoting Falck-Muus 1922). The evidence from these excavations also continues to show that, despite the apparent commonness of the material, it was highly valued as a resource and was used in whatever state was available. It may also indicate that these whetstones were not readily available or cheap to replace, hence their continued use.

Although some Norwegian Ragstone may have been brought into Winchester from London (Ellis and Moore 1990, 280), a large rod of 550 mm long recently found at Southampton, albeit of a slightly later 13th–14th century date (Shaffrey in prep), suggests this port as another, closer and more likely source. Whetstones could easily have been added to the large loads of wine which were brought to Winchester from Southampton during the medieval period, the port being the main source for Winchester's wine (Keene 1985, 272).

In contrast to other whetstones and hones, rotating whetstones were found only in small numbers in Saxon and Anglo-Norman phases of Properties BW 2–4. The four fragments with measurable diameters are comparable to the rotating whetstones at early medieval Dorestad, which measured between 210 and 400 mm diameter (Kars 1983, 4). Two are of comparable thickness to the Dorestad examples at around 70 mm thick but the remainder are much thinner at between 20–30 mm thick. The centre of none of the examples survived so it is not possible to determine if they were perforated. The thinner examples seem likely to have been used for sharpening small blades. The limited focus of distribution indicates the presence of a smith's workshop somewhere within the boundaries of one of these properties, possibly Property BW 3, which has the highest number of whetstone fragments of any single property (five), or BW 4 which has the most rotating whetstone fragments. How these whetstones were powered is not clear, although water-driven whetstones are known to have been operating outside East Gate on the bridge (Keene, 1985, 279).

Quern numbers are fairly low and many of them are likely to be residual. The lack of evidence probably reflects the city's large number of water powered mills (Keene 1985, 254) and supports the documentary evidence that only small numbers of people would have owned and used their own rotary quern (ibid.).

The assemblage of other items of worked stone includes a broad range of things largely representing domestic or small scale industrial activity. There are no patterns of distribution of particular artefact types, except the whetstones which might indicate the presence of a smith's workshop. Most items, notably the spindle whorls, made use of locally available materials such as chalk.

Catalogue of illustrated stone objects (Figs 7.33–6)

1 **Lamp.** Chalk. Crudely made with hole in centre perhaps for fixing ceramic lamp. Has slight rim around base. Blackened by burning along one internal top edge. Ctx NH 6039. Ph 5

2 **Spindle whorl.** Chalk. Broken almost exactly in half. Burnt and blackened with prominent white circles near the base and top and fainter ones in between. Perforation measures 11 mm diameter. Measures 33 mm diameter x 17 mm high. Ctx NH 2577. Ph 5. SF 976

3 **Spindle whorl.** Chalk. With wide perforation, 11-13

mm diameter. Decorated with nine evenly spaced rings around the circumference 1.5 mm apart. Burnt. Measures 31.5-32 mm diameter x 15.5 mm high. Ctx NH 5161. Ph 5. SF 1470

4 **Spindle whorl.** Chalk. Bun shaped with flat base but which curves up slightly to the edges. Perforation is 10 mm diameter. Dark with four paler rings. Measures 34 mm diameter x 19 mm high. Ctx NH 4593. Ph 5. SF 1297

5 **Spindle whorl, complete.** Small complete. Flattened bun shaped whorl. Not decorated and with slightly biconical perforation. Ctx NH 1323. Ph 4. SF 114

6 **Pivot stone and secondary whetstone, including rotating.** Pennant sandstone. Thick and flat with circular edge worn very smooth and with smoothed dips on both faces. On one face there are two extremely worn sockets caused either through tertiary use as pivot sockets or as deep shallow

