

# ◆ An early Roman pottery assemblage and possible clamp kiln at Ersham Farm, Hailsham, East Sussex

By Andrew Peachey and  
Antony R.R. Mustchin

With contributions by  
Julia E.M. Cussans  
John R. Summers

*Archaeological investigations at Ersham Farm, Hailsham, encountered part of a multi-period landscape on the edge of the Pevensey Levels. The Romano-British occupation of the site, spanning the mid- to late 1st to early 2nd centuries AD, was characterised by a series of ditched enclosures and pit digging. Of particular significance were the remains of a possible pottery clamp kiln constructed within the profile of an enclosure ditch. The site's pottery assemblage is predominantly comprised of East Sussex grog-tempered wares, probably produced locally on the Weald.*

## INTRODUCTION

The site at Ersham farm is located on the southern edge of Hailsham, the largest town in Wealden district (NGR TQ 5877 0843; Fig. 1). The excavation area, formerly part of Ersham Farm, comprises a roughly rectangular plot of development land measuring about 1.7ha (Fig. 1). Investigations, comprising a trial trench evaluation and subsequent excavation, were conducted by Archaeological Solutions Ltd between October 2015 and February 2016.

The site is situated at approximately 16–17m AOD on a relatively flat topography which slopes gently away to the south-east and the low-lying marshlands of the Pevensey Levels. This landscape was subject to piecemeal drainage and reclamation from the late 12th century AD, prior to which it comprised tidal marshes (Donkin 1973, 104). The site's soils are the slowly permeable, seasonally waterlogged clayey soils of the Wickham 1 Association, suitable for short term grassland and winter cereals (Soil Survey of England and Wales 1983, 16). The underlying geology is Tunbridge Wells Sand, surrounded by Weald Clay (British Geological Survey 1978).

## BACKGROUND

Archaeological finds from Hailsham are scarce, no doubt reflecting a paucity of modern fieldwork (*cf.* Harris 2008). Indeed, Roman period settlement between Lewes and Pevensey (Chuter 2009, Fig.

3 (updated from Drewett 1982)) is characterised by dispersed farmsteads and only one major settlement, while the area around Hailsham is almost devoid of evidence. The closest large sites to Ersham are the Saxon Shore fort of *Anderitum* (at Pevensey; East Sussex Historic Environment Record (hereafter ESHER) MES4712), and a late Roman pottery production site at Arlington (ESHER MES2785), about 5km to the south-west.

This part of Sussex also suffers from an overall lack of Roman infrastructure, with large urban centres and major road networks developing elsewhere during the early post-conquest era (Cunliffe 1988, 84). This does not, however, discount the economic importance of the Wealden iron industry (e.g. Cleere and Crossley 1995; Hodgkinson 2008) and established coastal trade networks (Cunliffe 1988, 84); Roman control of maritime Sussex was achieved by AD 47 (Bosworth 2013, 76). Nonetheless, the early Romanisation of this part of England – forming part of *Britannia Prima* – appears to have been based largely on an existing, late Iron Age template (Cunliffe 1988, 85). This region also appears to have been an area of 'mild' Roman rule, afforded a degree of political autonomy (Bosworth 2013, 76).

## THE ROMANO-BRITISH SITE

Excavations revealed two distinct phases of past activity, dating to the early Romano-British and High Medieval periods. During the latter, the site formed part of a wider enclosed agricultural

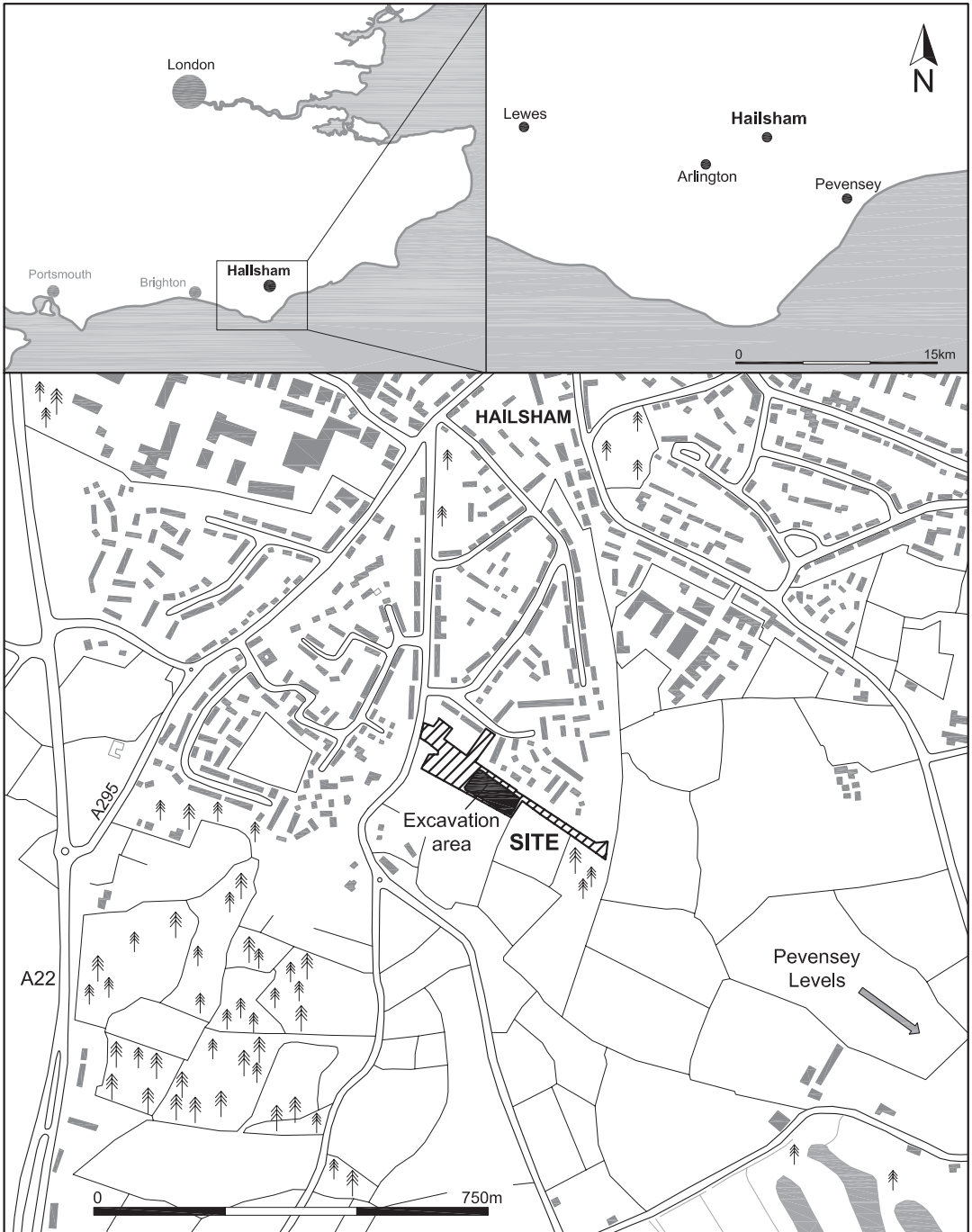


Fig. 1. Site location.

landscape, containing similar sites/farmsteads at Hailsham Primary School (Wallis 2015, 3) and Downash (Wilson and Hurst 1964), a short distance to the west and south-east, respectively. Full project outcomes, including specialist data and analyses are presented in the research archive (Mustchin 2016), deposited with Eastbourne Heritage Service.

The Romano-British occupation, dating between the mid- to late 1st to early 2nd centuries AD, witnessed the construction and development of a rectilinear system of ditched enclosures, numbering at least four and extending beyond the excavated area (Fig. 2); a possible section of trackway was also identified. Activity within/around the enclosures was characterised by pits and post-holes, including two possible clay extraction pits, while evidence of structures was lacking. However, the Roman pottery assemblage (*see below*) is outwardly domestic in

character and suggests the existence of a small farmstead, or similar habitation, somewhere in the local vicinity. Of particular significance within the Romano-British site were the truncated remains of a possible pottery clamp kiln or oven type feature, constructed within the profile of an enclosure ditch.

#### THE ENCLOSURES

Twenty-six Romano-British ditches and gullies were encountered, predominantly in the south-eastern half of the excavation (Fig. 2). The exceptions were two small gullies located a short distance to the north-west. The rectilinear layout of the ditches and gullies (aligned roughly north-east to south-west or roughly north-west to south-east) clearly formed part of an enclosed Romano-British landscape, extending beyond the excavation. The enclosed nature of the site is typical of the ‘...extensively

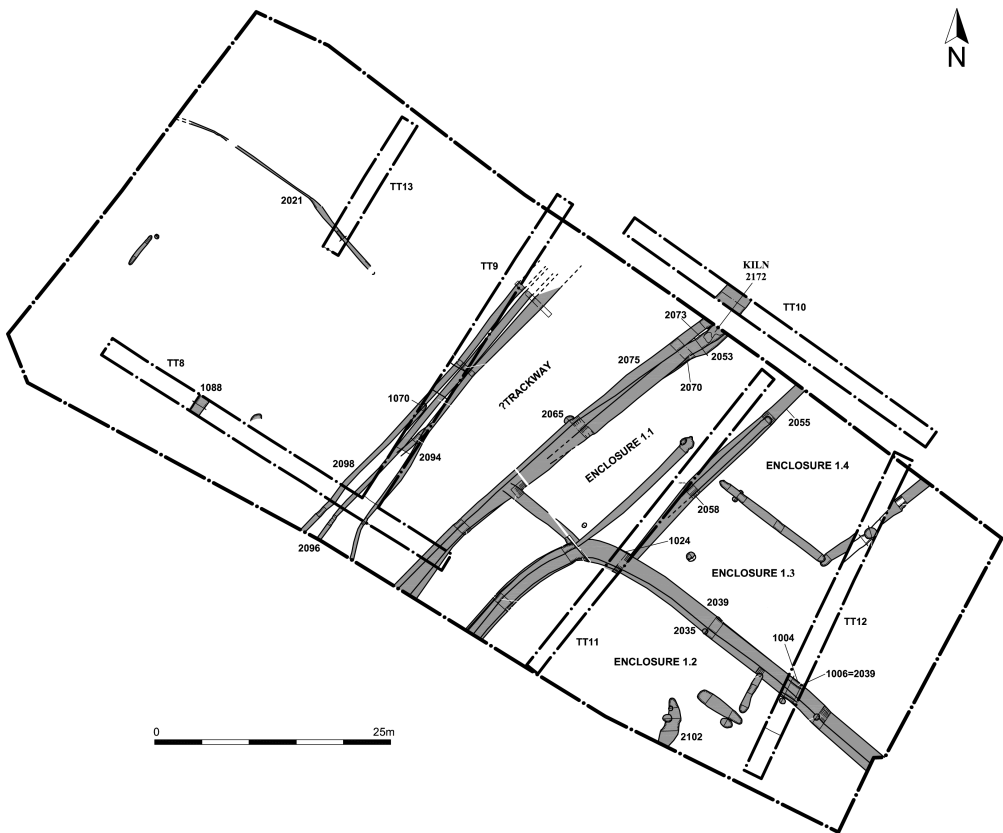


Fig. 2. The Romano-British site.

and continuously bounded [Romano-British] landscapes' recorded across southern and central England (Taylor 2007, 113).

Regional parallels are well documented and include a 1st-to-3rd-century, rectilinear enclosure system excavated at Hassocks, West Sussex (Mullin *et al.* 2010), and an enclosed roadside settlement at Wilbees Farm, Arlington (ESHER MES7296). The Wilbees Farm site yielded abundant early post-conquest material (*ibid.*). The remains of at least four ditched enclosures were represented at Ersham Farm (Table 1), along with a section of possible trackway. The stratigraphic sequence demonstrates the development of the Romano-British landscape over a relatively short period of time, with several boundaries having been re-cut or replaced on more than one occasion.

Table 1. The enclosures.

