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A First-Century A.D. Burial Plot at Barnwood, Gloucestershire: Excavations in 2013–14

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SUPPLEMENTARY MATERIAL

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SECTION 1. SAMIAN *By* Gwladys Monteil

The principal characteristics and significance of the samian assemblage have been described in the main article; this supplementary material presents the methodology employed, along with a catalogue of the illustrated samian and potters' stamps.

METHODOLOGY

After taking a small fresh break the fabric of each sherd was examined under a x20 binocular microscope and the whole assemblage was fully quantified. Each archive entry included context number, fabric, form and decoration identification, condition, sherd count, MNV (Maximum Number of Vessels), rim EVE (Estimated Vessel Equivalents), rim diameter, weight, notes and a date range. The fragmented nature of the group and the uniformity of the plain vessels represented made estimating an accurate number of vessels difficult and it is likely that the MNV is overly high. Both EVEs and MNV have therefore been used during the analysis. Decorated samian and the stamps were subject to further analysis; rubbings were taken, mounted, scanned and submitted as illustrations (ONLINE FIGS 1–2). Detailed catalogues are provided below (Cat. Nos 1–65).

A number of samian stocks dating to the Neronian period have been selected for comparison. In Cirencester, a discarded samian stock thought to have come from a store in the fort or *vicus* was dumped in defensive ditch III, providing potentially contemporary comparative material from a military context[1] (though full quantification is not available). The discarded shop groups from Colchester[2] and One Poultry in London,[3] thought to have been destroyed in the Boudiccan revolt, also provide interesting parallels from civilian contexts. Finally, the samian assemblage from the Kingsholm fortress[4] has also been included for comparative purposes.

[1] Hartley and Dickinson 1982, 133–42.
[2] Millett 1987; Monteil and Silvéréano 2011.
[3] Rayner 2011; Bird 2011.
[4] Wild 1985.

DECORATED SAMIAN CATALOGUE (ONLINE FIG. 1)

The following catalogue lists the decorated pieces recovered from the site. For South Gaulish Dr.29 and 30s it is often difficult to suggest a specific potter or even a group of potters. For most of the vessels parallels for the decoration could be found and for some of them a clear link to relatively well-identified mould maker groups can be suggested. The Inventory Numbers (Inv. No.) quoted as parallels are taken from the Mainz Internet Database on Terra Sigillata.[5]

The catalogue is arranged by feature and each entry provides the feature name, the excavation context number and details of the decoration.

Cat. No. 1 — Quarry Pit 2, (6070), one body sherd, Dr.29, La Graufesenque. The decoration is too partial to be identified with any confidence and what is left does not match any of the other vessels in this group.

Cat. No. 2 (ONLINE FIG. 1, 2) — Quarry Pit 2, (fill 6071), three body sherds, Dr.29, La Graufesenque and finds-rich fill of Quarry Pit 2, (fill 6086), one body sherd, Dr.29, La Graufesenque. The leaf used up-side-down as a tassel is on a bowl in T-1 style with a Bassus ii-Coelus internal stamp (Inv. No. 0000177). The festoon is the one also on a bowl in T-1 style with a Bassus ii-Coelus internal stamp (Inv. No. 0000179) and on a Dr.29 from London with an internal stamp by Niger ii (Inv. No. 0007472).

Cat. No. 3 — Quarry Pit 2, (6116), one body sherd, Dr.30, La Graufesenque. The ovolo is too partial to be identified with confidence and not like any of the ones recovered from the finds-rich fill of Quarry Pit 2.

Cat. No. 4 — Finds-rich fill of Quarry Pit 2, (6018), one body sherd, Dr.29, La Graufesenque. The leaf is the same as the one used in the lower frieze of the Dr.29 with an internal stamp by Senicio (Cat. No. 28).

Cat. No. 5 (ONLINE FIG. 1, 5) — Finds-rich fill of Quarry Pit 2, (fill 6018), one rim sherd, Dr.29, La Graufesenque. A Dr.29 from Nanstallon with an internal stamp by Manduillus has an almost identical decoration with the rosette and striated small buds in the upper frieze and a scroll with the leaf with serrated edge and delicate small bows tendrils (Inv. No. 0000677). A.D. 60–80. See Cat. No. 16 for perhaps the same leaf and the same bowl.

Cat. No. 6 — Finds-rich fill of Quarry Pit 2, (6024), one body sherd, Dr.29, La Graufesenque.

[5] http://www.rgzm.de/samian.

Loop of a scroll with leaf tip fillers.

Cat. No. 7 — Finds-rich fill of Quarry Pit 2, (6024), one body sherd, Dr.29, La Graufesenque. Partial upper frieze with a swirl ending in a rosette which appears close to the one on Cat. No. 5, the little bud at the end of the tendril. See Cat. No. 10 for perhaps the same bowl.

Cat. No. 8 — Finds-rich fill of Quarry Pit 2, (6024), one body sherd, Dr.29, La Graufesenque. The larger leaf in the lower frieze is on a bowl with an internal stamp by Calvus i (Inv. No. 0000256). The rosette at the end of the tendrils in the upper frieze is perhaps the one on a Dr.29 with an internal stamp by Mommo (Inv. No. 0001660).

Cat. No. 9 — Finds-rich fill of Quarry Pit 2, (6024), one body sherd, Dr.29, La Graufesenque. Partial lower frieze with three examples of the same leaf.

Cat. No. 10 — Finds-rich fill of Quarry Pit 2, (6086), one body sherd, Dr.29, La Graufesenque. Perhaps the same bowl as Cat. No.7, the upper frieze includes the same arrangement of swirls with rosette and little buds. The lower frieze is made up of gadroons.

Cat. No. 11 — Finds-rich fill of Quarry Pit 2, (6086), one body sherd, Dr.29, La Graufesenque. A similar striated medallion is on a bowl with an internal stamp by Crestio (Inv. No. 0006997).

Cat. No. 12 — Finds-rich fill of Quarry Pit 2, (6086), one body sherd, Dr.29, La Graufesenque. Possibly the same as Cat. No. 27 but here there is a simple medallion around the duck.

Cat. No. 13 — Finds-rich fill of Quarry Pit 2, (6086), one body sherd, Dr.29, La Graufesenque. All of the motifs in this partial lower frieze are in an identical arrangement on a Dr.29 in a T-1 style and with an internal stamp by Senicio (die 2a, Inv. No. 0004010).

Cat. No. 14 — Finds-rich fill of Quarry Pit 2, (6086), one body sherd, Dr.29, La Graufesenque. Upper frieze with a scroll, the delicate stirrup leaf and the rosette are on a Dr.29 with an internal stamp by Bassus ii-Coelus (Inv. No. 0000153). The other leaf is possibly a compound of the one found in the lower scroll and basal wreath on the Dr.29s with a stamp by Senicio (Cat. Nos 23 and 28) with a small lozenge detail added at the top.

Cat. No. 15 — Finds-rich fill of Quarry Pit 2, (6086), one body sherd, Dr.29, La Graufesenque. Partial upper frieze.

Cat. No. 16 — Finds-rich fill of Quarry Pit 2, (6086), one body sherd, Dr.29, La Graufesenque, Perhaps the same leaf and the same bowl as Cat. No. 5.

Cat. No. 17 — Finds-rich fill of Quarry Pit 2, (6086), one body sherd, Dr.29, La Graufesenque. Partial upper frieze with leaf tip fillers.

Cat. No. 18 — Finds-rich fill of Quarry Pit 2, (6086), one body sherd, Dr.29, La Graufesenque. Small body sherd from the upper frieze, the partial motif is similar to the one on a Dr.29 with an internal stamp by Aquitanus (Inv. No. 0004016), one with a stamp by Felix i (Inv. No.

0000433) and one with an internal stamp by Niger ii-And– (Inv. No. 0004294).

Cat. No. 19 — Finds-rich fill of Quarry Pit 2, (6024), one body sherd, Dr.29, La Graufesenque. Lower frieze with straight gadroons.

Cat. No. 20 — Finds-rich fill of Quarry Pit 2, (6024), one body sherd, Dr.29, La Graufesenque. Lower frieze with straight gadroons with a wavy border at the base.

Cat. No. 21 — Finds-rich fill of Quarry Pit 2, (6086), two joining body sherds, Dr.29, La Graufesenque. Lower frieze with straight gadroons.

Cat. No. 22 — Finds-rich fill of Quarry Pit 2, (6086), one body sherd, Dr.29, La Graufesenque. Partial upper frieze.