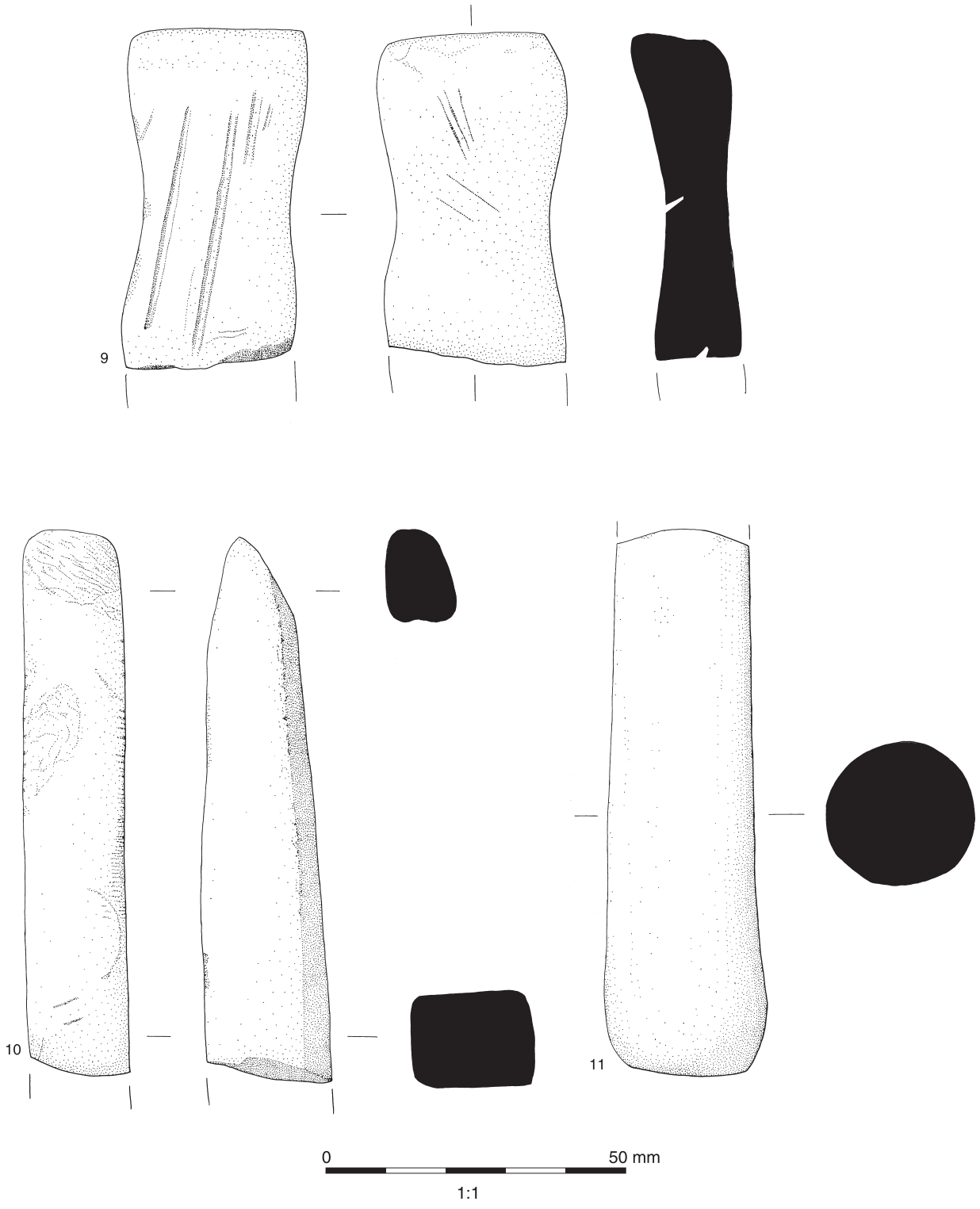


Fig. 7.35 Worked stone (9–11)