Enclosure No.	Internal size (m <sup>2</sup> )	Entrance(s) visible (Y/N)
1.1	At least c. 265m <sup>2</sup>	Uncertain
1.2	At least c. 550m <sup>2</sup>	N
1.3	At least c. 740m <sup>2</sup>	N
1.4	At least c. 190m <sup>2</sup>	Y

#### POSSIBLE KILN/OVEN S2172

A possible kiln or oven type feature (S2172) had been constructed within Enclosure Ditch F2073 (Figs 2–3). It consisted of a clay layer (L2181) over a layer of black, charcoal-rich material (L2180). The lining was only partially surviving and no internal deposits, potentially relating to the firing of S2172, were present. The surviving superstructure was sealed by a post-abandonment backfill of firm, mid-grey, silty clay (L2182), sealed in turn by a pottery-rich dump or levelling deposit (L2183). The pottery from L2183 comprised predominantly East Sussex ware 1 (dated to the late 1st century). This context also yielded a small quantity (12g) of slag, presumably derived from local iron working (Newton in Mustchin 2016). Environmental remains from these deposits were scarce. However, sampling of Pit F2065 (L2086), some 16m to the south-west of the possible kiln/oven, yielded a rich assemblage of cereal remains, including hulled barley and glume wheat, and dominated by chaff (*see below*). This deposit may well represent fuel waste, although its association with S2172 cannot be proven.

#### THE ANIMAL AND PLANT REMAINS

by Julia E.M. Cussans and John R. Summers

Animal bone and shell were scarce. None of the recovered bone fragments (totalling 43 (<7g)) could be identified to species, mostly due to their poorly preserved and fragmented state, while only 15 pieces of shell were recovered, including one, possible, oyster shell fragment.

Environmental remains were more abundant. The arable economy appears to have been dominated by the cultivation of spelt wheat, accompanied by a minor emmer wheat component. Hulled six-row barley was also cultivated and pulses may have contributed to the diet; a single pea/bean seed (*Fabaceae*) from Pit F2065 may represent a crop plant. There is also clear evidence for the residues from bulk processing of glume wheats, as well as barley processing by-products. This indicates arable processing activities on the site and the preparation of cereal crops for storage and/or export.

Whether any of these by-products were used as fuel within possible Kiln/Oven S2172 is uncertain, although frequent carbonisation of processing by-products indicates their use as fuel somewhere on the site. By-products of the bulk de-husking and fine sieving of glume wheat are common on Romano-British sites and are often found as part of the fuel resource, particularly in agricultural and pottery kilns (e.g. Campbell 2008; Mustchin *et al.* 2016; Summers 2013; van der Veen 1989). Overall, the environmental remains suggest largely non-domestic activity.

#### THE ROMAN POTTERY

A total of 1864 sherds (29,159g) of well-preserved Roman pottery were recovered (Table 2). The assemblage is predominantly comprised of East Sussex grog-tempered wares, probably produced locally, and supplemented with occasional fine, white ware flagons and a samian ware platter that support a chronology in the mid- to late 1st century, possibly extending into the early 2nd century. The East Sussex grog-tempered ware form types have a strong bias towards slack-bodied, sinuous-profiled bowl-jars, generally plain, although jars with burnished 'eyebrow' or line decoration are also present, as are occasional dishes, bowls and lids. The assemblage includes four significant diagnostic groups of pottery: within and overlying possible

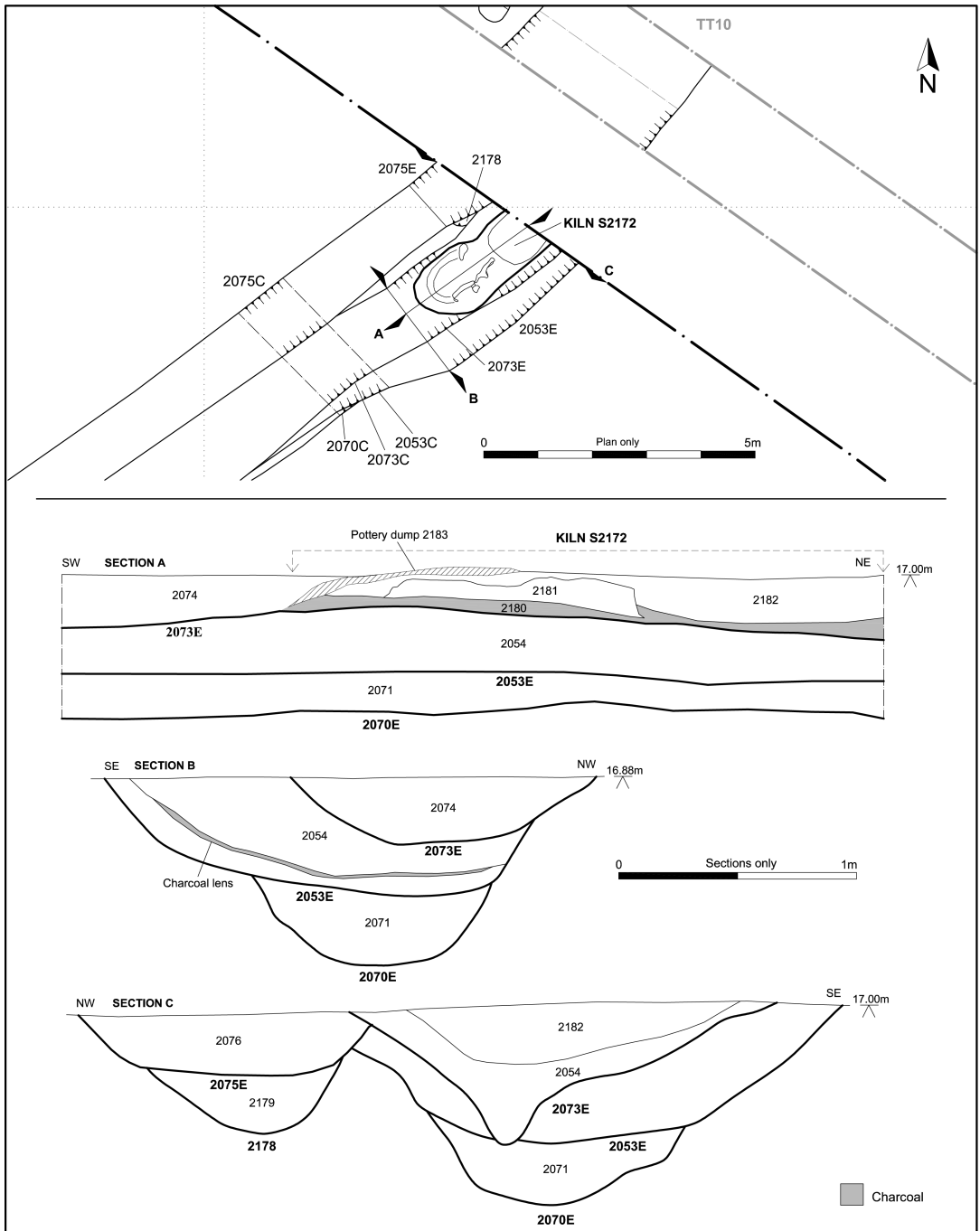


Fig. 3. Detail of possible Kiln/Oven S2172.

Table 2. Quantification of Roman pottery groups

Pottery Group	Sherd Count	Weight	R.EVE
?Kiln/Oven S2172	434	7508	2.65
Pit F2065	203	2399	1.65
Ditch F1088	304	7375	5.55
Ditch F1006=F2039	300	4243	1.17
Ditch F2070	74	810	0.30
Ditch F2075	65	480	0.15
Ditch 1004=1024=2035	57	1158	0.80
Ditch F2073	57	611	0.50
Ditch F2053	42	567	0.05
Ditch F1022=2055	34	676	0.15
Ditch F1086	17	274	0.30
Ditch F2087	24	313	0.00
Other Roman Ditches (14 features)	74	1063	0.35
Other Roman Pits (8 features)	45	525	0.1
Residual in Medieval Features	134	1157	1.32
<b>Total</b>	<b>1864</b>	<b>29159</b>	<b>15.04</b>

Kiln/Oven S2172, in Pit F2065 and in Ditches F1088 and F1006. Overall, the assemblage represents focussed deposition of rubbish and clearing of surfaces.

## METHODOLOGY

The pottery was quantified by sherd count, weight and rim-estimated vessel equivalent (R.EVE). Fabrics were examined at x20 magnification and assigned alphanumeric codes according to the systems developed for the National Roman Fabric Reference Collection (Tomber and Dore 1998). All data conform to the Standard for Pottery Studies in Archaeology (Barclay *et al.* 2016), which complement the guidelines for the archiving of Roman pottery developed by the Study Group for Roman Pottery (Darling 2004).

## FABRIC CODES AND DESCRIPTIONS

### East Sussex grog-tempered ware

This broad type of regional coarse ware was initially categorised as a geographically-focussed ceramic tradition by Green (1980, 74), likely focussed on numerous small production sites or industries, as discussed by Lyne (2015, 5–6). The grog-tempered fabrics identified within this assemblage may represent variations in the selection (intentional or expedient) of tempering material by potters in

the local area on the Weald, minor variations in the local geology from which clay was sourced or the movement of vessels between slightly contrasting local industries within the East Sussex landscape.

East Sussex Wealden Ware is one late Roman variant of East Sussex grog-tempered pottery identified by Lyne (2015, 10) as being produced from the mid-2nd century onwards. It is characterised by hand-made vessels, fired at low temperatures in ephemeral clamp kilns – characteristics that appear equally applicable to the early Roman East Sussex grog-tempered ware present in this assemblage, whose production may have been centred on similar small kiln sites or have occurred in more singular domestic kilns (Mason 2012, 23), or been associated with iron production and tile manufacture (Cleere 1978, 60–1).

Three East Sussex grog-tempered ware fabrics were identified in the assemblage, with black to red-brown surfaces over a dark-grey to black core. Surfaces are notable for having a fairly soapy finish, with burnishing and other surface treatments relatively rare but capable of achieving a slightly sloppy, but glossy, finish. Fabric ESX GT1 dominates (see Table 3) and was almost certainly produced on, or close to, the site. ESX GT2 is probably also a local product, while the less common EXS GT3 may represent an alternative clay source in the region. The three fabrics are described below.

Table 3. Quantification of Roman fabric types.

Fabric Code	Sherd Count	Weight	R.EVE
Early Roman fabrics (stratified and residual)			
ESX GT1	1492	21362	8.45
ESX GT2	233	4927	2.92
ESX GT3	23	512	0.25
GRS1	52	1554	1.10
GRS2	23	212	0.25
ALH RE	2	58	1.00
UNS CR1	25	410	0.80
UNS CR2	2	11	0.10
WIG WH	2	46	0.00
LGF SA	3	9	0.05
LEZ SA2	3	30	0.00
Late Roman fabrics (residual)			
DOR BB1	3	24	0.12
NFO RS2	1	4	0.00
<b>Total</b>	<b>1864</b>	<b>29159</b>	<b>15.04</b>

*ESX GT1. East Sussex grog-tempered ware 1*

Inclusions comprise common grog (0.2–2.5mm), slightly contrasting (redder/blacker/paler) in colour than the slightly silty matrix, with occasional brown-red ironstone/ferruginous grains (<2.5mm). A moderate to soft fabric with a slightly soapy texture. Sparse examples are wheel-finished but handmade vessels are the norm. This early Roman fabric is consistent with the sub-type of this ceramic tradition defined in the late Roman period as East Sussex Wealden Ware (Lyne 2015, 10). Closely comparable fabrics were manufactured at Bardown, about 19km to the north (Lyne forthcoming *a*, fabric C1D; Lyne 2015, 6), and recorded in 1st- to 2nd-century deposits at Beauport Park, roughly 20km to the east (Green 1988, 247–8). At Bardown, a variant of this fabric with a superior finish but comparable fabric was noted (Lyne forthcoming *a*, fabric C1DB), but could not be consistently distinguished (due to preservation/fragmentation). Therefore, the single vessel in this assemblage classified with a superior finish (discussed below) remains quantified under this fabric heading.