Cat. No. 23 (ONLINE FIG. 1, 23) — Finds-rich fill of Quarry Pit 2, (fill 6024), two joining sherds, Dr.29 with an internal stamp by Senicio (see Cat. No.60), La Graufesenque. Little of the decoration remains, a basal wreath below partial gadroons. The motif in the wreath is the same one used in the saltire on the other Dr.29 with an internal stamp by Senicio (Cat. No. 28) and is used in a basal wreath on a Dr.29 in a T-1 style with a Senicio stamp though a different die (Inv. No. 0001300). The die used here, 2a, is not normally associated with bowls from moulds of the later Neronian period including the T-1 group and is more often associated with slightly earlier styles.[6] A notable exception is Inv. No. 0004010 from Moers-Asberg with die 2a by Senicio on a Dr.29 from a T-1 mould with the same motif used in two wreaths in the upper frieze. See comments for Cat. No. 28.

Cat. No. 24 (ONLINE FIG. 1, 24) — Finds-rich fill of Quarry Pit 2, (fill 6024), two joining sherds, Dr.29, and (fill 6086), one body sherd, Dr.29, La Graufesenque. The hound facing right and the hare are on a Dr.29 with an internal stamp by Felix i (Inv. No. 0000419). The hound facing right, the small circles in the upper frieze and the gadroons are on a bowl from the Kingsholm Close group,[7] the hound facing left is on a Dr.29 with an internal stamp by Albus i (Inv. No. 0000036) and the three animals in a similar arrangement are on a Dr.29 from the shop group recovered from One Poultry in London.[8] The two hounds are on a bowl with an internal stamp by Ianua[9] and are amongst the characteristic motifs of the T-1 mould maker.

Cat. No. 25 — Finds-rich fill of Quarry Pit 2, (6086), two rim sherds, Dr.29, and (6024), one rim sherd, Dr.29, La Graufesenque. Upper zone with an unusual scroll with tendrils ending in pomegranate and four petals rosettes. A pomegranate is on the upper frieze of a Dr.29 with an

[6] Hartley and Dickinson 2011, 209.
[7] Wild 1985, no. 25.
[8] Bird 2011, <P237>.
[9] Dannell 1993, no. 19.

internal stamp by Modestus i (Inv. No. 0003958), on another one with a stamp by Ardacus ii (Inv. No. 0003908) and one by Melus i (Inv. No. 0004032). The four petals rosette is on a Dr.29 also with an internal stamp by Modestus i (Inv. No. 0007442) and on one with an internal stamp by Primus iii (Inv. No. 0003405).

Cat. No. 26 — Finds-rich fill of Quarry Pit 2, joining sherds from (6024), (6086) and (6153), Dr.29, La Graufesenque. The leaf in the lower frieze is on a Dr.29 from Kingsholm[10] and on a bowl with an internal stamp by Primus iii (Inv. No. 0002808); it is here associated with a different small bud but in a similar arrangement.

Cat. No. 27 (ONLINE FIG. 1, 27) — Finds-rich fill of Quarry Pit 2, (fill 6086), three joining sherds, two additional non-joining sherds, Dr.29, La Graufesenque. For the motif between the medallions in the upper frieze see Inv. No. 0000186 with an internal stamp by Bassus ii-Coelus and no. 551 in Colchester on a mould attributed to T-1.[11] The duck looking left is on a bowl with an internal stamp by Bassus ii-Coelus (Inv. No. 0000163). The ducks in medallion and the small leaf in the lower frieze at the end of the tendril around each duck are on a Dr.29 from London with an internal stamp by Niger ii (Inv. No. 0007472).

Cat. No. 28 (ONLINE FIG. 1, 28) — Finds-rich fill of Quarry Pit 2, (fill 6086), two joining base sherds, Dr.29 with an internal stamp by Senicio (see Cat. No. 61), two additional body sherds and two joining rim sherds from fill 6024. The leaf used as a tassel in the upper frieze is the same as the one used in the vertical wreath on the Dr.30 in this group (see Cat. No. 32). The leaf in the lower frieze scroll is close to the one on a Dr.29 also with an internal stamp by Senicio (Inv. No. 0002878). The chevron leaf/motif at the end of the tendrils in the saltire in the lower frieze is on a Dr.29 from One Poultry in London with an internal stamp by Bassus ii-Coelus (Inv. No. 0003186) and in two wreaths in the upper frieze on a Dr.29 from Moers-Asberg with the same die by Senicio (Inv. No. 0004010) from a T-1 mould. This bowl from Moers-Asberg shows a lower frieze with a similar arrangement to this one with alternating saltire and scroll though the details are different. Senicio's die 2a normally appears on vessels in styles 'ranging from Tiberian to Neronian'.[12] Here, however, it is associated with a style more typical of the T-1 group normally dated to the mid to late Neronian period.[13]

Cat. No. 29 — Finds-rich fill of Quarry Pit 2, (6086), Dr.29, La Graufesenque. Lower frieze, the decoration is blurred in places as if the bowl had been removed too quickly or carelessly

[10] Wild 1985, D24.
[11] Dannell 1999.
[12] Hartley and Dickinson 2011, 209.
[13] ibid.

from the mould. The decoration alternates two types of floral arrangements interceded by a wavy border topped with a small bud. All are linked at the base by festoons. One of the arrangements topped by a small lyre-shaped bud is similar to one found on a Dr.30 in the One Poultry shop group[14] and on a Dr.30 with a signature by Masclus i (Inv. No. 0005009). The rest of the motifs cannot be matched precisely to known examples but the overall style is common in the Claudian and early Neronian period (Inv. Nos 0000134, 0000656 and 0003785).

Cat. No. 30 — Finds-rich fill of Quarry Pit 2, joining sherds from (6024) and (6086), Dr.29, La Graufesenque. The same combination of upper and lower frieze is on a Dr.29 with an internal stamp by Severus iii from Lisieux (Inv. No. 0003757).[15] The dating for this bowl presents some difficulties; the only parallel found, Inv. No. 0003757, was clearly cast from the same mould, the style of which suggests a date in the early Neronian period. The Lisieux example is, however, associated with an internal stamp by Severus iii, a potter whose main output is Flavian.[16] The reading of the stamp is unverified but the drawing published in Lemaître suggests a reading of OFSEV[.[17] Hartley and Dickinson suggest that Severus iii 'was at work by the late Neronian period'[18] so this bowl is perhaps one of his earlier pieces when he bought moulds, in this case perhaps an old one. Alternatively, and perhaps more likely, this bowl is contemporary with the mould and Neronian.

Cat. No. 31 (ONLINE FIG. 1, 31) — Finds-rich fill of Quarry Pit 2, (fill 6018), six joining sherds and an additional sherd, one bodysherd from 6055 (fill of quarry pit 6102) and one additional sherd from 6122 (fill of pit 6121), Dr.29, La Graufesenque, upper frieze with two small hounds and a lower frieze with poppy heads interceded by small beaded medallions. The poppy head looks like the one used by the T-1 group and found on bowls with internal stamp by Bassus ii-Coelus (Inv. No. 0003186), the two hounds and hare are on Cat. No. 24 and a number of bowls attributed to Bassus ii-Coelus.[19]

Cat. No. 32 (ONLINE FIG. 1, 32) — Finds-rich fill of Quarry Pit 2, two joining sherds from fill 6024, three sherds from fill 6024 and five joining sherds from fill 6086, one additional sherd from fill 6086, one from fill 6072 and one from fill 6153, all are assumed to be from the same Dr.30 but it is possible that they come from two vessels, La Graufesenque. What links all of the fragments are the ovolo and the vertical wreath/stack of leafs. The ovolo is known on a

[14] Bird 2011, <P270>.
[15] Lemaître 1974, pl. 1, 1.
[16] Hartley and Dickinson 2011, 265.
[17] Lemaître 1974, pl. 1, 1.
[18] Hartley and Dickinson 2011, 265.
[19] Knorr 1952, Taf. 10, G and J.

Dr.30 with a signature by Calus ii (Inv. No. 0004391) and the small leaf used in the wreath is on the upper frieze of the Dr.29 with an internal stamp by Senicio (Cat. No. 28). The remaining fragments seem to suggest that each of the panels is slightly different. There are two types of saltires; the wider one includes four examples of the same trefoil leaf with three little birds on top and a small running dog below with little leaves. A similar arrangement is on a Dr.30 from Mainz[20] attributed to the T-1 group.[21] The second and narrower saltires both include the same trifid leaf at the top but with different motifs below; one includes a conventional mix of borders and striated buds, the other is more elaborate and includes swirls, rosettes, little birds and the little leaf used in the larger saltire and the vertical wreath/stacks. In other more partial panels two partial figured types with shields are visible, they wear different dresses and slightly different round shields, one is probably Minerva, the other is close to Os.164A and found with an ovolo associated with Calus ii (Inv. No. 1000500) and with another ovolo (Inv. No. 1000705). The ovolo and the trefoil leaf used back to back in one of the saltires are on Inv. Nos 1000822 and 1002624, the trefoil leaf is also on two Dr.29s with internal stamps by Niger ii (Inv. Nos 0000585 and 0000947) and one with a stamp by Regenus (Inv. No. 0001282).