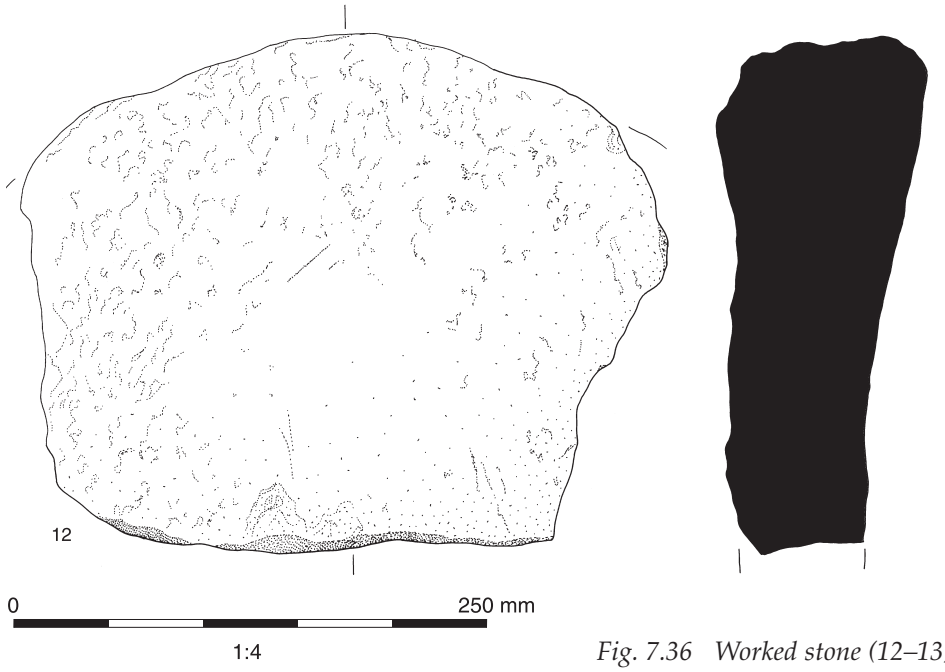
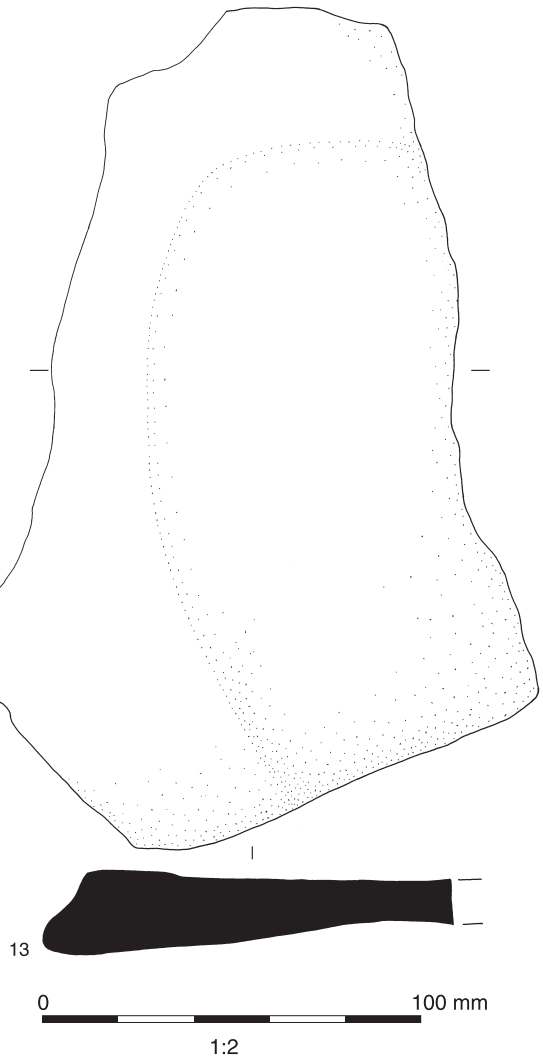


Fig. 7.36 Worked stone (12–13)



mortars. Measures 290 mm diameter x 68 mm thick. Ctx NH 3221. Ph 4.1

7 **Metal smithing tool.** Cornish Greenstone. Heavily reused as the profile has been changed on two sides. One side has been broken and then partly worn smooth. Measures >40 x max 44 x max 24. Ctx NH 4718. Ph 2.4. SF 1341

8 **Whetstone.** Grey schist, Norwegian Rag. Elongate with flattened oval cross section. Unevenly utilised and heavily worn on both major faces including one large groove and polish. Measures 85 x 42 x 14 mm. Ctx NH 6053. Ph 5

9 **Whetstone, probably primary.** Probable Kentish Rag. Very well used cigar shaped whetstone with rectilinear cross section. There are also two straight narrow fairly deep grooves suggesting the sharpening of fine points on one of the main faces. Measures > 55 mm long x 27-31 mm wide x 11-16 mm thick. Ctx NH 1222. Ph 5