*ESX GT2. East Sussex ware 2*

Handmade; as ESX GT1, with additional sparse-to-common, white siltstone grog (<2mm) supplementing the darker grog. A comparable variant of East Sussex grog-tempered ware was identified at Bardown (Lyne forthcoming *a*, fabric C1E), and it has been suggested that bands of white-firing clay in the Lower Weald and near Hastings may have been exploited for raw material.

*ESX GT3. East Sussex ware 3*

Handmade; as ESX GT1, with additional common vesicles of leached out calcareous inclusions (generally <2mm, occasionally larger). A comparable variant of East Sussex grog-tempered ware was also identified at Bardown (Lyne forthcoming *a*, fabric C1L).

**Other early Roman local and regional coarse wares**

A limited proportion of the early Roman pottery (about 4% by sherd count) (Table 3) is comprised of coarse wares other than East Sussex grog-tempered wares, and while the bulk of these are grit-and-grog-tempered (GRS1), suggesting related or parallel local production, low quantities of sandy, reduced wares (GRS2 and ALH RE) represent the use of regional products.

*GRS1. Grit-and-grog-tempered ware 1*

Mid/dark-grey surfaces (occasionally oxidised pale orange) over a darker grey core. Inclusions comprise moderately-sorted common grey to black grog (0.2–2mm, occasionally to 4mm), quartz and black ironstone (<0.3mm). A hard fabric with a gritty, abrasive texture. Late Roman production of comparable fabrics has been identified in the Beddingham and Ranscombe area about 13km to the west, notably at Beddingham villa (Lyne forthcoming *b*, fabric C2), possibly in association with Wealden iron working (Lyne 2015, 27), and a similar geographic origin for this early Roman fabric appears feasible.

*GRS2. Sandy grey ware*

Mid-grey surfaces and core, with thin oxidised margins. Inclusions comprise common-abundant fine quartz (<0.2mm) and sparse fine mica and black ironstone/iron-rich grains (0.25–1.5mm). A hard fabric, with a slightly powdery to finely abrasive texture. Analysis of a range of similar grey ware fabrics at Beddingham villa identified 3rd-century kilns at Wickham Barn, Chiltington about 20km to the west (Butler and Lyne 2001) and Wealden Sussex in general in the late 1st to 2nd centuries (Lyne forthcoming *b*, fabric C8) as one source of this fabric type, while similar fabrics were also produced at Hardham in the early Roman period (Lyne 1994, 55, fabric 2).

*ALH RE. Alice Holt reduced ware*

(Tomber and Dore 1998, 138; Lyne and Jefferies 1979, 18: Fabric A).

**Early Roman samian ware and white wares***LGF SA. La Graufesenque samian ware*

(Tomber and Dore 1998, 28).

*LEZ SA2. Lezoux samian ware 2*

(Tomber and Dore 1998, 32).

*UNS CR1. Cream ware.*

Very pale yellow-brown throughout. Inclusions comprise well-sorted, common black and red, iron-rich grains and quartz (all <0.25mm). Similar 1st-century fabrics were recorded at Bardown and Beddingham, with Wiggonholt a probable source (Lyne 1994, 55, fabric 9; Lyne forthcoming *a* and *b*, fabric F5), but other regional production centres cannot be discounted.

*UNS CR2. Fine white ware*

Probably imported from north Gaul (north-western France), though possibly imitated at Canterbury. Pale cream surfaces fading to a pale orange core. Inclusions comprise common fine quartz (<0.1mm), sparse white quartz and red, iron-rich grains (0.1–0.25mm) (Blockley *et al.* 1995, 651, WW4).

*WIG WH. Wiggonholt white ware*

(Tomber and Dore 1998, 187). Coarse variant of mortaria fabric, with trituration grits of common red/black iron-rich grains with sparse flint and quartz (typically about 2mm, occasionally to 5mm). Probable Wiggonholt product, though similar contemporary fabrics were also produced at Beauport Park (Green 1988, 250).

**Late Roman fabrics (residual)***DOR BB1. (South-east) Dorset black-burnished ware 1*

(Tomber and Dore 1998, 127; DOR BB1).

*NFO RS2 New Forest (fine) red-slipped ware 2*

(Tomber and Dore 1998, 144).

**DISCUSSION OF FABRIC GROUPS****East Sussex grog-tempered ware**

The ceramic tradition of largely hand-made, grog-tempered vessels fired at a low temperature in clamp kilns in East Sussex spans the Roman period. However, the diagnostic vessels in this assemblage provide a distinct group of early Roman form types, whose local production probably forms part of a domestic or ancillary industry that is the precursor of the late Roman East Sussex Wealden ware tradition (see above). A total of 53 vessels were identified in this ceramic tradition, the bulk (41 vessels) in ESX GT1, with sparse examples (11 vessels) in ESX GT2, and a single anomalous jar in ESX GT3 that suggests the latter is not part of a homogenous grouping. Within these 53 vessels, 12 broad form types could be defined and are summarised and quantified in Table 4, with each assigned a type number for ease of reference (see below); however, this does not represent an attempt to define a type series.

*Type 1 (ESX GT1-2)*

Bowl-jars with a sinuous, slack to rounded body, with a girth width slightly exceeding the diameter of the plain everted rim, which sometimes appears thicker than the body due to the hand-made

manufacture. Occasional wide-mouthed or large examples, generally in ESX GT2, skew the mean rim diameter, with the bulk of this type of vessel having a rim diameter of 140–180mm. All examples recorded in this assemblage are plain, with evidence for surface treatment limited to a single complete bowl-jar (Fig. 4.1) in Ditch F1088 that exhibits a burnished exterior and rim. This is by far the most common vessel type in the assemblage (Table 4), presumably utilitarian, with the only evidence of wear comprising a patchy white residue in a near complete bowl-jar (Fig. 4.2) also contained in Ditch F1088.

In addition to these complete/ near complete examples (Figs 4.1, 4.2), Ditch F1088 included two further, similarly sized examples (Figs 4.3 and 5.4), while possible Kiln/Oven S2172 and overlying contexts included at least six examples with a wider range of sizes present (i.e. Figs 4.5–4.8). Similarly, Pit F2065 contained small (Figs 4.9 and 10.3) and large (Figs 4.11 and 10.1) examples; while Ditch F1006 (=F2039) was notable for numerous fragmentary rim sherds (i.e. Fig. 5.13), and single examples were common in ditch features, including Ditch F1086 (Fig. 5.14). This type of bowl-jar comprises a key component of early Roman assemblages of East Sussex grog-tempered ware, including in the mid/late-1st-century assemblages from Horsted Keynes, Sedlescombe and Newhaven (Green 1980, 71–5, Figs 27.5, 28.12–13 and 29.3), especially Newhaven Group 1 dated to the Neronian to Flavian periods (Green 1976, 261: Fig. 9.12–20). Type 1 bowl-jars are also contained 1st-century deposits at Bullock Down (Rudling 1982, 133, Fig. 65.141 and 146), and groups commencing around AD 100 at Hassocks (Lyne 1994, 62, Fig. 6.14–6.16). They continue to be produced into the mid-2nd century on the Weald and at Bardown (Lyne 2015, 8–11, vessels 5A.5 and 5B.1–6; Lyne forthcoming *a*, vessels 10 and 61). However, in the mid-2nd century, similar form types begin to develop an off-set at the base of the neck and become less sinuous.

*Type 2 (ESX GT1)*

Bowl-jars or jars with an everted bead rim. Likely a variant of Type 1 jars, possibly representing the development of a slight off-set at the base of the neck. Everted bead rim sherds are very rare in the assemblage. Excluding a constricted neck vessel, they are limited to a single example in Pit F2065 (Fig. 5.15), possibly paralleled by mid- 1st/2nd-



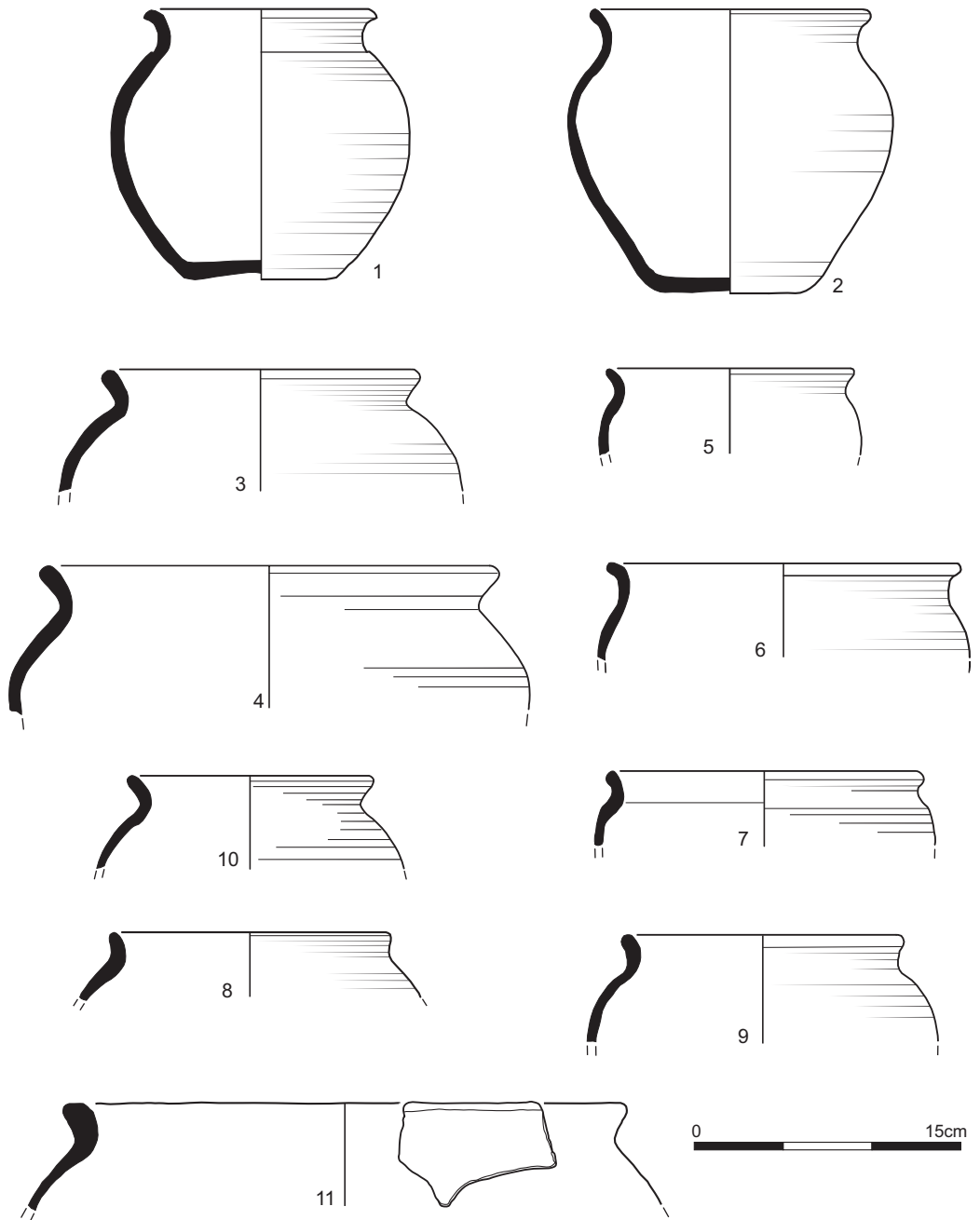


Fig. 4. East Sussex grog-tempered ware pottery: nos 1-11

Table 4: Quantification of form types in East Sussex grog-tempered wares (ESX GT1-3)

Type No.	Vessel Type	Form Description	Diameter Range	Mean Rim Diameter	MNV	Total R.EVE
1	Bowl-Jar	Sinuuous, slack-profiled, plain	140-300mm	180mm	27	5.72
2	Bowl-Jar	Bead rim	220mm	220mm	1	0.2
3	Jar	Cordoned, plain	120-300mm	180mm	7	1.9
4	Jar	Burnished pattern decoration	120-180mm	150mm	3	0.35
5	Jar	'Eye-brow' decoration	140-200mm	165mm	3	0.35
6	Jar	Constricted neck, globular body	100-220mm	140mm	5	1.70
7	?Jar/Beaker	Thumb-impressed strip	?	?	1	-
8	Jar	Shouldered, foot-ring, fine finish	120mm	120mm	1	0.25
9	Jar	Grooved body	160mm	160mm	1	0.25
10	Dish	Plain rim	200mm	200mm	2	0.70
11	Bowl	In-turned segmented rim	220mm	220mm	1	0.1
12	Lid	Flared rim	160mm	160mm	1	0.1
	Total				53	11.62

century jars at Newhaven (Green 1976, 263, Fig. 23, Nos 34, 36-7; Green 1980, 77, Figs 30.6-30.8), but it is far from perfectly or neatly formed and may represent an idiosyncratic variation by an earlier potter.