Cat. No. 33 (ONLINE FIG. 1, 33) — Finds-rich fill of Quarry Pit 2, one sherd from (fill 6086), Dr.30, La Graufesenque. The fan-shaped leaf, the festoons and the tall trapezoidal leaf are in a similar but not identical arrangement on a Dr.30 from York with a tongueless ovolo similar to the one on Cat. No. 38 (Inv. No. 1001714). Most probably by Sabinus iii.

Cat. No. 34 — Finds-rich fill of Quarry Pit 2, three rim sherds from (6086), Dr.30, La Graufesenque. Single border ovolo with a rosette ending tongue, perhaps the one found on other Dr.30s from La Graufesenque and La Nautique (Inv. Nos 1003464 and 1001067).

Cat. No. 35 — Finds-rich fill of Quarry Pit 2, one rim sherd from (6024), Dr.30, La Graufesenque. The single border ovolo is perhaps the one found on a few Dr.30s from La Graufesenque (Inv. No. 1002306) and the port site of La Nautique in Narbonne (Inv. Nos 1003556 and 1003388).

Cat. No. 36 — Finds-rich fill of Quarry Pit 2, one rim sherd from (6086), Dr.30, La Graufesenque. Ovolo with a straight tongue on the right (see Inv. No. 6000029). Same ovolo and perhaps same vessel as Cat. No. 37.

Cat. No. 37 — Finds-rich fill of Quarry Pit 2, (6018), two joining body sherds, Dr.30, La Graufesenque. Ovolo with straight tongue on the right (see Inv. No. 6000029).

[20] Knorr 1952, 67A.
[21] Dannell 1993, 30.

Cat. No. 38 (ONLINE FIG. 1, 38) — Finds-rich fill of Quarry Pit 2, two sherds from (fill 6024), two joining sherds from (fill 6086), one sherd from (fill 6086), Dr.30, La Graufesenque. All share the same ovolo without tongue and spiked outer border, this ovolo is known but is as yet unrecorded on a signed vessel, it is associated with Sabinus iii.[22] The large leaf on one of the sherds from fill 6024 is on a vessel from La Graufesenque with the same ovolo (Inv. No. 1001634).[23] The wreath made out of trefoil leaves is the same as the one on two bowls Dr.29 with internal stamps by Sabinus iii (Inv. Nos 0004271 and 0003465). The ovolo and the wreath are together on two Dr.30s (Inv. No. 1001635).[24] The use of this ovolo by Sabinus iii is dated A.D. 50–70 by Dannell.[25]

Cat. No. 39 — Finds-rich fill of Quarry Pit 2, (6024), one sherd, Dr.30, La Graufesenque. Partial wreath between two wavy borders but the trefoil leaf used in the wreath is the same one as on the Dr.30 with the large tongue-less ovolo (see Cat. No. 38).

Cat. No. 40 — Finds-rich fill of Quarry Pit 2, one body sherd from (6086), Dr.30, La Graufesenque. The partial wreath is the one on Cat. Nos 38 and 39 associated with the work of Sabinus iii; the small leaf is perhaps the one on Cat. No. 38.

Cat. No. 41 — Finds-rich fill of Quarry Pit 2, one body sherd from (6086), Dr.30, La Graufesenque. Partial decoration but possibly the same large leaf as the one on Cat. No. 38.

Cat. No. 42 — Finds-rich fill of Quarry Pit 2, one body sherd from (6086), Dr.30, La Graufesenque. Partial decoration with vertical wavy borders ending in a little bow-shaped leaf and tendrils.

Cat. No. 43 — Finds-rich fill of Quarry Pit 2, (6024), two joining sherds, Dr.30, La Graufesenque. The small tongue-less ovolo is one of the ovolos found on a number of vessels signed by Sabinus iii (Inv. No. 0005387).[26] A.D. 50–70.

Cat. No. 44 — Finds-rich fill of Quarry Pit 2, (6018), one body sherd, Dr.30, La Graufesenque. This fragment does not join with any other and is too small to confidently assign to a style.

Cat. No. 45 — Finds-rich fill of Quarry Pit 2, (6018), one body sherd, Dr.30, La Graufesenque. The remaining decoration is very partial but the motif is on a Dr.29 from Old Winteringham attributed to Aquitanus.[27]

Cat. No. 46 — Pit 6102, (6055), Dr.29 with an internal stamp by Senicio (see Cat. No. 62),

[22] Dannell 2006, 97.
[23] See also Dannell 2006, fig. 52, 59.
[24] See also Dannell 2006, fig. 52, 60.
[25] Dannell 2006, table 16, ovolo J.
[26] See also Dannell 2006, ovolo E.
[27] Hartley and Pengelly 1976, no. 45.

very little of the decoration remains, the edge of a basal wreath.

Cat. No. 47 — (6060), one body sherd, Dr.29, La Graufesenque. Partial upper frieze that cannot be assigned to a specific group of potters though the partial striated medallion is possibly the same as the one on Cat. No.11.

Cat. No. 48 — (6060), one body sherd, Dr.29, La Graufesenque. The small rosette is perhaps the one on a bowl with an internal stamp by Melainus (Inv. No. 0001478) though neither of the other two motifs, the medallions, are on bowls with his stamp.

Cat. No. 49 — Ditch 4, (6041), one body sherd, Dr.29, La Graufesenque. Upper frieze with a hound chasing a hare, both are on a Dr.29 with an internal stamp by Felix i (Inv. No. 0000419) and on Cat. No. 24.

Cat. No. 50 — (6007), one body sherd, Dr.29, La Graufesenque. Upper frieze with a partial scroll.

Cat. No. 51 — Ditch 10, (6095), one body sherd, Dr.29, La Graufesenque. Same decoration as Cat. No. 4.

Cat. No. 52 — (6015), one body sherd, Dr.29, La Graufesenque. Possibly the same vessel as Cat. No. 4.

Cat. No. 53 — Ditch 7, (6068), two joining rim sherds, Dr.37, Lezoux. Free style decoration. The ovolo (probably B14), the beaded border and the stag (Os.1772) are known for Sacer i (Inv. No. 0012501), Attianus ii[28] and Criciro v (Inv. No. 0011356). The use of the acanthus leaf is perhaps more typical of Attianus ii and Sacer i. Probably Hadrianic.

CATALOGUE OF SAMIAN POTTERS' STAMPS (ONLINE FIG. 2)

Cat. No. 54 — Quarry Pit 1, (fill 6075), Bassus ii, 4b, three joining sherds, unused footring of a Dr.27g, La Graufesenque.[29] a.d. 45–70.

Cat. No. 55 — Finds-rich fill of Quarry Pit 2, (fill 6024), Bassus ii, 4e, unused footring from a Dr.15/17, La Graufesenque.[30] A.D. 45–70.

Cat. No. 56 — Finds-rich fill of Quarry Pit 2, (fill 6024), Bassus ii, 15p, unused footring from a Dr.24/25, La Graufesenque.[31] A.D. 45–70.

Cat. No. 57 — Finds-rich fill of Quarry Pit 2, (fill 6024), Bassus ii-Coelus, 6b, two joining

[28] Stanfield and Simpson 1990, pl. 85, 9.
[29] Hartley and Dickinson 2008, 18–31.
[30] Hartley and Dickinson 2008, 18–31.
[31] ibid.

sherds, unused footring from a Dr.24/25, La Graufesenque.[32] A.D. 50–70.

Cat. No. 58 — Finds-rich fill of Quarry Pit 2, (fill 6024), Bassus ii-Coelus, 6b, unused footring from a Dr.24/25, La Graufesenque.[33] A.D. 50–70.

Cat. No. 59 — Finds-rich fill of Quarry Pit 2, (fill 6086), Bassus ii-Coelus, 6b, two joining sherds from a cup, La Graufesenque.[34] A.D. 50–70.

Cat. No. 60 — Finds-rich fill of Quarry Pit 2, (6024), Senicio, 2a, unused footring, Dr.29, La Graufesenque.[35] See Cat. No. 23 for details of the decoration. A.D. 30–65.