10 **Whetstone, primary.** Fine grained micaceous dark grey sandstone. Heavily tapered so is almost pointed at one end. Heavily used so all the faces (and the wide end) are smooth, flat and polished. Measures 92 mm long x 15 x 21 at the wide end. Ctx CC 2126. Ph 4.2. SF 230

11 **Elongate, rounded primary whetstone.** Fine-grained grey sandstone, possible Kentish Rag. Incomplete with sub-square section. Is slightly bulbous at the complete end. Appears to have been generally used over all the surfaces and possibly across the end as well. Measures >90 mm length x 24-27 mm x 23-26 mm. Ctx NH 3286. Ph 6. SF 1060

12 **Saddle quern.** Lodsworth Greensand. Large saddle quern with three broken edges. Worn and concave grinding surface. The one surviving edge is curved. Measures 310 x 270 mm diameter x 100 mm thick. Ctx NH 6184. Ph 1.1. SF 1685

13 **Possible grinding or mixing slab.** Slab with no original edges but worn very smooth and concave on both faces so that very thin in the centre. Measures 180 x 130 x 8 mm. Ctx NH 2619. Ph 2.3

Struck flint *by Hugo Lamdin-Whymark*

In total, 362 struck flints were recovered, including 129 chips measuring below 10 mm, retrieved from sieved residues (Table 7.27). Flint was recovered from 157 contexts across the excavated areas. Most was clearly redeposited from Roman and later contexts. The raw material is of local origin; cortical pieces exhibit either a thick white cortex from sources in the chalkland landscape, or a thin and abraded cortex typical of flint from the local river gravels. A small number of Mesolithic or early Neolithic flints indicates an early presence in the landscape typical of the chalklands of southern England. The blades and bladelets present exhibit dorsal blade scars and platform edge abrasion characteristic of this period. In contrast, the unspecialised flakes which dominate the assemblage appear to have been struck from irregular and unprepared cores, predominately using a hard hammer percussor, such as a hammerstone, without preparation of the platform edge. This reduction strategy is typical of middle to late Bronze Age industries, although comparable flintwork is known in the Iron Age (Ford *et al.* 1984; Humphrey 2003). The artefacts form a relatively low density spread, but nevertheless reflect a period of activity in the local landscape. Due to the limited number of diagnostic flint artefacts and the lack of contextual associations it was not possible to precisely characterise the nature of this activity. The Roman and later activity may have augmented the prehistoric assemblage with additional flakes and chips, some from construction in flint, the majority representing accidental debitage created whilst cutting pits and foundations.

Table 7.27: The worked flint assemblage by category type

Category Type	*NH*	*CC*	*Grand Total*
Flake	96	104	200
Blade	3	1	4
Bladelet	1	4	5
Blade-like	2	1	3
Irregular waste	8	4	12
Sieved chips 10-4 mm	19	110	129
Tested nodule/bashed lump		2	2
Multiplatform flake core	1		1
Scraper on a non-flake blank		1	1
Other scraper	1		1
Awl		1	1
Spurred piece		1	1
Denticulate		1	1
Retouched flake	1		1
Grand total	132	230	362

METALWORKING

Surface X-ray fluorescence (XRF) analysis of non-ferrous metalworking debris *by Cath Mortimer*

Surface X-ray fluorescence (XRF) analysis was used to determine the metals present within visible metallic droplets on the surfaces of 17 crucibles, and hence suggest which types of alloy were being melted and cast at site. Four other samples were also analysed (Table 7.28).

Metals from the melting process are present within vitrified areas where they have combined with other elements from the hearth and from the crucible fabric itself, but the relationship between the elements found in vitrified layers and those of the original metal load is even more complex than that between the metallic deposits and the metal load. Analysis was carried out on those samples where metallic deposits could be clearly seen. Occasionally vitrification with copper alloy deposits becomes detached from the crucible, and one sample (NH4491) is probably an example of this. Another fragment seems be from a large, thick-walled crucible (NH4694); although there are no metallic droplets, the inner surface was analysed. Two other samples were analysed, one (NH4623) has a crucible form, but with oxidised surfaces, and the other (NH3571) is a piece of shaped, fired clay, also oxidised, with possible

Table 7.28: XRF analyses of crucibles and other metalworking debris. Only non-ferrous metals are noted, except where iron alone was detected. Bold type is used where the metal is particularly abundant and brackets where there is only a trace.