#### Type 3 (ESX GT1-2)

Bowl-jars, or jars with an everted plain rim, and a plain shoulder cordon/ corrugated shoulder. This form type was manufactured in a comparable size range to Type 1 bowl-jars, and beyond the definition of a cordon/corrugation on the shoulder does not offer any additional decoration or surface treatment, with burnished surfaces completely absent. The distribution of these vessels also correlates closely with the Type 1 jars, with three vessels in Ditch F1088 (Figs 5.16-18), including one example (Fig. 5.18), significantly complete although fragmentary due to burning, with a non-cross-joining pock-marked base indicating exposure or contact with an intense heat source.

Single examples were also contained in Pit F2065 (Fig. 5.19), layers sealing possible Kiln/Oven S2172 (Fig. 6.20) and in Ditch F1086 (Fig. 6.21), with relatively little uniformity in the formation or shape of the shoulder cordons. Cordoned/corrugated bowl-jars, or jars of this type, are present in mid/1st-century groups at Sedlescombe and Garden Hill (Green 1980, 73 and 77, Figs 28.6 and 30.1), as well as 1st-century deposits at Beauport Park (Green 1988, 249, Fig. 21.2); at Bardown they appear to continue into the 2nd century (Lyne forthcoming *a*, vessels 1, 3 and 5).

#### Type 4 (ESX GT1)

Jars with an everted plain rim and decorated with burnished linear design on the shoulder. Although only three Type 4 jars were recorded, they appear to have been sized within the smaller half of the range of the more common Type 1 and Type 3 vessels, and to tend towards a slightly globular or shouldered body. The burnished linear decoration exhibits little consistency, with a jar in Ditch F1024 decorated with a narrow cordon of oblique lines (Fig. 6.22); a jar in Ditch F2058 has a semi-radial design comprised of three lines per branch (Fig. 6.23) and a jar in Ditch F2070 has a zig-zag of parallel lines (Fig. 6.24). The contrasting schemes, the design of the latter two vessels set between double burnished lines/ grooves, is closely comparable to the construction of the curvilinear designs on the 'eyebrow' jars (Type 5) and the distinction between the types may be illusory. Jars with this type of decoration occur in groups of the mid- to late 1st century at Newhaven and Asham (Green 1980, 73, Fig. 28.16-17), but could conceivably extend into the early 2nd century at Ranscombe Hill (Green 1980, 73, Fig. 29.14) and Bullock Down (Rudling 1982, 109, Fig. 50.57).

#### Type 5 (ESX GT1)

Jars with an everted plain rim, decorated with burnished curvilinear 'eyebrow' design on the shoulder. This type of 'eyebrow' jar occurs in similar quantity, with a similar size range and profiles to the Type 4 jars, and the two types may represent an arbitrary division of a single Roman product.

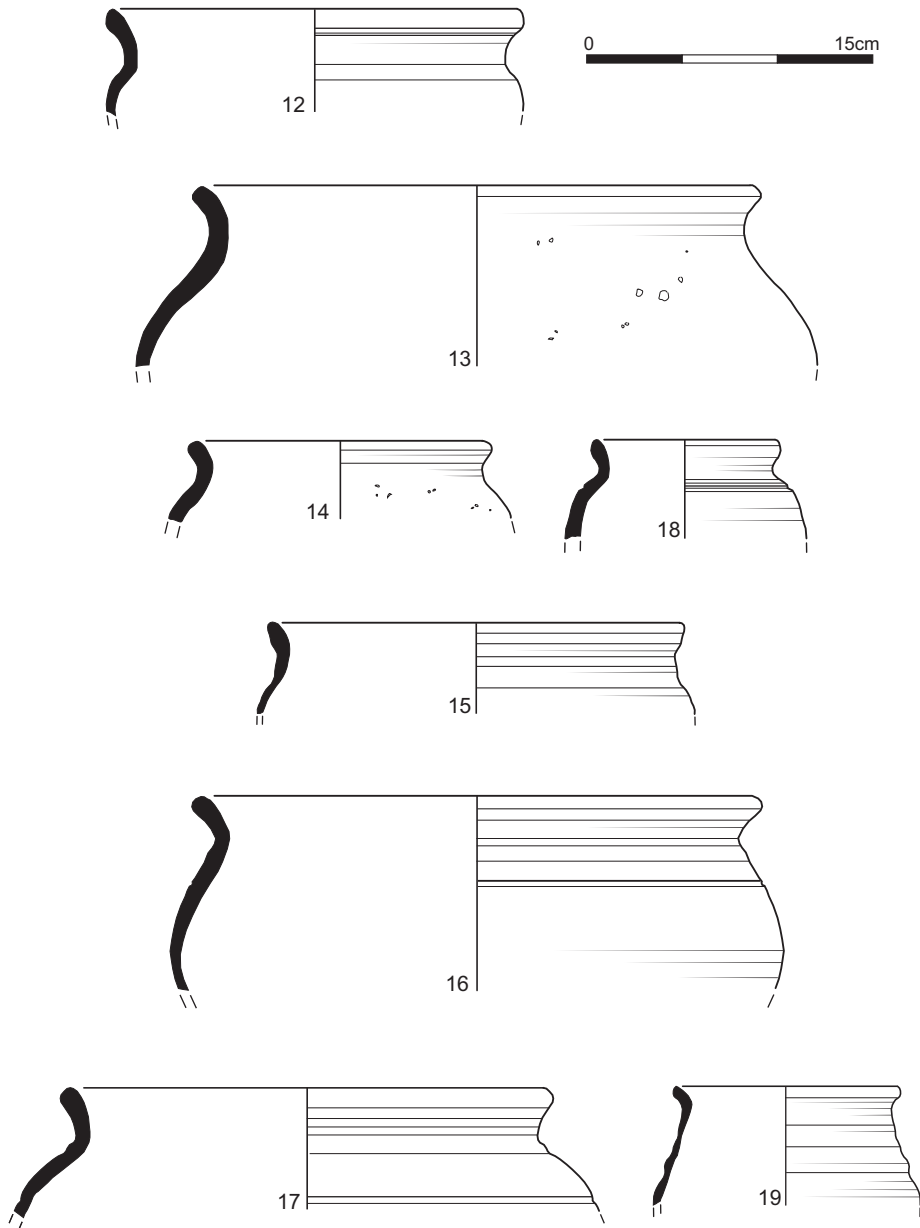


Fig. 5. East Sussex grog-tempered ware pottery: nos 12–19

In contrast to Type 4 jars, the decoration of Type 5 jars appears more consistent (in part defining the form type), consisting of burnished arcs within a shoulder cordon, with double lines on jars in Ditch F2102 (Fig. 6.25) and Ditch F2035 (Fig. 6.26), and

three parallel arcing lines on the jar in Ditch F2055 (Fig. 6.27).

While limited in number, Type 5 jars are important in defining the chronology of the assemblage, as they do not appear to post-date

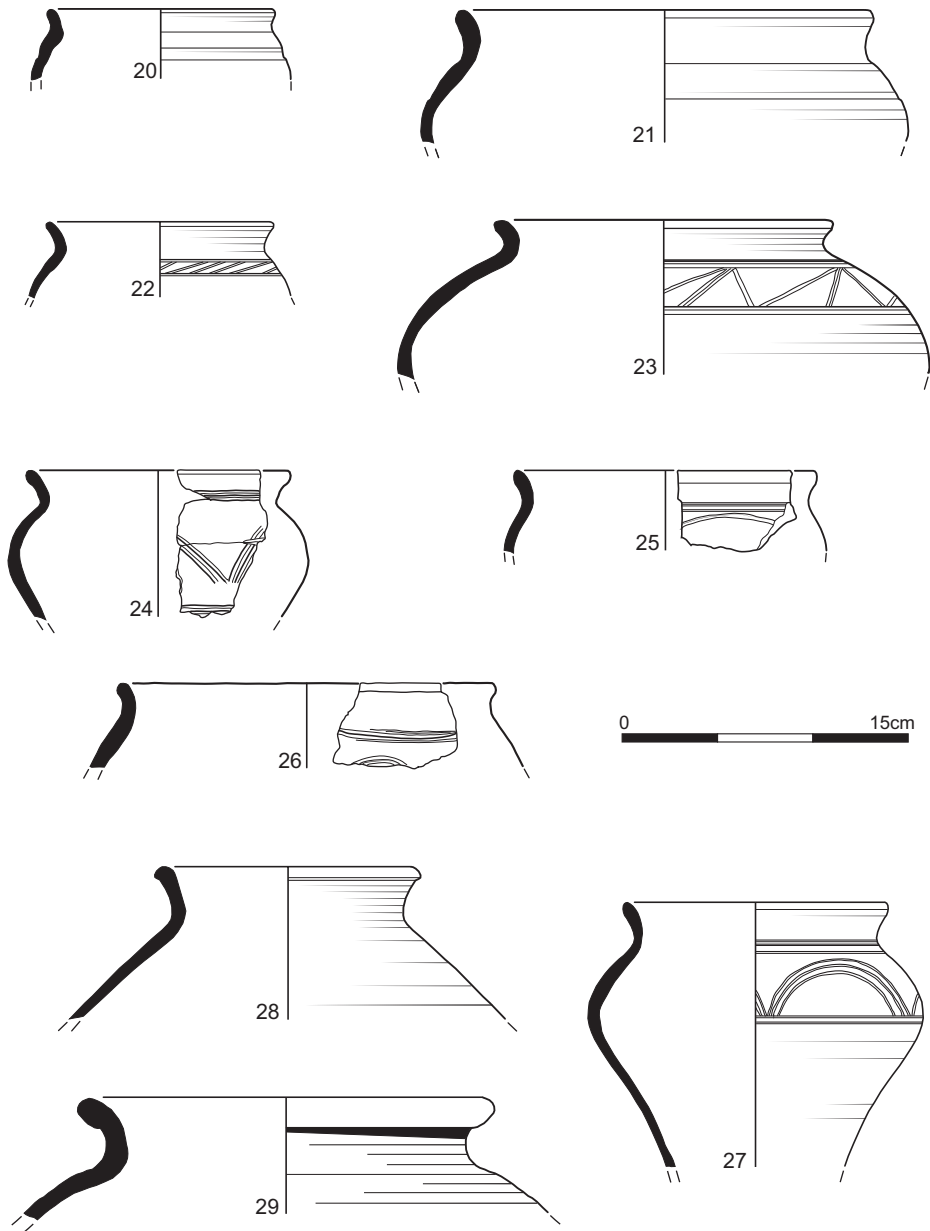


Fig. 6. East Sussex grog-tempered ware pottery: nos 20-29

around AD 100, while other form types are most common in the 1st century but may extend into the early or mid-century. At Horsted Keynes and Bishopstone 'eyebrow' jars were dated to the conquest period, if not slightly earlier (Green 1980, 71, Fig. 27.1-4), while at Sedlescombe and Newhaven

they were recorded in groups dated to the latter half of the 1st century (Green 1976, 260, Fig. 8.1; Green 1980, 73-75, Figs 28.5 and 29.4), as well as in a 1st century group at Bullock Down (Rudling 1982, 133, Fig. 65.145).