Cat. No. 61 — Finds-rich fill of Quarry Pit 2, (fill 6086), Senicio, 2a, unused footring, Dr.29, La Graufesenque.[36] See Cat. No. 28 for details of the decoration. A.D. 30–65.

Cat. No. 62 — Quarry pit 6102, (fill 6055), Senicio, 2a, unused footring, Dr.29, La Graufesenque.[37] See Cat. No. 46 for details of the decoration. A.D. 30–65. In contrast to Cat. Nos 60 and 61, the second letter I is faintly impressed on this example and does not show well.

Cat. No. 63 — Finds-rich fill of Quarry Pit 2, (fill 6072), illiterate, unused footring, Dr.27g, La Graufesenque. This illiterate stamp is known in Vechten where several examples were recorded on form Dr.27g and on a Dr.29.[38] Examples have also been recorded in Britain[39] but have yet to be recovered from securely dated deposits; two are known on form Rt.8, three on form Dr.24 and the others as here on Dr.27g. The range of forms suggests that this stamp is also pre-Flavian.

Cat. No. 64 — Finds-rich fill of Quarry Pit 2, (6086), illiterate, unused footring, Dr.27g, La Graufesenque. Same stamp as Cat. No. 63.

Cat. No. 65 — Finds-rich fill of Quarry Pit 2, (6086), illiterate, unused footring, Dr.27g, La Graufesenque. Same stamp as Cat. No. 63.

[32] Hartley and Dickinson 2008, 32–5.
[33] ibid.
[34] ibid.
[35] Hartley and Dickinson 2011, 209.
[36] ibid.
[37] ibid.
[38] Polak 2000, Y67, 370.
[39] B. Dickinson, pers. comm.

SECTION 2. AMPHORAE CATALOGUE *By* David Williams

See main article for a discussion of the amphora assemblage.

Period 1A

1. Finds-rich fill of Quarry Pit 2 (fill 6018)

Most of a Gauloise 4, probably all from the same vessel. Lacking the rim and handles but with the bottom section of the vessel, including footring, part neck with handle stub, part shoulder with handle stub and 47 bodysherds. Altogether 50 sherds are represented here (9,346 g). Also, two Dressel 20 part handles (578 g) + 59 Dressel 20 bodysherds (4,126 g) + two Gauloise 4 bodysherds (102 g).

2. Finds-rich fill of Quarry Pit 2 (fill 6073)

Five Dressel 20 bodysherds (644 g) + one Gauloise 4 bodysherd (106 g).

3. Finds-rich fill of Quarry Pit 2 (fill 6024)

14 Dressel 20 bodysherds (1,696 g) + part of a Dr. 20 handle (328 g) + pair of Dressel 20 handles probably belonging opposite to each other + part of neck. The latter two handles are Neronian–Vespasianic in shape (1,076 g).

4. Finds-rich fill of Quarry Pit 2 (fill 6086)

One almost complete Dressel 20 handle, Neronian–Vespasianic in shape (618 g) + six Dressel 20 bodysherds (564 g) + one part Gauloise 4 handle (92 g) + two Gauloise 4 bodysherds (136 g).

5. Finds-rich fill of Quarry Pit 2 (fill 6153)

Five Dressel 20 bodysherds (344 g) + 13 Gauloise 4 bodysherds (172 g).

6. Finds-rich fill of Quarry Pit 2 (fill 6153)

Almost complete top section of a Gauloise 4, showing rim, neck and almost complete handle and handle stub on the other side (1,404 g).

7. Pit 6102 (fill 6055)

Five small Dressel 20 bodysherds (72 g).

8. Quarry Pit 2 (fill 6071)

Two Dressel 20 bodysherds (32 g) + three Gauloise 4 bodysherds (124 g).

9. Quarry Pit 2 (fill 6074)

One Dressel 20 bodysherd (310 g).

10. Quarry Pit 2 (fill 6104)

One Gauloise 4 bodysherd (42 g).

11. Quarry Pit 2 (fill 6116)

Three Dressel 20 bodysherds (248 g) + part of the base of a Gauloise 4 (728 g) + nine Gauloise 4 bodysherds (616 g). Also, a number of Dressel 20 sherds, probably all from the same vessel: complete rim, Neronian–Vespasianic in shape, part neck and handle stub, two parts of a handle, stamped handle with part of the neck, Neronian–Vespasianic in shape, and 11 Dressel 20 bodysherds. Altogether 16 sherds (2,494 g).

12. Quarry Pit 2 (fill 6200)

Part of a Dressel 20 handle, Neronian–Vespasianic in shape (448 g).

13. Pit 6049 (fill 6050)

One Dressel 20 bodysherd (60 g).

Period 1B

14. Enclosure Ditch 1 (fill 6022)

One Dressel 20 bodysherd (96 g).

Period 1C

15. Enclosure 2 (fill 6123)

Part of a Dressel 20 handle (152 g).

16. Enclosure 2 (fill 6227)

One Dressel 20 bodysherd (84 g).

17. Post-hole 6204 (fill 6205)

Eleven small Dressel 20 bodysherds (50g).

Period 1D

18. Ditch 7 (fill 6068)

Part of a Gauloise 4 handle (46 g).

Period 2 (medieval)

19. Ditch 10 (fill 6095)

Three Dressel 20 bodysherds (128 g) + one Gauloise 4 bodysherd (22 g).

SECTION 3. COARSE ROMAN POTTERY *By* E.R. McSloy

The following presents an overview of the composition of the coarse Roman pottery assemblage, along with a catalogue of the illustrated vessels (ONLINE FIG. 3). See the main article for a discussion of the coarse pottery assemblage.

ASSEMBLAGE COMPOSITION

Imports

Lyon ware TF 11H.[40] In Britain distribution is largely confined to first-century military sites and Greene[41] considered production to have ended *c*. A.D. 69. After the samian this was the most numerous single type, although its presence is exaggerated due to high fragmentation. Almost all recovered material comes from the dumped deposits within Quarry Pit 2 (Table 4). The poor condition makes identification of individual vessels difficult, although there are base portions from a minimum of seven vessels. All appear to be cups, including roughcasted vessels (ONLINE FIG. 3, 18; Greene's forms 1 or 20), cups with applied 'raspberries' (ONLINE FIG. 3, 19 and 21; Greene form 5.1-2) and a cup with applied scales (ONLINE FIG. 3, 20; Greene form 3). Also present in an identical fabric were a number of lamps, described below. *Totals: sherd count: 359; weight 166 g; EVEs total 0.58.*

Pompeian redware TF 16A.[42] Peacock[43] advanced a Campanian manufacture for this type, although subsequent work has widened the area of potential sources to include Etruria and the area near Rome.[44] In Britain, as with Lyon ware, it is known mainly from Claudian/Neronian military sites although importation may extend into the early Flavian period. At Barnwood Road it occurs only amongst the dumped material from Quarry Pit 2. The forms represented

[40] Tomber and Dore 1998, 59, LYO CC.
[41] Greene 1979.
[42] Tomber and Dore 1998, 43, CAM PR1.
[43] Peacock 1967.
[44] Peña 1990.

closely match examples from the Kingsholm group,[45] comprising lids (ONLINE FIG. 3, 13–16) and platters (ONLINE FIG. 3, 17), the latter with an internal red slip. *Totals: sherd count: 34; weight 447 g; EVEs total 0.51.*

North Gaulish whiteware No TF.[46] The base portion of a single vessel was recorded from Quarry Pit 2. The form is probably a butt-beaker (CAM 113) of a type relatively widely known from pre-Flavian groups, not confined to military sites. *Totals: sherd count: 4; weight 58 g.*

'Cream flagons' No TF. A single vessel from Quarry Pit 2, almost certainly a flagon, was recorded in this fabric which matches material described from Kingsholm Close.[47] A North Gaulish source is thought most likely. *Totals: sherd count: 6; weight 33 g.*

Local wares

Kingsholm fabrics TF 24, TF 24/213 and TF 9S(a). The Kingsholm type fabrics were the most abundant of the locally-made types represented, common in the dumped material in Quarry Pit 2 (Table 4). Type TF 24/213 was used by Darling[48] to describe a sandier fabric and the same convention is followed. Type 9S(a) is used for mortaria. Local manufacture is clear from the distribution of this type and its abundance at Kingsholm, production geared towards providing specialist vessels (mainly flagons and mortaria) for the military. Identifiable forms here comprise flagons, mortaria and a single bowl, all corresponding to vessels recorded from Kingsholm Close.[49] *Totals (TF 24): sherd count: 275; weight 2,389 g; EVEs total 3.03. (TF 24/213): sherd count: 44; weight 433 g; EVEs total 0.69. (TF 9Sa) sherd count: 28; weight 1,033 g; EVEs total 0.55.*

'Local' sandy coarse ware TF 213. Code TF 213 was used for the Kingsholm Close assemblage[50] to describe mainly reduced sandy coarse wares that occurred mainly from the early military phases and as a distinctive range of forms. Comparisons were made with similar material from pre-Flavian military associations, including the Leaholme ditch at Cirencester[51] and Usk.[52] Here, as at Kingsholm Close, TF 213 is the most abundant coarse ware type. The forms correspond to those common from Kingsholm Close: necked jars with squared rims

[45] Wild 1985.
[46] Tomber and Dore 1998, 24, NOG WH.
[47] Darling 1985, 67.
[48] Darling 1985, 80–2.
[49] Darling 1985, 68–9, figs 24–5.
[50] Darling 1985, 78.
[51] Rigby 1982, 179.
[52] Darling 1985, 68–9.