Context	*SF*	*Phase*	*Property*	*Sample ID*	*XRF*
CC1519	541	6	BE 2	CA waste	**Cu Sn** Pb Zn
CC3151	338	6	BE5	crucible	Cu Zn Pb
NH1022		5	SE2	crucible	Cu Zn Pb Sn
NH2240		5	BW4	crucible	**Zn** Cu Pb (Sn)
NH2356		5	BW4	crucible	Cu Zn Pb
NH2444		2.4		crucible	Cu Zn Pb
NH2459		5	BW4	crucible	Cu Pb Sn(Zn)
NH2577		5	BW4	crucible	**Zn** Cu Pb
NH2583		5	BW4	crucible	**Zn** Cu Pb
NH3528		5	BW4	crucible	Cu Pb Sn (Zn)
NH3558		5	BW4	crucible and ?crucible	Cu Pb (Zn)
NH3571		5	BW3	ceramic	only Fe
NH3669		4.2	BW3	crucible	Cu Zn Pb (Sn)
NH4085		4.2	BW2	crucible	Cu Pb Sn (Zn)
NH4394		4.2	BW2	crucible	Cu Pb Sn (Zn)
NH4394	266	4.2	BW2	crucible	**Zn** Cu Pb Sn
NH4401		4.2	BW2	crucible	Cu Zn Pb Sn
NH4464	279	4.1	BW2	crucible and vitrification	**Zn Pb** Sn Cu
NH4491	281	4.1	BW2	vitrification	Cu Zn Pb Sn
NH4535		4.1	BW2	crucible	**Zn** Cu Pb Sn
NH4623		4.1		crucible?	only Fe
NH4694		2.4		crucible	Pb, Zn (Cu)

metallurgical connections. Lastly, although there is only a small amount of copper alloy waste at the site, one large irregular mass (small find 541, CC1519) was selected for analysis. A full report can be found in *Digital Section 4*.

Results

All the analyses on metallic droplets showed that copper alloys were being melted and cast at the site. Copper, zinc and lead were detected in each case, and tin was detected in the majority of cases. Iron was also detected in each analysis because iron is present in most early copper alloys, as well as in the crucible fabric and because it is easily detectable by surface XRF. Other relevant elements (eg nickel, arsenic, antimony, silver) were sought but not detected.

Many of the copper alloys can be characterised as either zinc-rich or tin-rich. Five samples (NH2356, 2444, 2577, 2583 and CC3151) are amongst those with the highest levels of detectable zinc, and revealed no tin at all. Two samples (NH2240, 3669) had significant amounts of zinc and only very low levels of tin. These seven samples can be characterised as being brass-like. Conversely, four samples showed only very small traces of zinc (NH2459, 3528, 4085, 4394) but plenty of tin, more characteristic of bronzes. Seven analyses (NH1022, 4394, 4401, 4464, 4491, 4535 and CC1519) showed all four major elements clearly present, although zinc was more prominent than tin in three of these (NH4394, 4464 and 4535). These probably reflect quaternary copper alloy, where zinc, tin and lead were all important alloying elements; this includes NH4491, the sample of copper-alloy debris within vitrification and CC1519, the copper alloy waste. One sample (NH3558) showed copper, lead and only a tiny trace of zinc, so is only classifiable as a copper alloy.

Amongst the other samples selected for analysis, only iron was detected on both NH4623 (a crucible form, but with oxidised surfaces) and NH3571 (shaped, fired clay, oxidised). There is therefore no clear analytical evidence that these were used for metalworking although, according to specialist opinion (see Cotter above), the 'unused crucible' samples are unlikely to have been designed as lamps. NH3571 may be considered with the other fired clay material at the site (see Poole above). Analysis confirmed that the large possible crucible (NH4694; Phase 2.4) was probably in contact with a copper alloy at high temperatures, since large zinc and lead peaks and a small copper peak were observed.