*Type 6 (ESX GT1)*

Jars with constricted necks, and a globular body. This is a catch-all category for constricted neck jars, which collectively appear relatively voluminous vessels, possibly with a storage function, but vary slightly in their profile. Jars from possible Kiln/Oven S2172 include an example with a sinuous profile (Fig. 6.28), not dissimilar to the 'eyebrow' jars (Type 5), and an example with an everted bead rim and slightly offset neck (Fig. 6.29), one of the most neatly wheel-made/finished vessels in the assemblage, while an example in Pit F2065 has a plain shoulder cordon (Fig. 7.30). Other Type 6 jars are represented by small rim fragments only. Like the 'eyebrow' jars (Type 5), jars with constricted necks appear predominantly in groups of the mid- to late 1st century, including at Sedlescombe and Asham (Green 1980, 73, Figs 28.2 and 17), as well as in 1st-century groups at Beauport Park (Green 1988, 249, Fig. 8.1).

*Type 7 (ESX GT1)*

Ditch F2053 contained a single body sherd decorated with a horizontal-applied, thumb-impressed strip (not illustrated). Several types of East Sussex grog-tempered ware vessel have been recorded with this type of decoration, although dated vessels appear limited to groups of the mid/late 1st century. These include a Type 5 'eyebrow' jar at Bishopstone and Type 1 bowl-jars at Newhaven (Green 1980, 71–75, Figs 27.1 and 29.10) and Bullock Down (Rudling 1982, 109, Fig. 50.24–7), while an undated Type 6 constricted neck jar is present at Bardown (Lyne forthcoming *a*, vessel 95).

*Type 8 (ESX GT1)*

Finely finished small jar or large beaker with a short, everted rim, shouldered body and foot-ring base. Ditch F1004 contained the only example of this type (Fig. 7.31), whose fabric is identical upon microscopic examination to ESX GT1, but superficially appears finer due to a superior burnished finish (possibly on a wheel) and thinner walls than all other types, probably paralleled by a similar fabric variant with a superior finish identified at Bardown (Lyne forthcoming *a*, fabric C1DB).

Vessels with this type of foot-ring and profile have been identified as late 1st-century beakers in Southwark (Marsh and Tyers 1978, 568–9: type IIC), and the quality of the burnished finish may

reflect an attempt to replicate such wares. A closely comparable jar with a foot-ring was present in the Neronian to Flavian Group 1 at Newhaven (Green 1976, 263, Fig. 10.34), while a foot-ring on a grog-tempered, small cordoned vessel of the 1st century was also recorded at the Caburn, near Lewes (Curwen and Curwen 1927, 31 and plate IX.9).

*Type 9 (ESX GT3)*

A necked, everted rim jar with an ovoid, grooved body, possibly defining multiple plain cordons or girth grooves. This ESX GT3 jar (Fig. 7.32) was recorded in Ditch F1006 in association with numerous ESX GT1 vessels and south Gaulish samian ware that date it to the mid/late 1st century, but it is the only diagnostic vessel in ESX GT3 and is not paralleled in the other coarse ware in the assemblage, suggesting it may have been imported from an alternative producer of East Sussex grog-tempered wares, probably not on the Weald. A similar jar was present in a 2nd-century group at Newhaven (Green 1976, 279, Fig. 32.207) while at Hassocks comparable jars were produced in a sandy grey ware from Hardham (Lyne 1994, 63, Fig. 7.26–27), suggesting this may be a local imitation.

*Type 10 (ESX GT1–2)*

A shallow dish with a plain rim and burnished finish. Dishes are rare in the assemblage but include examples with a slightly incurving rim in Ditch F2170 (Fig. 7.33) and a slightly out-turned tip in Ditch F1088 (Fig. 7.34), consistent with classic dog-dish types produced from the mid- to late 1st century onwards and comparable to dishes at Newhaven (Green 1976, 263, Fig. 10.30) which continue to the mid-2nd century and later at Bardown (Lyne 2015, 8, vessels 5A.12 and 5A.15; Lyne forthcoming *a*, vessel 88).

*Type 11 (ESX GT1)*

A single bowl with an in-turned, segmented rim (Fig. 7.35) was present in the assemblage, within material sealing possible Kiln/Oven S2172. A comparable bowl was recorded in a group at Ranscombe Hill, dated to the late 1st to early 2nd century (Green 1980, 75, Fig. 29.15).

*Type 12 (ESX GT1)*

A single lid with a shallow profile and slightly flared/flattened tip (Fig. 7.36) was contained in Gully F2098, comparable to 1st-century lids at Beauport

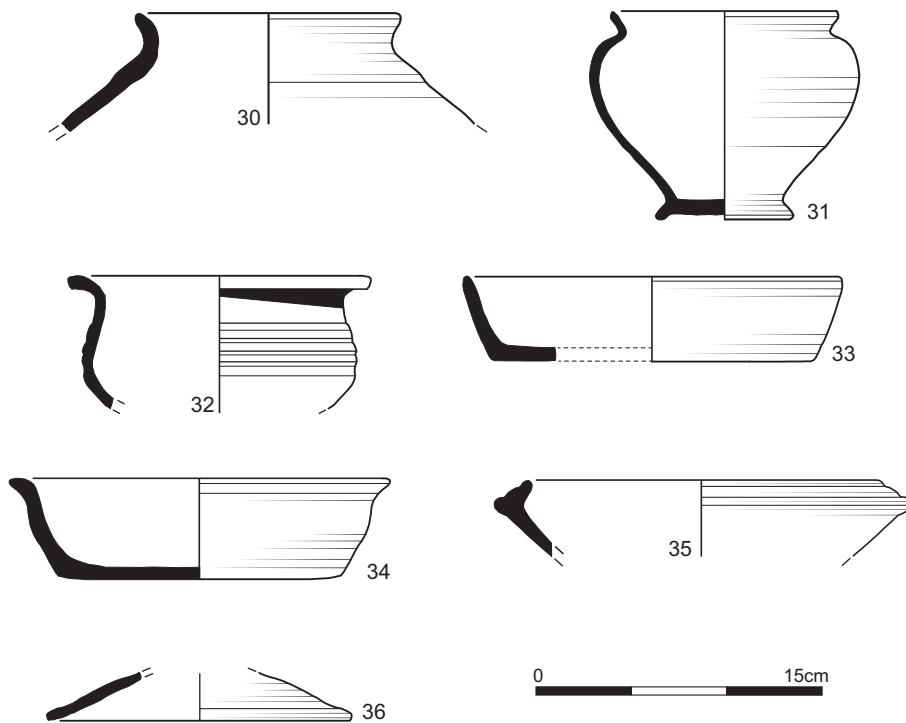


Fig. 7. East Sussex grog-tempered ware pottery: nos 30–36

Park (Green 1988, 249, Fig. 8.3), mid- to late 1st-century types at Newhaven (Green 1976, 272, Figs. 24.52 and 24.53; 28, 106) and those subsequently produced in the late Roman fabric variant of Wealden ware (Lyne 2015, 11, vessel 5B.15).

#### Other early Roman local and regional coarse wares

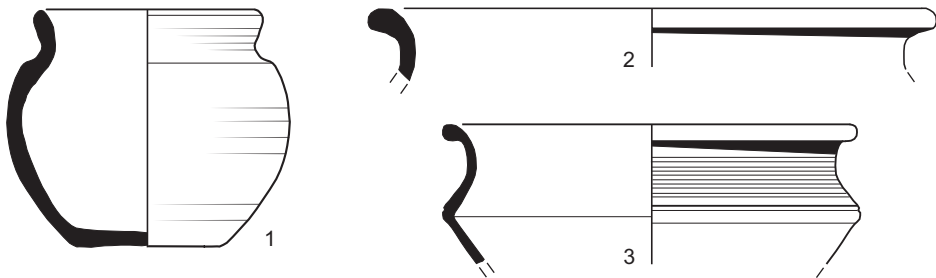
Other reduced coarse wares account for about 4% of the assemblage by sherd count (about 6% by weight), primarily the products of kilns manufacturing wheel-made pottery in East Sussex (GRS1 and GRS2), with rare sherds representing vessels imported from the major industry at Alice Holt, Farnham (ALH RE), about 80km to the west. The most common of these fabrics is GRS1, though its proportional presence is overstated by a group of 29 sherds (1281g) of GRS1 in Ditch F1088, largely derived from a complete bowl-jar (Fig. 8.1) comparable to the Type 1 vessels in ESX GT1, while a small fragment of everted bead rim from a wide-mouthed jar or bowl (Fig. 8.2) is also present. A single vessel was recorded in GRS2, contained in Ditch F1024, and comprising a carinated, necked

bowl (Fig. 8.3) that is comparable to vessels at Hassocks dated AD 70–150 (Lyne 1994, 65, Fig. 8.45–46). Stratified sherds of ALH RE are limited to a single sherd in Gully F2098, representing a narrow-neck jar or flask; relatively small for its type although comparable examples from the late 1st to early 2nd century have been recorded at the kiln site (Lyne and Jefferies 1979, 24, type 1A.4), and this smoothly finished vessel must have appeared quite refined, even delicate, in comparison to the locally-produced grog-tempered wares.

#### White ware

Two white ware fabrics (UNS CR1 and UNS CR2) were imported to the site as flagons. The UNS CR1, which was probably manufactured at Wiggonholt, about 50km to the west, has a sparse distribution across the site, including a small group of body sherds in Pit F2065, but most notable is a large pulley-rim flagon with a four-rib strap handle (Fig. 8.4) in Ditch F1088. This type of flagon was produced at Wiggonholt (Evans 1974, Fig. 10.34 and 16.163), and is a characteristic component of late 1st/

## Other early Roman local and regional coarse ware



## White ware

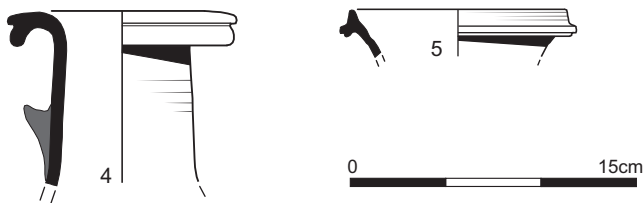


Fig. 8. Other early Roman local and regional coarse ware pottery: nos 1–3 and White ware nos 4–5

early-2nd-century groups in the region, including at Newhaven (Green 1976, 268, Fig. 26.65–6); however, at the fort of Richborough, Kent, they do not appear to post-date the 1st century (Bushe-Fox 1928, vessels 197–200). A chronology not exceeding around AD 100 appears to be supported by the finer fabric of an UNS CR2 flagon contained in a charcoal-rich layer forming part of possible Kiln/Oven S2172, which has a pulley rim with a bifurcated lower collar (Fig. 8.5), comparable to vessels of the mid- to late 1st century at Canterbury, where the flagons may have arrived from north Gaul and/ or been imitated by local potters (Blockley *et al.* 1995, 668; Pollard 1988, 76, Fig. 28.77).

Mortaria are virtually absent in the assemblage but do include two basal sherds from a single mortar in Ditch/ Terminus F1070. The cream fabric appears consistent with the products of Wiggonholt (WIG WH), where a small industry commenced production in around AD 70–110 (Hartley 1974, 140). However, the mortar appears heavily worn and

retains only limited trituration grits, constraining certain identification of the fabric's source.

**Samian ware**

Samian ware accounts for <0.5% of the assemblage by sherd count and weight and the sherds that are present are very poorly preserved due to adverse acidic soil conditions that have eroded surfaces and removed all but small patches of red slip. The only diagnostic vessel is a south Gaulish (LGF SA) Dr.15/17 platter with a quarter moulded wall junction, contained in Ditch F2039, which would have been imported in the mid- to late 1st century, with quantities declining rapidly in the Flavian period (late 1st century). Dr.15/17 platters are present in low quantities in Neronian-Flavian groups at Bullock Down (Rudling 1982, 130) and Wiggonholt (Evans 1974, 144). Further small sherds of LGF SA were contained in Ditch F1006, while flakes of central Gaulish samian ware (LEZ SA2) were present in Ditches F2021, F2094 and F2096, each of

which contained very low quantities of pottery, but suggesting some features may have still been open into the 2nd century.