(ONLINE FIG. 3, 11–12 and 23) and small ovoid beakers (ONLINE FIG. 3, 10). *Totals: sherd count: 187; weight 1,756 g; EVEs total 1.58.*

Black-firing coarse ware TF 201. Type 201 was rare at Kingsholm,[53] but is widely recorded elsewhere in the county from first-century contexts. The Barnwood Road fabric is close-textured and micaceous. The single vessel represented (ONLINE FIG. 3, 9) comes from the main dumped deposit in Quarry Pit 2, making Neronian dating near certain. Its form is 'native' in style, closer to Belgic-inspired bowls from Bagendon and other sites[54] than to those in reduced TF 213. *Totals: sherd count: 26; weight 458 g; EVEs total 0.76.*

Severn Valley Ware TF 11A; TF 11D.[55] The early, possibly pre-Conquest, origins of this long-lived tradition have been discussed by Timby.[56] The Barnwood Road group, mostly from Period 1A deposits, is further evidence for a recognisably 'early' form repertoire including beakers, jars and carinated cups (ONLINE FIG. 3, 5–8). Variant TF 11D is distinguished by abundant organic (charcoal) inclusions and this type is similarly associated with early groups. *Totals (TF 11A): sherd count: 43; weight 431 g; EVEs total 0.86. (TF 11D): sherd count: 119; weight 1,871 g; EVEs total 1.30.*

Other coarse wares No TF. A handful of unfeatured sherds occurred in 'miscellaneous' fabrics: reduced, oxidised and whiteware fabrics (types GW; GWf; OX and WHf in Table 4). They are probably of local origin. *Totals: sherd count: 4; weight 16 g.*

Grog-tempered TF 2. Wheelthrown grogged wares are a relatively common feature of the mid- and later first century in the wider area, notably so from sites in the Bagendon 'complex' and north of Cirencester. They were however uncommon at Kingsholm Close.[57] The single vessel from Barnwood Road, a carinated bowl or cup (not illus.), was from Period 1A layer 6011. *Totals: sherd count: 1; weight 16 g.*

Malvernian igneous/metamorphic rock-tempered TF 18A.[58] Peacock's group A fabrics[59] pre-date the Roman period, although the handmade 'tubby cooking pot' forms (ONLINE FIG. 3, 24) continue well into the second century. *Totals: sherd count: 20; weight 423 g; EVEs total 0.18.*

Handmade, limestone-tempered TF 33. Equivalent to Peacock's group B fabrics,[60] originating in the Malverns and possibly May Hill. This type is particularly common in the period

[53] Darling 1985, 86.
[54] Clifford 1961, figs 65–6.
[55] Tomber and Dore 1998, 148, SVW OX2.
[56] Timby 1990.
[57] Darling 1985, 84.
[58] Tomber and Dore 1998, 147, MAL RE A.
[59] Peacock 1967.
[60] ibid.

immediately preceding and following the Conquest. At Barnwood Road it is present only as bodysherds. *Totals: sherd count: 9; weight 46 g.*

Regional wares

Savernake ware TF 6.[61] A single sherd in this hard-fired grog-tempered fabric was recorded (Quarry Pit 2). This type is common in Cirencester across the mid-first and earlier second centuries. *Totals: sherd count: 1; weight 10 g.*

South-east Dorset black-burnished ware TF 4.[62] One sherd of this very widespread type was recorded from medieval Quarry Pit 3. Dating spans the second to fourth centuries. *Totals: sherd count: 1; weight 5 g; EVEs total 0.03.*

CATALOGUE OF ILLUSTRATED COARSE POTTERY (ONLINE FIG. 3)

Finds-rich fills of Quarry Pit 2

1. Fabric 24: KNG FF. Double-handled flagon/amphora. Twin horizontal grooves to neck; expanded rim.[63] Fill 6018.
2. Fabric 24: KNG FF. Single-handled flagon; collared/'Hofheim' rim.[64] Fill 6018.
3. Fabric 24: KNG FF. Single-handled flagon; collared/'Hofheim' rim.[65] Fill 6018.
4. Fabric 24/213: KNG FFq. Bowl. Slanting flanged rim with grooves.[66] Fill 6018.
5. Fabric 11D: SVW OXo. Ovoid beaker; wide cordon at shoulder.[67] Fill 6018.
6. Fabric 11D: SVW OX2. Carinated cup/small bowl (Webster Type H).[68] Fill 6018.
7. Fabric 11D: SVW REo. Large necked storage jar (Webster Type A).[69] Fill 6018.
8. Fabric 11D: SVW OX2. Narrow-mouth jar; bifid rim. Roller-stamping at shoulder (Webster Type A).[70] Fill 6072.
9. Fabric 201: LOC BS. Necked/shouldered bowl. Angular cordons at shoulder. Fill 6018.

[61] Tomber and Dore 1998, 191, SAV GT.
[62] Tomber and Dore 1998, 127, DOR BB1.
[63] cf. Darling 1985, fig. 24, no. 15.
[64] cf. Darling 1985, fig. 24, nos 1–6.
[65] ibid.
[66] cf. Darling 1985, fig. 24, nos 182–5.
[67] cf. Timby 1990, fig. 4, no. 50.
[68] Webster 1976.
[69] ibid.
[70] ibid.

10. Fabric 213: LOC GW. Small ovoid or globular beaker; everted rim. Fill 6018.
11. Fabric 213: LOC OX. Necked globular jar. Square rim and low cordon at shoulder. Fill 6018.
12. Fabric 213: LOC OX. Necked jar. Square rim and low cordon at shoulder. Fill 6024.
13. Fabric 16A: CAM PR1. Lid; thickened rim. Fill 6086.
14. Fabric 16A: CAM PR1. Lid thickened rim. Fill 6086.
15. Fabric 16A: CAM PR1. Lid thickened rim. Fill 6086.
16. Fabric 16A: CAM PR1. Small lid; up-turned rim. Fill 6086.
17. Fabric 16A: CAM PR1. Platter (with internal red slip). Fill 6086.
18. Fabric 11H: LYO CC. Roughcasted cup.[71] Fill 6086.
19 Fabric 11H: LYO CC. Cup with applied 'raspberries'.[72] Fill 6024.
20. Fabric 11H: LYO CC. Cup with applied scales.[73] Fill 6024.
21. Fabric 11H: LYO CC. ?Cup with applied leaves and 'raspberries'.[74] Fill 6086.
22. Fabric 9S: KNG FFm. Mortarium. Deep hooked flange and prominent bead.[75] Fill 6073.

Other features

23. Fabric 213: LOC GW. Necked jar. Squared/undercut rim. Quarry pit 6102 (fill 6055).
24. Fabric 18A: MAL REA. Neckless jar ('tubby cooking pot'). Bead rim. Quarry pit 6102 (fill 6055).
25. Fabric 24: KNG FF. Single-handled flagon; pointed rim. Ditch 6289 (fill 6290).

SECTION 4. CATALOGUE OF POTTERY LAMPS *By* E.R. McSloy

1. Lyon ware lamp (10 fragments; 14 g). The heavily worn design to the *discus* shows a reclining female. The shoulder is closest to Loeschcke's class IIIa.[76] Period 1A finds-rich fill of Quarry Pit 2 (fill 6024). Not illus.
2. Lyon ware lamp (2 fragments; 3 g). The design to the *discus* is much degraded and incomplete. It probably shows a running horse-like animal with the wing-like projection

[71] cf. Greene 1979, fig. 21, nos 1 or 2.
[72] cf. Greene 1979, fig. 21, no. 6.
[73] cf. Greene 1979, fig. 21, no. 4.
[74] cf. Greene 1979, fig. 21, no. 7.
[75] cf. Darling 1985, fig. 27, no. 99.
[76] Loeschcke 1919, 25.

suggestive of Pegasus. Period 1A finds-rich fill of Quarry Pit 2 (fill 6086). Not illus.