Discussion

The site provides only limited evidence for copper alloy casting, probably of small decorative objects, and no evidence of precious metalworking. The analysed crucibles come from Phases 2.4 to 6, with a concentration in Phases 4.1, 4.2 and 5. They come from five properties BW 2, BW 3, BW 4, SE 2 and BE 5, with seven examples from BW 2 and seven from BW 4. It is difficult to see any clear patterns within these phases and properties, but notably five of the six quaternary alloys are from BW 2, and four of the brass alloys from BW 4. However, the four brass alloys from Property BW4 were all found on fragments with walls that were distinctly thinner than those of the average crucibles, about 4.9 mm, compared with averages between 6 and 7 mm. This suggests that these four samples originated from a single crucible, broken and scattered over several contexts within the same property. The wall thicknesses of the other analysed crucibles are more typical of those found across the site, so the same situation may not have applied elsewhere. This example serves to warn against over-interpretation of numbers of crucibles present, and hence the intensity of production.

Soil analysis (see MacPhail and Crowther, Chapter 8) showed industrial-related dumped soils in Property BW 5 had elevated levels of the heavy metals Pb, Zn and Cu, but these were not at levels that would have been 'sufficient in themselves to provide unequivocal evidence of non-ferrous metalworking.' Only a small amount of copper alloy waste was found, including a little spillage, and some traces of copper alloy within non-diagnostic slags (see Starley below). It should be noted that the small size of crucibles would have meant only small amounts of metal would be melted, hence only minor quantities of metal were available to be lost or discarded during working. Furthermore, it seems likely that small artefacts would be cast at a workbench rather than on the workshop floor (as for late medieval cauldrons), which would allow a 'cleaner' operation with less metal loss. Of the small amount of mould evidence at the site (see Poole above), an example of a mould for a decorative fitting (CC2237; Property BE 4, Phase 5) would fit with this type of working.

The metalworking debris *by David Starley*

The excavation produced a quantity of ferrous metalworking debris. This material was assessed by Lynne Keys (Keys 2006) prior to joint re-examination resulting in this report. The total 70 kg of debris retained was re-examined, classified, categorised into the main functional categories of smithing, smelting and undiagnostic ironworking (Table 7.29), and the results considered in the light of contextual information, phasing and the research aims of the project. This report is abstracted from a detailed digital report that accompanies this volume (*Digital Section 4*). Digital Appendix 1 presents the complete data from the 4.65 kg of sieved residues. The full data for the examination of bulk debris is presented in Digital Appendix 2.

Table 7.29: Breakdown of metalworking activity by debris

Activity	*Classification*	*Weight (g)*
Smelting	possible ore	6
Smithing	smithing hearth bottoms	20721
	hammerscale	25
Non-ferrous metalworking	copper alloy debris	189
Non diagnostic metalworking	undiagnostic ironworking slag	35849
	iron lumps	900
	fayalitic runs	130
	slagged pot	26
	iron-rich cinder	3
Possible metalworking or other high-temp process	vitrified hearth/furnace lining	3101
	cinder	2060
	fuel ash slag	517
	fired clay	80
Fuel	burnt coal	38
	charcoal	3
Non-slag	ferruginous concretion	884
	burnt stone	855
	concrete	115
	stone	15
	bone	7
Total		65,524

Functional categories

Iron smithing

Evidence for iron smithing was recovered in two forms—bulk slags and micro slags. Of the bulk slags, the most easily recognisable are normally the smithing hearth bottoms. In addition to bulk slags, iron smithing also produces micro slag of two types (Starley 1995). Flake hammerscale consists of fish-scale like fragments of the oxide/silicate skin of the iron dislodged during working. Spheroidal hammerscale results from the solidification of small droplets of liquid slag expelled during hot working, particularly when two objects are being fire-welded together or when the slag-rich bloom of iron is first worked into a billet or bar. Hammerscale is important in interpretation of activity on sites, not only because it is highly diagnostic of smithing, but, because it tends to build up in the immediate vicinity of the smithing hearth and anvil, it may give a more precise location of the activity than the bulk slags, which may be transported elsewhere for disposal (Mills and McDonnell 1992).