### DISCUSSION OF KEY GROUPS

The assemblage includes four significant diagnostic groups of pottery (Table 2), which collectively account for about 67% of the assemblage by sherd count (about 74% by weight). These four groups are situated at least 25m from one another and therefore do not appear to represent a focussed industrial or occupation area within the site. However, the presence of a possible kiln may indicate that pottery production, even on a domestic scale, contributed to the dominance of East Sussex grog-tempered wares in the assemblage, while enclosure ditches may have acted as receptacles for material discarded from associated workshops or storage points, if not from occupation.

#### **Group 1: Possible Kiln/ Oven S2172 (mid- to late 1st century AD)**

The pottery group contained within and immediately overlying possible Kiln/ Oven S2172, situated on the northern edge of the excavated area, is the highest concentration of pottery in the assemblage (Table 2; Fig. 9). The feature may represent the remnant of the 'chamber' of a clamp kiln cut into a ditch, and while there is no evidence of waster or over-fired sherds, low-temperature clamp firings tend not to produce such obviously spoil vessels. The bulk of the group is comprised of ESX GT1, primarily Type 1 bowl-jars, although there is little consistency in size, suggesting that if this was an intended product, the hand-made manufacture extended to an absence of standardisation. The presence of sparse sherds of ESX GT2, GRS1-2 and UNS CR1-2 suggests that the group represents rubbish backfilled into the feature – possibly as part of a 'levelling' event – rather than a failed and abandoned kiln load. The bulk of the grog-tempered pottery potentially spans the mid-1st to early 2nd centuries, but the Type 6 constricted neck jars are primarily recorded in 1st-century groups and the UNS CR2 is unlikely to post-date AD 100.

#### **Group 2: Pit F2065 (mid- to late 1st/early 2nd century AD)**

The concentration in Pit F2065 (Fig. 10) is situated towards the centre of the excavation area, cut by Ditch F2075. This ditch is part of a sequence of

boundary features, the latest of which (F2073) contained possible Kiln/Oven S2172. Like Group 1, it is primarily comprised of ESX GT1, with sparse sherds of GRS2 and UNS CR2, the latter comprising cross-joining body sherds, probably from the globular body of an unidentified flagon. Form types are also dominated by Type 1 bowl-jars, with the association of a Type 6 constricted neck jar suggesting a date within the 1st century. However, there are no diagnostic types present to confirm a date slightly before or after AD 100.

#### **Group 3: Ditch F1088 (mid- to late 1st century AD)**

The group in Ditch F1088 (Figs 11–12), situated in the western part of the site, has a composition similar to Groups 1 and 2, with ESX GT1 supplemented by ESX GT2, GRS1 and UNS CR1. Also similar is the presence of Type 1 and 3 bowl-jars; however, their preservation provides a point of contrast, as two were deposited complete, with a third near complete and a dish also near complete. The group is also notable for containing a UNS CR1 pulley rim flagon that suggests Group 3 pre-dates AD 100.

#### **Group 4: Ditch F1006=F2039 (mid- to late 1st century AD)**

Ditch F1006 (=2039) forms an extensive section of enclosure ditch in the south-east area of the excavation. However, the bulk of the group, 206 sherds (2635g), was recovered from L2040, including small rim fragments of ESX GT1 Type 1, Type 3 and Type 6 jars, but these were highly fragmentary, reflecting a poorer level of preservation throughout Group 4 in comparison to Groups 1–3. Slightly less fragmented vessels, including the only jar in ESX GT3, were contained in L1009, while L2046 (Seg.E) contained a south Gaulish (LGF SA) Dr.15/17 platter that dates the group to the mid- to late 1st century (*see* Fig. 13).

## DISCUSSION

### **SITE LOCATION AND ARCHAEOLOGICAL CONTEXT**

The layout and development of the site is likely to have been heavily influenced by its landscape setting, on a slight rise overlooking the Pevensy Levels. This low-lying landscape would have comprised shallow tidal marshes during the Roman occupation (Aston 2002, 95; Tapete and Bromhead 2013, 727). While the site's soils are suitable for short-term grazing and cereal agriculture (Soil



## Group 1: ?Kiln/Oven S2172 - mid to late 1st century AD

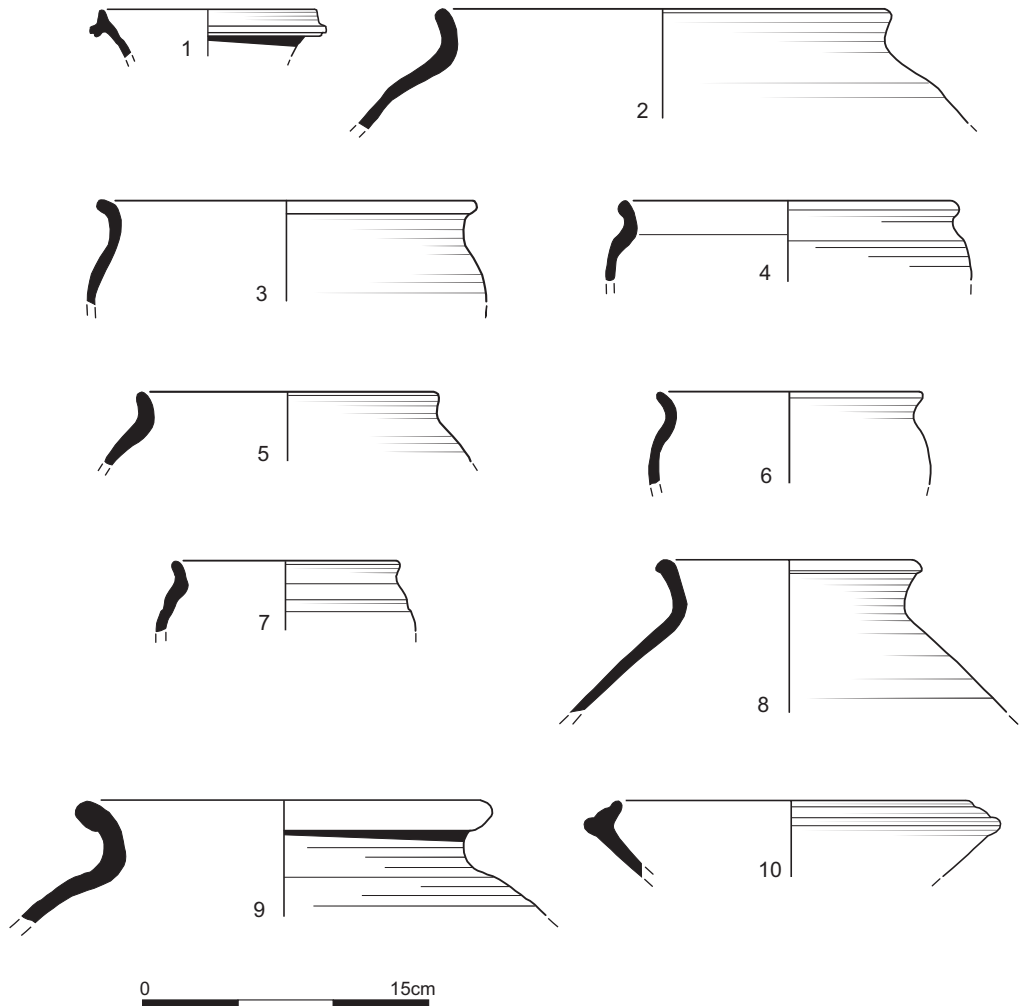


Fig. 9. Pottery. Group1: Possible Kiln/Oven S2172. Mid- to late 1st century AD. 9.1. UNS CR2; flagon; pulley rim with bifurcated lower collar. L2180. 9.2. ESX GT1; type 1 bowl-jar. L2183. 9.3. ESX GT1; type 1 bowl-jar. L2180. 9.4. ESX GT2; type 1 bowl-jar. L2183. 9.5. ESX GT1; type 1 bowl-jar. L2180. 9.6. ESX GT1; type 1 bowl-jar. L2183. 9.7. ESX GT2; type 3 bowl-jar with plain cordon. L2183. 9.8. ESX GT1; type 6 jar with constricted neck. L2183. 9.9. ESX GT1; type 6 jar with constricted neck and everted bead rim. L2183. 9.10. ESX GT1; type 11 bowl with in-turned, segmented rim.

Survey of England and Wales 1983, 16), the neighbouring marshes would have provided a diversity of resources also attractive to settlement; for example, wild flora/fauna and salt (*cf.* Cunliffe 1988, 84). The salt-making industry was widespread in the low-lying, coastal areas of the period (e.g. Murphy *et al.* 2012, 146). Although Romano-British infrastructure is somewhat lacking in the immediate area, the current site's economically

expedient location at the boundary of two distinct ecological zones is a pattern mirrored elsewhere. At Romney Marsh, some 50km to the north-east of Hailsham, Cunliffe (*ibid.* 85) has suggested seasonal exploitation of the marshlands by a 'transhumant sector' of the local Romano-British population, with permanent settlements located on the higher, drier ground.

## Group 2: Pit F2065 - mid to late 1st/early 2nd century AD

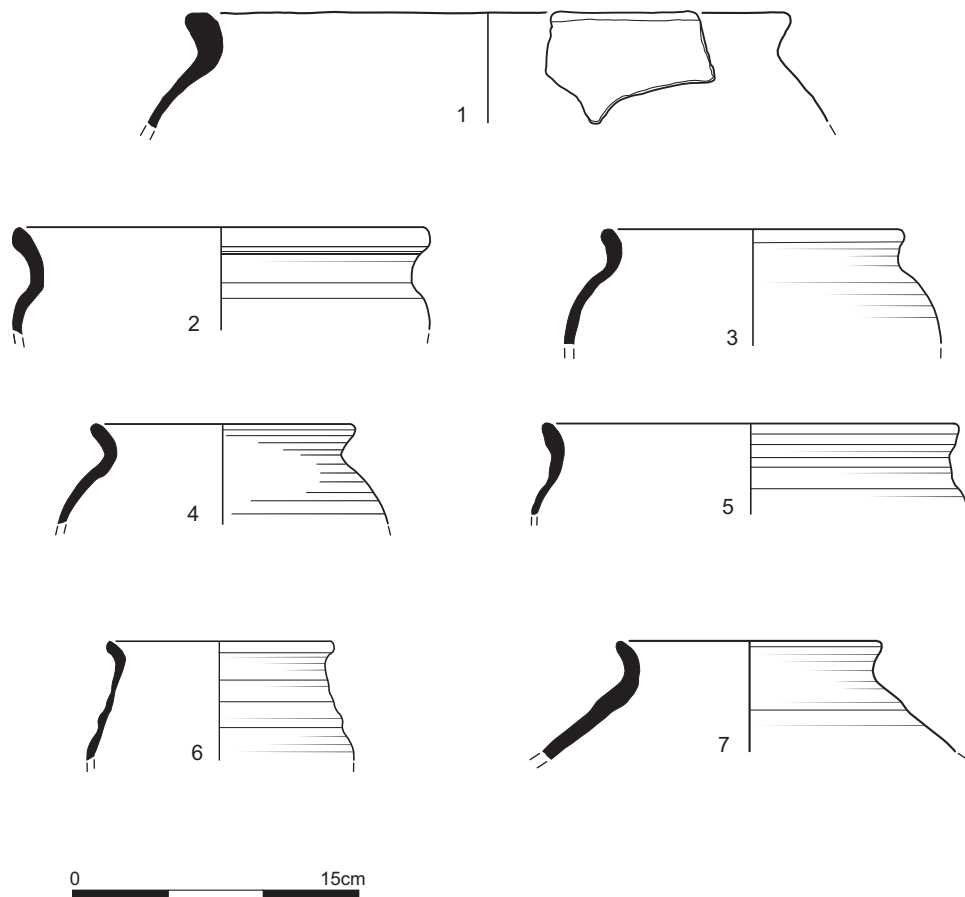


Fig. 10. Pottery. Group 2: Pit F2065 (mid- to late 1st/early 2nd century AD).