3. Lyon ware lamp (6 fragments; 11 g). Shoulder fragments from volute lamp. The form of the shoulder is closest to Loeschcke's class IIIa,[77] although it differs in detail to that of No. 1. Period 1A finds-rich fill of Quarry Pit 2 (fill 6086). Not illus.
4. Lyon ware lamp (4 fragments; 3 g). Shoulder fragments from volute lamp. The form of the shoulder is closest to Loeschcke's class IIIb.[78] Period 1A finds-rich fill of Quarry Pit 2 (fill 6086). Not illus.

SECTION 5. POST-ROMAN POTTERY *By* E.R. McSloy

156 sherds (1,597 g) of medieval pottery were recovered from a small number of features, the majority from Period 2 quarry pits 6016, 6081 and 6232. The assemblage was fully recorded, with fabric codes matched to the Gloucester city pottery type series.[79] Most of the sherds (88%) were unglazed coarse wares. As is typical for medieval Gloucester, two sources are prominent: the local/north Cotswolds area, which produced limestone-tempered coarse wares (TF 41b), and the Malvern Chase area to the north, which supplied unglazed cooking wares (TF 40). The latter source is also responsible for some glazed wares (TF 52), with the remainder supplied from the Worcester area (TF 42/TF 90) or Minety, north Wiltshire (TF 44). Where form was identifiable, vessels in unglazed fabrics were primarily jars, and those of glazed types jugs/pitchers. Good indications of dating are scarce from this medieval group. The abundance of limestone-tempered ware (TF 41b) and its common association with Malvernian coarse wares suggests that most date from the twelfth to thirteenth century. A Minety ware pitcher sherd and an incurved dish from quarry 6081 probably date from the twelfth to earlier thirteenth century. Oxidised Malvernian glazed ware sherds (TF 52) recovered from features 6081 and 6232 likely date to the thirteenth century or later. Very small quantities (13 sherds, weighing 349 g) of post-medieval/modern pottery, probably of eighteenth- to early nineteenth-century date, were recovered from quarry pit features 6337 and 6340 (grouped as Quarry Pit 4).

[77] ibid.
[78] ibid.
[79] Summarised in Vince 1986.

SECTION 6. CATALOGUE OF COINS *By* E.R. McSloy

1. Copper-alloy dupondius copy. Claudius (A.D. 41–54). Rev. Ceres Augusta (*RIC* 94). Diam. 28–28.5 mm; weight 9 g. Ra. 18. Period 1A Quarry Pit 2 (fill 6151).
2. Copper-alloy dupondius copy. Claudius (A.D. 41–54). Rev. Ceres Augusta (*RIC* 94). Diam. 28.2 mm; weight 13 g. Ra. 9. Period 1B Ditch 3 (fill 6093).

SECTION 7. CATALOGUE OF METAL OBJECTS *By* E.R. McSloy

62 metal items, comprising 54 of iron, 4 of copper alloy, 3 of lead/lead alloy and 1 of silver, were recorded. The catalogue presented below is selective, describing items of individual interest. The remaining items, mostly comprising nails or fragmentary items of lead, have been discussed briefly in the main text.

However, in addition to the iron objects recovered from Roman contexts, a number were associated with medieval activity. These included a U-shaped padlock bolt (Ra. 1) and a stapled hasp, both from Period 2 Quarry Pit 3. The padlock bolt conforms to Goodall's Type B (barrel padlocks with fins and tubes), a form rare after the fourteenth century.[80] The stapled hasp is a strip-like fitting with a fixed U-shaped projection, which in this example exhibits white-metal plating. Stapled hasps were utilised in conjunction with fixed locks and a sliding bolt to secure chests, caskets or doors.[81]

Silver

The identification of the metal used for No. 1 as silver was confirmed by surface x-ray fluorescence analysis.[82]

1. Section of openwork strip (inlay?). Figure-of-eight/'spectacle' form, although breaks to either end suggest this object is part of a longer, wavy-edged, chain-like strip. The internal perforations are of lenticular form and the rounding of one face suggests these were formed using a punch. Its function is unclear although its flimsiness would argue against unsupported use, for example as jewellery; it is more likely to have functioned as an inlay for a box or similar. Surviving length: 16 mm; width 4.5 mm; thickness 0.5 mm. Period

[80] Goodall 1980, 130.
[81] Goodall 1980.
[82] P. Greaves, in archive.

1A finds-rich fill of Quarry Pit 2 (fill 6018). *Ra 4* (Main article, FIG. 4, no. 1).

Copper alloy

2. Cast harness pendant of Bishop's Type 1.[83] The form of the main part of the pendant is oval/bi-lobed, with swagged extensions below terminating in hollow, domed mouldings. A suspension loop to the upper edge only partially survives. This was for attachment to the disc-like *phalera* (not present), which was the means of attachment to the harness strap. The purpose of the pinned hinge to the rear face is unclear. It may be a secondary means of attachment to the *phalera*/harness, or for the suspension of a further decorative element. The front face features a central circular perforation (rivet hole?) and double vertical grooved 'decoration'. These features and the button-like terminal mouldings distinguish this example from any of those presented by Bishop. It is closest to the bifid Type 1h, but best regarded as a new sub-type.[84] Length: 66 mm; width 65 mm; max. thickness 0.5 mm. Period 1A finds-rich fill of Quarry Pit 2 (fill 6072). *Ra 17* (Main article, FIG. 4, no. 2).
3. Fitting (pendant?) consisting of central hourglass-shaped section with smaller and larger flat terminals, both damaged. The larger (lower) terminal is lunate in form; the smaller is incomplete but is probably a ring for suspension. A spur projecting from the lower portion of the central hourglass-shaped section is broken and its function is uncertain, rendering interpretation of the object difficult. Given the associations of the context and the popularity of lunate forms in military (particularly cavalry-related) equipment, identification as such seems likely; it may be a variant of Bishop's Lunate type (Type 9).[85] Length: 52 mm; surviving width 19 mm. Period 1A finds-rich fill of Quarry Pit 2 (fill 6024). *Ra 5* (Main article, FIG. 4, no. 3).
4. Jar-proportioned vessel of beaten construction. Prominent rounded shoulder with short everted rim and narrow, flat base. No decoration or other marks are visible, although these may be masked by heavy corrosion. Although it lacks a handle, the form and construction resembles early imperial Roman military *situla* jars/'camp kettles'. Scenes on Trajan's Column, which show marching legionaries carrying equipment including what are interpreted as metal cooking-pots, imply that at this time at least each soldier was issued with such a vessel. A number of complete vessels of comparable form to this example,

[83] Bishop 1988, 142, fig. 43.
[84] M.C. Bishop, pers. comm.
[85] Bishop 1988, 152, fig. 47.

with or without handles, were recorded from the fort at Newstead in southern Scotland.[86] Height: (approximately) 140 mm; diameter (at shoulder): 130 mm. Period 1A finds-rich fill of Quarry Pit 2 (fill 6024). *Ra 10* (Main article, FIG. 4, no. 4).

5. Fragment of small cast vessel. Simple rim and decoration as paired circumferential grooves. Surface x-ray fluorescence analysis (in archive) confirms tinning to the exterior only and a low-lead bronze. Diameter. 50 mm; thickness 1.2–0.9 mm. Period 1A Quarry Pit 2 (fill 6116). *Ra 15* (Main article, FIG. 4, no. 5).

Lead

6. Lidded container (urn associated with cremation burial). Plain cylindrical form with simple folded-over lid. The vessel is undecorated although there are numerous tooling (hammer) marks around the lid and base. The lid, removed from the vessel upon discovery by the building contractors, is close-fitting and the tooling suggests this was fashioned *in situ* over the body of the container. The exterior of the container is well finished, the joins to the body and base well disguised. A brazed vertical seam and the roughly finished base visible to the interior indicate that that the body of the container was made from a sheet of lead folded under and joined (brazed) to a separate, disc-like base. Height: 140–5 mm (lid depth 25 mm); diameter (at lid): 165–8 mm, (at base): 160–5 mm; thickness: 5–6 mm (body); 3–4 mm (lid). Unstratified (lifted by site workers in the area central to Enclosure 2; subsequent excavation demonstrated that it had been recovered from pit 6190). *Ra 21* (Main article, FIG. 3).