Undiagnostic ferrous metalworking

The largest category of material was undiagnostic ironworking slag. Such irregularly-shaped fayalitic slags can be produced by both iron smelting and iron smithing processes, but it is not possible to determine which by visual examination. A very small quantity of iron-rich cinder was recognised by its significant content of iron not chemically combined as silicates, but visible as rust-orange coloured hydrated iron oxides and iron hydroxides.

Non-ferrous metalworking

The presence of green copper alloy corrosion products led to a number of fragments being classified as copper alloy debris (see Mortimer above). These might relate to specialised copper alloy working. However, they may also be associated with ironworking, in which copper coatings or inlays are applied to iron objects or components are brazed together, or possibly with the recycling of such composite artefacts.

Undiagnostic – metalworking or other high temperature process

Several categories of the material recovered can be produced by a wide range of high temperature activities and are of little help in distinguishing between these processes. Material listed as vitrified hearth/furnace lining may derive from either ironworking or, particularly with fragments showing brightly coloured glazes, from non-ferrous metalworking. A material closely associated with vitrified hearth/furnace lining, but separately classed as cinder, comprises only the lighter portion of this—a porous, hard and brittle slag formed by the reaction between alkali fuel ash and fragments of clay that had spalled away from the heath/furnace lining, or another source of silica, such as the sand sometimes used as a flux during smithing. The small amount of fired clay without any surface vitrification could have derived from structures associated with metallurgical purposes, or from those used for other high temperature activities. Fuel ash slag is a very lightweight, light coloured, porous material which results from the reaction between alkaline fuel ash and silicates from the soil, sand or clay at elevated temperatures.

Fuel

Very little charcoal was identified, although many pieces of slag retained the impressions, if not actual fragments, of charcoal. A number of fragments of burnt coal were identified, together with very occasional undiagnosnic slag which either contained burnt coal inclusions or was of a clinkery nature, suggesting coal-fuelled smithing.

Discussion

The analytical examination of metalworking debris from the site re-examined a total of 70 kg of metallurgical debris. The bulk slag, as assessed by Lynne Keys (2006), showed the dominant activity to be iron smithing. In addition, a few fragments from non-ferrous metalworking were identified (see

Mortimer above). A couple of fragments which might have been indicative of smelting were carefully considered, but rejected as providing insufficient proof of primary metal production. The fuel for the iron smithing was, for all periods except the post-1750 phase, charcoal. Although very occasional fragments of coal, or partially burnt coal were also identified in Roman, late Saxon and medieval contexts these were not directly associated with the metalworking debris.

The most significant findings of the post-assessment analysis derive from the quantification of the hammerscale in the 4.65 kg of magnetic material extracted from the sieved residues of soil samples. Whereas the total mass of bulk slags could have been the product of only a few weeks' work by a single smith, the hammerscale provided evidence of much more sustained activity. More importantly, the hammerscale was often found in its primary contexts, such as occupation layers, giving far more precise indications of the locations and date of the iron smithing. It would appear, not untypically, that bulk slag was being almost entirely removed from the site of smithing and only occasionally remained in the vicinity of the ironworking, notably in the fill of pits used primarily for disposal of cess and other non-industrial waste.

The evidence for metalworking activity was restricted to some degree both as a result of the mitigation strategy and, more significantly, by truncation of earlier horizontal stratigraphy by later activity. Under these circumstances, the survival of an even poorly preserved metalworking workshop would be unexpected. Although some hearths survive and some may be linked to ironworking, it should be borne in mind that, traditionally, smithing is carried out using raised hearths and that, after demolition, their positions may be difficult to recognise. More likely to survive are the recesses for anvil blocks and quenching pits and further detailed study of the environs of occupation layers containing hammerscale may allow such features to be recognised. A possible example of one of these is oval feature NH2209 in Phase 4.1 of Property BW 5, which was recorded as a posthole, but might otherwise be the socket for an anvil base.

There is plenty of evidence that smithing was a significant activity through most of the Roman period, but little to show the exact position of any workshop. The first clear evidence of iron smithing comes early in the Roman settlement, in Phase 2.1, immediately adjacent to the Roman street (Street CC1703). Here a yard area (Group CC7002) associated with Structure CC7049 on the street frontage had bulk slag added to its surface, whilst hammerscale was found in several pits. Phase 2.2 provided little evidence of smithing, but there is much stronger evidence in Phase 2.3, again largely from pits. Continuation into Phase 2.4 is apparent with smithing debris within various dark earth deposits.