10.1. ESX GT1; type 1 bowl-jar. L2066. Fig. 10.2. ESX GT1; type 1 bowl-jar. L2066. Fig. 10.3. ESX GT1; type 1 bowl-jar. L2066. Fig. 10.4. ESX GT1; type 1 bowl-jar. L2066. Fig. 10.5. ESX GT1; type 2 bowl-jar with everted bead rim. L2066. Fig. 10.6. ESX GT1; type 3 bowl-jar or jar with plain shoulder cordon. L2066. Fig. 10.7. ESX GT1; type 6 constricted neck jar. L2066.

### THE POSSIBLE CLAMP KILN

It is suggested, based on the limited surviving evidence, that S2172 could have represented the remains of a pottery clamp kiln. Although the remains of these structures can be difficult to identify archaeologically, two clamp kilns have been recorded at Alice Holt in East Hampshire (Swan 1984, 54). These kilns were between 1m and 1.6m in diameter and were dated between the late pre-Roman Iron Age and early post-conquest era (*ibid.*). Another, larger, clamp kiln is known from West Stow in Suffolk (West 1955, 42 (after Swan 1984, 54)). This mid-1st–mid-2nd-century example

comprised a wide, shallow pit clamp (1.40m x 0.36m) containing reduced sherds and ash with evidence of *in situ* firing (*ibid.*).

Other regional clamp kilns include a possible example at the East Sussex Glider Club, Ringmer (ESHER MES7383; Chuter *pers. comm.*), some 12km to the north-west of the current site. One ditch terminus at Ringmer yielded a substantial concentration of poorly-fired pottery and charcoal, either representing the site of a clamp kiln or a dump of material derived from a nearby kiln (Chuter *pers. comm.*). The location of this possible kiln, set within the profile of a ditch, is directly comparable to S2172

## Group 3: Ditch F1088 - mid to late 1st century AD

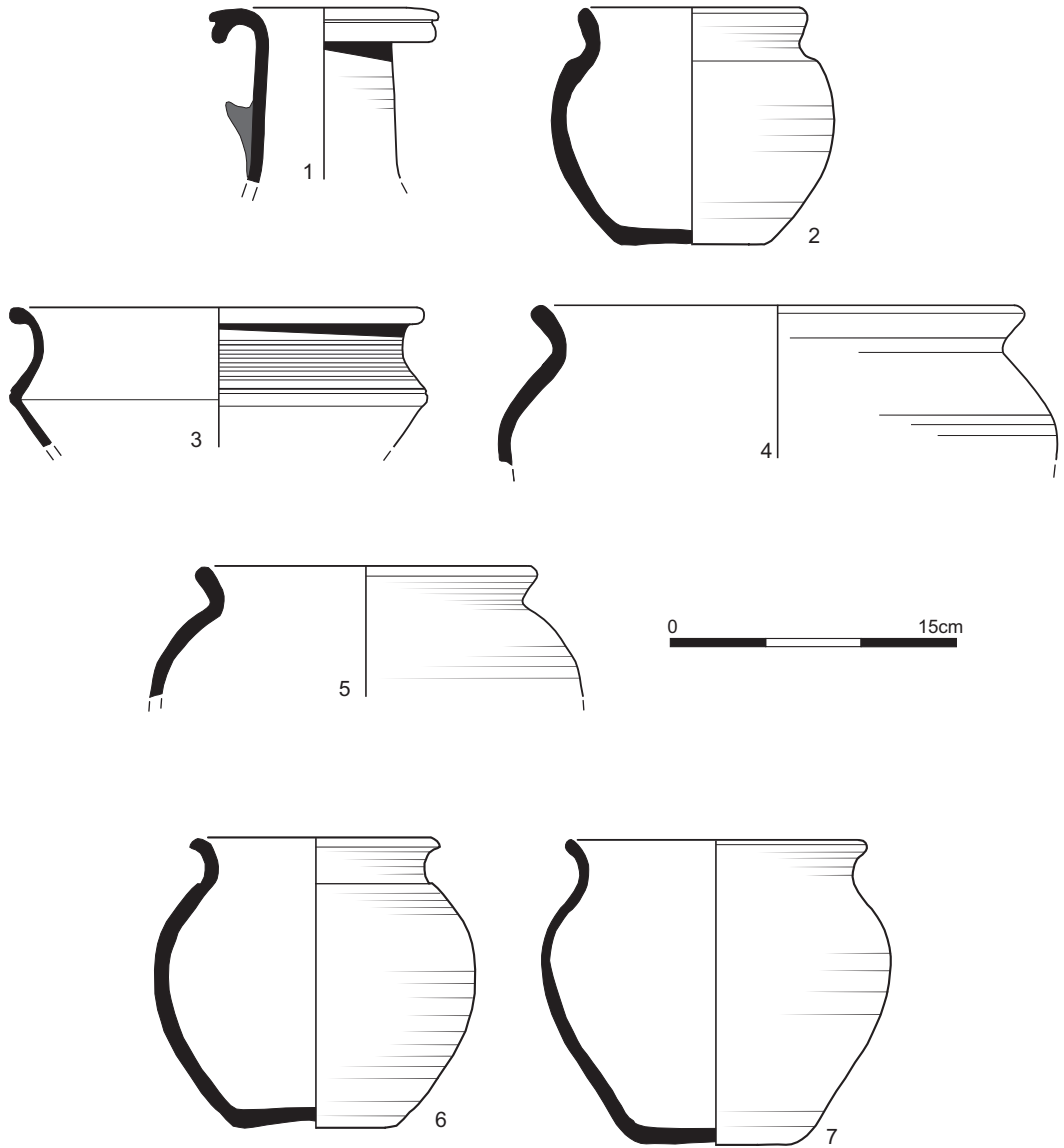


Fig. 11. Pottery. Group 3: Ditch F1088 (mid- to late 1st century AD).

11.1. UNS CR1; large pulley rim flagon with single four-rib strap handle. L1089. 11.2. GRS1; bowl-jar comparable to ESX GT1 Type 1, except wheel-made, traces of soot on exterior, complete vessel. L1089. 11.3. GRS1; everted bead rim of wide-mouthed jar or bowl. L1089. 11.4. ESX GT2; type 1 bowl-jar. L1089. 11.5. ESX GT1; type 1 bowl-jar. L1089. 11.6. ESX GT1; type 1 bowl-jar, burnished exterior and rim (internal), complete vessel. L1089. 11.7. ESX GT1; type 1 bowl-jar, white residue on interior, near complete vessel. L1089.

Group 3: Continued

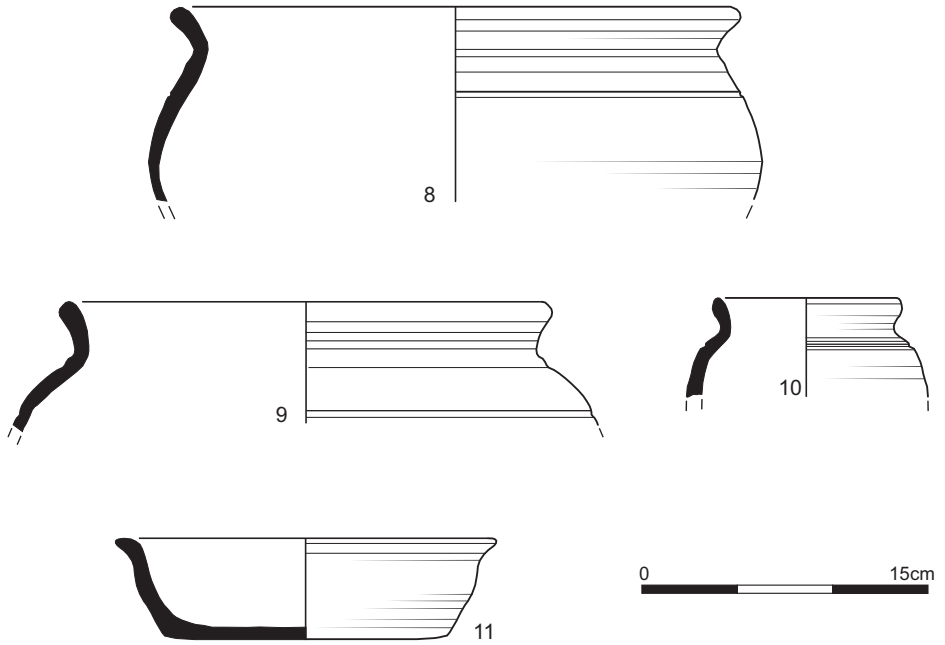


Fig. 12. Pottery. Group 3 continued. 12.8 ESX GT2; type 3 bowl-jar or jar with plain shoulder cordon. L1089. 12.9. ESX GT2; type 3 bowl-jar or jar with plain shoulder cordon. L1089. 12.10. ESX GT1; type 3 bowl-jar or jar with plain shoulder cordon. L1089. Fig. 12.11. ESX GT1; type 10 dish with out-turned top of rim. L1089.

Group 4: Ditch F1006=F2039 - mid to late 1st century AD

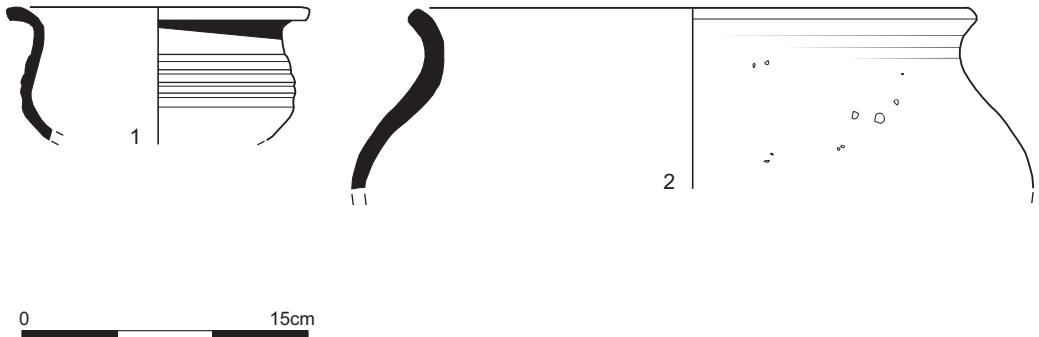


Fig 13. Pottery. Group 4: Ditch F1006=F2039 (mid- to late 1st century AD). 13.1. ESX GT3. Jar with plain everted rim, multiple grooves/girth cordons. L1009. 13.2. ESX GT2. Type 1 bowl-jar. L1089.

at Ersham and may represent an attempt to improve heat retention and limit draughts during firing (*cf.* Rhodes 1969, 3–8, in Swan 1984, 54). The Ersham Farm kiln (if genuine) appears to have been of a

simple construction and may have been a single use feature.

The lack of obvious pottery wasters at the current site might suggest that S2172 was not a

pottery clamp kiln, but rather an oven type feature or agricultural kiln. Modest clay-lined features of this type have been recorded at numerous sites across Roman Britain and are often associated with the drying/processing of grain. Regional examples of Roman corn-driers include a 4th-century example at Burgess Hill, West Sussex, albeit of a more complex construction than S2172 (Sawyer 1999, 49). Additional examples are recorded at Ranscombe Hill, Fishbourne and Bullock Down (Bedwin 1976; Rudkin 1986; Rudling 1982 (after Sawyer 1999, 56)). Romano-British corn driers, often displaying a T-shaped or H-shaped pattern of flues, are a common occurrence throughout lowland Britain and have long been regarded as being of major importance to the rural Romano-British economy (Goodchild 1943, 148; Upex 2008, 164). However, the poorly preserved nature of S2172 at Ersham and the lack of *in situ* environmental remains prevent any conclusive interpretation of its function.