SECTION 8. GLASS *By* H.E.M. Cool

The domestic material mainly came from the quarry pit fills. Two fragments belong to the ubiquitous blue/green pillar moulded bowl (Cat Nos 1–2),[87] common on military and other sites from the time of the Conquest into the early Flavian period. Most had disappeared by the late first century. They have been recovered frequently in the Gloucester area, both at Kingsholm,[88] and from the legionary fortress in the city centre at the New Market Hall site,[89]

[86] Clarke *et al.* 1980, 43.
[87] cf. Price and Cottam 1998, 44–6.
[88] Price and Cool 1985, 45, nos 4–9, fig. 17.
[89] Charlesworth 1974, 75, no. 1.

as well as other still unpublished sites such as Berkeley Street.

There are also two mould blown vessels, both from the finds-rich fill of Quarry Pit 2 (Cat. Nos 3–4; main article, FIG. 5). Mould blown vessels are regularly found on Claudio-Neronian sites. At Kingsholm, for example, fragments from four different cups depicting scenes of gladiator contests and chariot racing were found together with a tall beaker with a foliage pattern.[90] The sports cups especially can be regarded as common forms within the mould blown corpus. The two vessels from Barnwood Road, however, belong to a much less common form, so it is of interest to have fragments clearly from two vessels from the same fill.

No. 3 is best described as a jar as, although the rim finish is very well executed and would have been ideal for placing in the mouth, the overall shape would have been awkward to drink out of. More than half the rim circumference survives and the joined fragments retain a row of well-formed triangular bosses just below the shoulder. The spacing between the pair shown on the drawing and the third boss approximately one-third of the circumference distant, would be consistent with this line of bosses being spaced equidistantly. A fragment that cannot be joined to any of the other fragments has a vertical mould seam and the edges of two mouldings that appear to be the top of one boss and the side of another. It is not entirely certain that the fragment should be positioned immediately below the shoulder as shown in the drawing, but it does indicate that the pattern was probably of triangular bosses placed in quincunx. If so, the spacing would require a boss by the broken lower edge between the two complete bosses shown on the drawing. There is no sign of this either on the fragment or a mould made from it, but it may be noted that the break feels a little jagged at the point where the top of the boss would have been. This could well have come about because of a break along this natural line of weakness. The second vessel (No. 4) is represented by a single fragment with a similar, though slightly smaller, triangular boss.

No. 3. when complete would have been similar to the blue/green vessel from Lillebonne illustrated by Morin-Jean.[91] A small part of the rim and parts of the lower body were found at Fishbourne in a context assigned to Period 1B–C.[92] Unfortunately, the publication provides no information about the precise context(s) the fragments came from, but the phasing would indicate a Neronian date. This vessel is described as having ‘triangular bosses equidistantly scattered’. The plate illustrating it (though not the figure) shows the bosses were in quincunx. A footnote to the catalogue entry states the plate shows the piece upside down. If that is correct

[90] Price and Cool 1985, 45, nos 10–16, figs 17–18.
[91] Morin-Jean 1913, 192, fig. 252.
[92] Harden and Price 1971, 339, no. 37, pl. XXVIII, fig. 138.

the bosses on the piece would have their points upward. A bichrome fragment with parts of two triangular bosses was found at Usk.[93] This was residual in its third-century context, but the cased technique used to produce it strongly indicates a Claudio-Neronian date for its manufacture. In discussing this piece, Price usefully collected the limited evidence for the use of triangular bosses. Not all came from vessels where they were the only decorative motif and none of the others appear to have useful contextual dates.

Fragments with triangular bosses are often equated with the almond knob conical beaker family of Isings Form 31.[94] This is probably incorrect as where the pieces retain sufficient of the body for the form to be identified, they are clearly not conical beakers, as can be seen from No. 3 here, the examples from Lillebonne and Fishbourne and probably Bonn.[95] Though these vessels share a pattern of placing bosses in quincunx with the almond knob beakers, that is effectively the only link. Removing them from the ambience of the conical beakers allows their likely date to be assessed more clearly.

Price[96] has shown how mould blown wares can be divided into three groups. Almond knob beakers belong to Group 3, dating to the late Neronian and Flavian periods, effectively the final third of the first century. Group 1 belongs to the Tiberian to early Claudian period, and fragments of these are relatively rare in Britain. The Claudian to mid-Neronian Group 2 contains many forms, including the circus cups which are relatively common here, as was seen at Kingsholm. Interestingly this is also the phase where the ovoid shape of the triangular knobbed jars is found with other types of mould blown patterns.[97] Given this, the contextual date of the Fishbourne jar and the date derived from the technique of the Usk fragment, it seems likely that these jars belong to the second phase of mould blown production. No. 3 is clearly not residual in its context given the fresh breaks and amount preserved. How long vessels are curated is always an interesting question, but based on the contexts of fragments of other Group 2 mould blown vessels, one might expect a vessel such as No. 3 to be broken and discarded by the early years of the Flavian period.

Whether No. 4 belongs to the same form is unclear as only one boss survives, but, perhaps tellingly, the top right corner of the fragment is broken at a slight angle where another boss might be expected. The difference in size of the bosses might be accounted for by their position on the vessel, as the bosses would have had to become a little smaller as the vessel

[93] Price 1995, 150, 153, no. 22, fig. 43.
[94] Isings 1957.
[95] Follmann-Schulz 1988, 90, no. 317, Taf. 39.
[96] Price 1991.
[97] See for example Price 1991, pl. XVII a–b.

curved in to the base if the pattern was to be maintained.

Finally, it may be noted that given the relative rarity of the triangular boss in mid-first-century mould blown glass, there is now an interesting concentration on military sites around the Severn, as, in addition to the Usk and Gloucester examples, a fourth vessel may be noted at Sea Mills.[98] The Sea Mills vessel does not belong to the quincunx jars as the pattern clearly involved other decorative elements, and the boss is slightly larger than that on No. 3. Given that one model for the production of mould blown vessels is that they were produced by itinerant glass-blowers who set up workshops where there was a demand,[99] this cluster is intriguing and may reflect just such a person in this region in the A.D. 60s.

Two finds seem likely to be related to the funerary activity recorded on the site. A tall conical unguent bottle represents a development of the very common mid-first-century tubular unguent bottle, and may be dated to the second half of the first century. The fragment has been deformed by heat in a manner strongly suggesting that originally it was a pyre good, though as it was found unstratified there is no certainty of this. The use of unguent bottles as pyre goods during the first century is well attested at Gloucester, as at the Wotton/London Road cemetery.[100] Another fragment has also been melted and possibly came from pyre activity, but in this case it is not possible to identify the form with any certainty.

Catalogue

1 Pillar moulded bowl; rim fragment. Blue/green. Triangular fragment with tip retaining tiny area of fire-polished exterior. Dimensions 18 x 9 mm; weight 0.8 g. Period 1A finds-rich fill of Quarry Pit 2 (fill 6086).

2 Pillar moulded bowl; two joining body fragments. Blue/green. Retaining top of one rib. Dimensions 25 x 25 mm; weight 4.3 g. Period 1A gravel spread (deposit 6060).

3 Jar; five rim and six body fragments and one chip; joining in one group of three rim and two body fragments and one pair of two body fragments. Blue/green. Mould blown. Curved rim, edge cracked off and ground; slightly curved horizontal shoulder curving down to side. Row of triangular bosses on upper body. Largest joined fragment retains two complete and upper part of a third; two joining fragments have part of another boss. One non-joining fragment has a vertical mould seam and the edges of two other mouldings,

[98] Cool and Price 1987, 97, no. 7, fig. 44.
[99] Price 1991, 73.
[100] Cool 2008, 104; 2014, 111.

probably the lower side of a triangular boss and the upper part of a second on the other side of the seam. Rim diameter 75 mm (55% circumference extant); present height 33 mm; wall thickness 1.5 mm; weight 14.6 g. Period 1A finds-rich fill of Quarry Pit 2 (fill 6018). *Ra 3*.

4 Body fragment. Light green. Mould blown. Straight side. Triangular boss. Dimensions 24 x 12 mm; wall thickness 1 mm; weight 0.5 g. Period 1A finds-rich fill of Quarry Pit 2 (fill 6018).

5 Tall conical unguent bottle; four joining fragments forming the majority of the reservoir, upper part on one side only missing, retaining a small fragment of the junction with the neck on the other side. Blue/green. Base very slightly concave centrally. Heat affected with unusual white deposits internally, possibly a result of a reaction with the burnt remnants of its contents, upper part collapsed inwards. Maximum body diameter 32 mm; height of reservoir 72 mm; weight 16.4 g. Unstratified.

6 Melted fragment now in two joining fragments. Blue/green. Possibly originally from the folded rim of a bottle. Weight 5.6 g. Period 1A finds-rich fill of Quarry Pit 2 (fill 6018).