During the late Saxon period (Phase 4), there is a good deal of evidence for metalworking debris, particularly in the form of hammerscale, including some in the occupation levels where they provide the most precise location of the activity. Property BW4 provides some of the strongest evidence with hammerscale *in situ* within a structure's occupation layers. The location within a building is important; smithing relies on accurate judgement of temperature, as this is achieved by observing the colour of the metal which cannot be easily carried out in full daylight conditions. This group was also associated with charcoal spreads and a hearth, though it may not have had a metalworking function. Ironworking within this property appears to show considerable continuity, with evidence through to the Anglo-Norman phase (Phase 5).

Other foci of iron smithing appear to have been Properties BE 2, BW 2 and BW 3 in Phase 4.2, with BW 2 continuing through to Phase 5 if not 6. If the identification of an anvil base is correct then BW 5 may also have once housed a smithy. Beyond these foci occasional deposits of slag are found across the site, particularly in pits. Such distribution appears to show that the property boundaries did not prevent the linear transport of debris, though it may be that iron smithing was more widely distributed than the surviving layers suggest. There was a relative paucity of slag from the SE properties but one large pit in Property SE 3 produced evidence of smithing in the form of hammerscale which spans Phases 4 and 5. This might provide supporting evidence for the interpretation of the published Winton Domesday evidence, which appears to show that a named blacksmith, Richard, may have inhabited this property (Teague pers. comm.), in addition to continuity of craft specialism before and after the Norman Conquest. Unfortunately, no more than small quantities of undiagnostic slag were recovered to support similar documentary evidence for a smith named Harding on the adjacent Property SE 2.

Across the site, there was evidence of extensive pit digging and it may be prudent to consider to what extent this activity accounts for the concentrations of slag found in their lower levels. This may be residual material transferred from disturbed and now lost layers.

Apart from the waste debris, the intended products of the smithing activity are not easily identified. It is not known to the specialist whether the ferrous finds included any unfinished artefacts or stock material. As mentioned in the classification, it is generally held that a lower ratio of flake to spheroidal hammerscale indicates either primary consolidation of iron blooms, or the welding together of separately made parts. The percentages recorded from these samples were biased by their collection from wet sieved soil samples; there is a tendency for spheroidal hammerscale to float off during wet sieving. In the absence of smelting debris it would seem unlikely that bloom smithing was taking place. However, whilst some samples recorded a third as much spheroidal as flake, others revealed none, it could therefore be suggested that

there was a range of types of work being undertaken.

The economic importance of the industry is difficult to judge. Calculating from the surviving mass of hammerscale is likely to considerably underestimate the amount originally produced, given the limits on excavation, truncation of site and the partial sampling strategy. The quantity of evidence in the Roman period is fairly restricted, but from late Saxon to Anglo-Norman there appears to have been fairly intensive activity over an extensive area. In terms of demands on local resources, with the exception of the probable re-cycling of old ferrous artefacts there would have been a need for a trade in bar iron. For the Roman period, very large scale iron production sites are known, such as those in the Sussex Weald (Cleere and Crossley 1983), which would undoubtedly have been able to serve a wide area. On the other hand smaller sites, many yet to be discovered, might have provided more local sources. The finding of small quantities of smelting slag within Winchester on The Brooks site (Starley 1993) suggests that such sources might be very close at hand indeed.

Nationally, iron production in the post-Roman periods appears less impressive in scale. However, the corpus of information from the examination of artefacts suggests much higher quality, not least in the choice of specific iron alloys, with presumably well developed trade networks. The possibility of specialist steel production in mid Saxon Southampton has been raised by Mack *et al.* (2000), which would have provided easy river transport to Winchester. Beyond the requirements for iron the main resource would have been charcoal to fuel the hearths. Given the fragile nature of the material such a resource would have been probably gathered locally, but as recorded for historic iron smelting (Hildebrand 1992), the possibility of water borne transport might have considerably extended the distance from which it was worth supplying.