#### PATTERNS OF POTTERY CONSUMPTION

Observed patterns of consumption and deposition may be intrinsically linked with local pottery production, if Group 1 largely represents the backfill of a clamp kiln. Nonetheless, the assemblage illustrates a consumption pattern very highly focussed on East Sussex grog-tempered ware, with only limited supplementary coarse wares, white ware and samian ware. The dominance of East Sussex grog-tempered ware, supplemented with occasional flagons and samian vessels, is paralleled in the early Roman groups at Bullock Down (Rudling 1982, 109 and 133) and Newhaven (Green 1976, 258–9). The general distribution of the pottery may reflect expedient consumption and clearing arising from basic subsistence on a Wealden site. This low-status occupation may have combined domestic and industrial functions, potentially incorporating the *ad hoc* model of pottery production that has been postulated for East Sussex grog-tempered wares (Mason 2012, 29). The paucity of other fabrics, fine wares and mortaria (and absence of *amphorae*) contrasts with the cemetery at Hassocks (Lyne 1994, 60–6), the larger settlement at Newhaven (Green 1976, 268–73), and groups of the 1st century from

the bath house at Beauport Park (Green 1988), although these sites may have had economies elevated by their association with villas or military activity.

Consumption at Ersham Farm appears focussed on a limited repertoire of vessels, although the volume of bowl-jars varies considerably, predominantly comprised of Type 1 bowl-jars, Type 3 bowl-jars and Type 6 constructed neck jars. All other East Sussex grog-tempered ware vessel types occur in limited quantities, but the presence of the Type 5 jars with ‘eyebrow’ decoration provides a strong suggestion that the chronological range of this assemblage is limited to the latter half of the 1st century. This range is supported by the occasional presence of cream ware pulley rim flagons and south Gaulish samian ware, whose supply may be highly derivative and dependent on the economy or more distinct settlement nuclei in the local landscape.

#### CONCLUSION

The results of the investigations at Ersham Farm have made a valuable contribution to our current understanding of Romano-British settlement in the Weald. The site appears to have comprised part of an enclosed Romano-British farming landscape, practicing subsistence level economy and displaying only limited signs of Romanisation. However, evidence for the production of tradable crop surpluses and a modest occurrence of fine wares in the pottery assemblage suggest at least some limited access to local and wider markets. Furthermore, the presence of a possible clamp kiln or oven type feature within the excavated area might attest to local pottery production, albeit on a limited scale.

#### Acknowledgements

Archaeological Solutions Ltd (AS) would like to thank Matthew Homes Ltd for funding the project and Mr Bill Prosser for his assistance. AS is also pleased to acknowledge the input and advice of Mr Greg Chuter (East Sussex County Council Environment Advice Team). Antony Mustchin wishes to thank Greg Chuter for his insights and for the provision of information regarding the 2007 excavation at East Sussex Glider Club. Andrew Peachey gratefully acknowledges the assistance and input of Malcolm Lyne, who provided valuable background and unpublished material on East Sussex grog-tempered wares.

The illustrations are by Kathren Henry and Thomas Light.

**Correspondence:** Archaeological Solutions Ltd, 6 Brunel Business Court, Eastern Way, Bury St Edmunds, Suffolk, IP32 7AJ; andy.peachey@ascontracts.co.uk; antony.mustchin@ascontracts.co.uk

## REFERENCES

- Aston, M.** 2002. *Interpreting the Landscape: Landscape Archaeology and Local History*. London: Routledge.
- Barclay, A., Knight, D., Booth, P., Evans, J., Brown, D. and Wood, I.** 2016. *A Standard for Pottery Studies in Archaeology*. Medieval Pottery Research Group/ Study Group for Roman Pottery/Prehistoric Ceramics Research Group/ Historic England.
- Bedwin, O.** 1976. The Excavation of a Romano-British Site at Ranscombe Hill, South Malling, East Sussex, *Sussex Archaeological Collections* (hereafter SAC) **116**, 241–55.
- Blockley, K., Blockley, M., Blockley, P., Frere, S. S. and Stow, S.** 1995. *Excavations in the Marlowe Car Park and Surrounding Areas*. The Archaeology of Canterbury **5**. Canterbury: Canterbury Archaeological Trust.
- Bosworth, G. F.** 2013. *Cambridge County Geographies: Sussex*. Cambridge: Cambridge University Press.
- British Geological Survey**, 1978. *Legend for the 1:625,000 Geological map of the United Kingdom (solid geology)*. London: Mansfield.
- Bushe-Fox, J.** 1928. Second Report on the Excavation of the Roman Fort at Richborough, Kent. *Reports of the Research Committee of the Society of Antiquaries of London* **7**. Oxford.
- Butler, C. and Lyne M.** 2001. *The Roman Pottery Production site at Wickham Barn, Chiltington, East Sussex*. British Archaeological Reports (British Series) 323. Oxford: Archaeopress.
- Campbell, G.** 2008. Plant utilization in the countryside around Danebury: A Roman perspective, in B. Cunliffe, *The Danebury Environs Roman Programme: A Wessex Landscape During the Roman Era. Volume 1: Overview*, 53–100. Oxford University School of Archaeology Monograph No. 70. Oxford.
- Chuter, G.** 2009. Fieldwalking at Duttle's Brow near Jevington, East Sussex: prehistoric to Romano-British Downland occupation and an Anglo-Saxon cemetery, *Sussex Archaeological Review* **147**, 25–36.
- Cleere, H.** 1978. Roman Sussex – the Weald, in P. Drewett (ed.), *Archaeology in Sussex to AD 1500*, 59–63. Council for British Archaeology Research Report No. 29.
- Cleere, H. and Crossley, D.** 1995. *The Iron Industry of the Weald* (2nd edn). Chesterfield: Merton Priory Press.
- Cunliffe, B. W.** 1988. Romney Marsh in the Roman Period, in J. Eddison and C. Green (eds), *Romney Marsh: Evolution, Occupation, Reclamation*, 83–7. Oxford: Oxford University Committee for Archaeology Monograph No. 24.
- Curwen, E. and Curwen, E. C.** 1927. Excavation in the Caburn, near Lewes, SAC **115**, 152–78.
- Darling, M.** 2004. Guidelines for the Archiving of Roman Pottery, *Journal of Roman Pottery Studies* **68**, 67–74.
- Donkin, R. A.** 1973. Changes in the Early Middle Ages, in H. C. Darby (ed.), *A New Historical Geography of England before 1600*, 75–135. Cambridge: Cambridge University Press.
- Drewett, P.** 1982. *The Archaeology of Bullock Down, Eastbourne, East Sussex: the development of a landscape*. Sussex Archaeological Society monograph 1. Lewes.
- Evans, J.** 1974. Excavations on a Romano-British Site, Wiggonholt, 1964, SAC **112**, 97–151.
- Goodchild, R.G.** 1943. T-shaped Corn-drying Ovens in Roman Britain, *The Antiquaries Journal* **23** (3–4), 148–53.
- Green, C.** 1976. 'The Coarse Pottery', in M. Bell, The Excavation of an Early Romano-British Site and Pleistocene Landforms at Newhaven, SAC **114**, 256–87.
- 1980. Handmade Pottery and Society in Late Iron Age and Roman East Sussex, SAC **118**, 68–86.
- 1988. 'The Roman pottery other than samian', in G. Brodrribb and H. Cleere, The 'Classis Britannica' Bath-House at Beauport Park, East Sussex, *Britannia* **19**, 246–52.
- Harris, R.B.** 2008. *Hailsham Historic Character Assessment Report*, Sussex Extensive Urban Survey. East Sussex County Council/ West Sussex County Council/ Brighton and Hove City Council.
- Hartley, K.** 1974. 'The Mortaria', in J. Evans, Excavations on a Romano-British Site, Wiggonholt 1964, SAC **112**, 140–42.
- Hodgkinson, J.** 2008. *The Wealden Iron Industry*. Stroud: The History Press.
- Lyne, M.** 1994. The Hassocks Roman and Early Saxon Cemetery, SAC **132**, 53–85.
- 2015. *Late Roman Handmade Grog-Tempered Ware Producing Industries in South East Britain*. Archaeopress Roman Archaeology 12. Oxford.
- forthcoming a. The Pottery, in H. Cleere, Excavations on the Romano-British Industrial Site at Bardown, Wadhurst, Sussex.
- forthcoming b. The Pottery, in D. Rudling, Excavations at Beddingham Roman Villa.
- Lyne, M. and Jefferies, R.** 1979. *The Alice Holt/ Farnham Roman Pottery Industry*. Council for British Archaeology Research Report No. 30.
- Mason, O.** 2012. Roman Pottery Production in East and West Sussex: a review of evidence and establishment of a regional fabric and form type series. Ditchling: Archaeology South-East (Internal Draft).
- Mullin, D., Biddulph, E. and Brown, R.** 2010. A Bronze Age Settlement, Roman Structures and a Field System at Hassocks, West Sussex, SAC **148**, 17–46.
- Murphy, P., Heppell, E. and Brown, N.** 2012. 'The Archaeology of the Essex Coast', in N. Brown, M. Medlycott and O. Bedwin (eds), The Archaeology of Essex: proceedings of the Chelmsford Conference, 141–54. *The Transactions of the Essex Society for Archaeology and History* **3**.
- Mustchin, A. R. R.** 2016. *Ersham Farm, Ersham Road, Hailsham, East Sussex. Archaeological Trial Trench Evaluation and Excavation: Research Archive Report*. Archaeological Solutions Report No. 5238. Bury St Edmunds.
- Mustchin, A. R. R., Cussans, J. E. M., Summers, J. R. and Peachey, A.** 2016. A Large Romano-British Farmstead at North Stud, Woodditton, Cambridgeshire, *Proceedings of the Cambridge Antiquarian Society* **105**, 7–34
- Pollard, R.** 1988. *The Roman Pottery of Kent*. Maidstone: Kent Archaeological Society.
- Rhodes, D.** 1969. *Kilns: design, construction and operation*. London: Pitman Publishing.
- Rudkin, D. J.** 1986. The Excavation of a Romano-British Site by Chichester Harbour, Fishbourne, SAC **124**, 51–77.
- Rudling, D.** 1982. The Romano British Farm on Bullock Down, in P. Drewett, *The Archaeology of Bullock Down, Eastbourne, East Sussex: the development of a landscape*, 97–143. Sussex Archaeological Society monograph **1**. Lewes.
- Sawyer, J.** 1999. The excavation of a Romano-British site at Burgess Hill, West Sussex, SAC **137**, 49–58.

- Soil Survey of England and Wales (SSEW)**, 1983. *Legend for the 1:250,000 Soil Map of England and Wales*. Harpenden: SSEW.
- Summers, J. R.** 2013. The charred plant remains, in A. R. R. Mustchin, *An Archaeological Excavation on Land North of Blyth Houses, Church Road, Snape, Suffolk: Archive Report*. Archaeological Solutions Ltd Report No. 4471. Bury St Edmunds.
- Swan, V. G.** 1984. *The Pottery Kilns of Roman Britain*. London: Her Majesty's Stationary Office.
- Tapete, D. and Bromhead, E.N.** 2013. 'Geohazards and climate change issues for the preservation of the Saxon Shore in South Britain', in E. Bilotta, A. Flora, S. Lirer and C. Viggiani (eds), *Geotechnical Engineering for the Preservation of Monuments and Historic Sites*. London: CRC Press, 725-33
- Taylor, J.** 2007. *An Atlas of Roman Rural Settlement in England*. Council for British Archaeology Research Report No. 151.
- Tomber, R. and Dore, J.** 1998. *The National Roman Fabric Reference Collection*. London: Museum of London.
- Upex, S. G.** 2008. *The Romans in the East of England: settlement and landscape in the Lower Nene Valley*. Stroud: Tempus.
- van der Veen, M.** 1989. Charred grain assemblages from Roman-period corn driers in Britain, *Archaeological Journal* **146**, 302-19.
- Wallis, S.** 2015. *Medieval Occupation at Hailsham Primary School, Ingrams Way, Hailsham, East Sussex: An Archaeological Excavation*. Thames Valley Archaeological Services South Report No. 14/109c. Brighton.
- West, S.** 1955. Romano-British Pottery Kilns on West Stow Heath, *Proceedings of the Suffolk Institute of Archaeology* **26**, 35-53.
- Wilson, D. M. and Hurst, D. G.** 1964. Medieval Britain in 1962 and 1963, *Medieval Archaeology* **8**, 231-99.
-