In addition to the Roman material, two finds of post-Roman vessel glass were submitted, both likely to be eighteenth- to nineteenth-century or later in date. One was recovered from Quarry Pit 4 (fill 6342); the other, from Roman Period 1A pit 6102 (fill 6055), appears to be intrusive.

SECTION 9. WORKED STONE *By* Ruth Shaffrey

Almost half an upper rotary quern was recovered from deposit 6088, a fill of Period 2 Quarry Pit 3 (Cat. No. 1). Made of gritty sandstone, it is unusual in both form and material. The stone is most like May Hill Sandstone, a very common material used for saddle querns during the Iron Age in Gloucestershire and elsewhere.[101] This sandstone is rarely, if ever, found in Roman contexts or as rotary querns and it is possible that this is an imported stone unknown to the author. The flat, thick quern is very simple in form but with an unusual elbow-shaped handle socket. This sort of handle is extremely rare on querns of materials other than lava (at least in the south of England), which is a lighter stone and far easier to carve. One other (limestone) example is known to the author from Fengate[102] but that is of somewhat doubtful form. There is absolutely no doubting the authenticity of this handle socket. A presumption

[101] Roe 1999.
[102] Pryor 1984, 161.

must be made that it is an imitation of a lava quern. Although it was recovered from a context of medieval date, the very early and military focus of the Roman activity on site might indicate that the quern was imported from the Continent alongside other more typical lava querns. A broken cobble utilised as a hone was also discovered (Cat. No. 2). It was mainly used across its edges, which show some resulting bevelling, but there is also evidence for use across one of the broken ends, revealing that it was not immediately discarded after breakage.

Catalogue

1. Upper rotary quern half. Probably May Hill Sandstone. Third of thick upper rotary quern with flat faces and cylindrical eye that opens out when it reaches the grinding surface. Upper surface and edges are roughly worked. Grinding surface is pecked and very slightly concave. There is a very unusual elbow-shaped handle socket. Eye measures 65 mm diameter. Measures 360 mm diameter x 95 mm thick. Period 2 Quarry Pit 3 (fill 6088). *Ra. 8.*
2. Cobble hone. Quartzite. Central fragment of sub-rectangular cobble utilised as hone. The faces are flat and smooth and there is some slight faceting to the edges. Measures 68 x 28 mm x >47 mm. Weighs 199g. Period 1A gravel spread 6060. *Ra. 7.*

SECTION 10. WORKED FLINT *By* Jacky Sommerville

Four worked flints were hand-recovered, all residual finds from Roman features. Cream-coloured, abraded cortex remained on two items, suggesting a pebble resource such as river or beach gravels. The lithics comprise three waste flakes (with no evidence of utilisation) and one miscellaneous retouched item. All are undiagnostic, being only broadly datable to the prehistoric period.

SECTION 11. CREMATED HUMAN REMAINS *By* Sharon Clough

Osteological analysis was undertaken for cremated human bone contained within the lead urn from pit 6190 in Enclosure 2. Analysis sought to identify the type of deposit, weight of bone, degree of fragmentation, bone element, number of individuals, demographic and pathologic

data and efficiency of the cremation.[103]

METHODOLOGY

The urn was excavated during conservation of the lead vessel and the bone was sieved through fraction sizes of 10 mm, 5 mm and 2 mm. The bones retained from each sieve size were examined in detail and sorted into the following identifiable bone groups: skull (including mandible and dentition); axial (clavicle, scapula, ribs, vertebra and pelvic elements); upper limb and lower limb. Such separation of bone helps identify potential deliberate bias in the skeletal elements collected for burial.

Each sample was weighed on digital scales with details regarding colour and the largest fragment recovered recorded. Where possible, individual bones within the defined bone groups were noted. Unidentifiable fragments of long bone shafts or cancellous bone, which often form the majority of bones recovered from cremations, were weighed and incorporated into the subsequent quantitative analysis. The prevalence of unidentifiable bone is largely dependent on the degree of fragmentation, larger fragments being more easily identifiable than smaller ones.

It is important to note that some bones are more diagnostic and easily identifiable than others and are therefore more often recorded; this potentially biases calculations of relative quantities of the skeletal elements collected for burial. With tiny fragments it is also often impossible to distinguish between animal and human bone, except through microscopic or chemical analysis.

Age estimations from cremated remains are dependent on the survival of particular diagnostic elements. In adult cremations, the most useful indicators are degenerative changes to the auricular surface[104] and pubic symphysis[105] and cranial suture closure.[106] For subadults unerupted teeth, cranial thickness and size of bones help to determine age.

Sex estimation of adult cremated material is difficult, relying on the preservation of specific bone elements. Warping and shrinkage during the cremation process must also be taken into consideration when using the standard analytical techniques for estimating sex on dry bone.

[103] Brickley and McKinley 2004; Mays *et al.* 2004.
[104] Lovejoy *et al.* 1985.
[105] Suchey and Brooks 1990.
[106] Meindl and Lovejoy 1985.

RESULTS

Weight of cremated bone

The total weight of bone recovered was 410.8 g (excluding 84 g of bone from residue, <2 mm sieve fraction). The maximum weight of bone it is possible to recover varies from about 1,000 to 3,600 g,[107] suggesting that the cremation deposit comprised, at most, a third of the individual. However, upon its discovery the building contractors opened the burial urn on site; the level of disturbance to the urn is unknown, but evidently this may have affected the quantity of bone retrieved. If we assume that the quantity of bone originally in the urn was not significantly greater, then, given that it is possible to collect all bones from an undisturbed pyre, which often remain in anatomical order,[108] there appears to have been selection of certain elements over others. Indeed, it has been observed that cremation burials frequently contain 50 per cent or less of the total bones available.[109]

The expected weight percentages for the different skeletal elements in a complete dry skeleton (approximately equivalent for a cremated skeleton) are as follows: Skull: 18.2% (cranium, facial bones and jaw); Upper Limbs: 23.1% (shoulders, arms and hands); Axial Skeleton: 20.6% (vertebrae, ribs, pelvis); Lower Limbs: 38.1% (legs and feet). The fragments were mostly large, with 72 per cent of the bone fragments identified, allowing the selection pattern to be observed. There appears to be a collection bias within the cremation deposit (ONLINE TABLE 1), and while the axial and upper limb bones are of expected proportions, the cranial and lower limbs are under-represented. As such bones are typically more easily identified than others they are usually better represented than they are here. These bones also have thicker cortical bone than those of the axial skeleton and it is thought that areas of high trabecular bone content (epiphyses and os coxae) will disintegrate easily.[110] The high quantity of trabecular bone, mostly vertebrae, is therefore indicative of excellent bone preservation, suggesting that the observed bias is genuine. Where the side of a bone could be identified the right side was dominant; nearly all upper limb fragments could be identified as being from the right side. The lower limb identified was mostly tibia, along with a fragment of patella. The skull elements included a few cranial fragments, a piece of maxilla and the left and right

[107] Information acquired from adult cremation from modern crematoria; McKinley 2000a, 404.
[108] McKinley 1997a.
[109] McKinley 2000a.
[110] McKinley 1998.

temporo-mandibular joint. The additional torso elements present were pelvis and ribs.

ONLINE TABLE 1. WEIGHT OF CREMATED BONE BY SKELETAL AREA

Context	Total Weight (g)	Cranial (g)	Cranial %	Axial (g)	Axial %	Long bone (g)	Long bone %	Unid. (g)	Unid. %	Teeth (g)	Teeth %
RA 21 (lead urn)	410.8	37.1	9	82.4	20	177.7 *(upper 103.2)* *(lower 74.5)*	43 *(25)* *(18)*	113.6	28	0	0

Fragmentation

In order to assess fragmentation, the bone was sieved through 10 mm, 5 mm and 2 mm fraction sizes. The largest fragment measured 102 x 15 mm and the majority of fragments, 82 per cent, were in the >10 mm fraction (ONLINE TABLE 2). The 10–5 mm fraction accounted for 7 per cent of the fragments and the <5 mm fraction 11 per cent.

Fragmentation occurs along dehydration fissures that form during the cremation process, with the majority of fragmentation occurring after burial and during excavation. Using a sample of over 4,000 cremations, McKinley observed that over 50 per cent of bone fragments were in excess of 10 mm in size, the largest fragment being 134 mm, with an average maximum fragment size of 45.2 mm (including immature and disturbed cremations).[111] This burial therefore has above average fragment sizes, allowing a high level of identification.

It was not possible to excavate the urn in spits due to its disturbed nature. However, the conservator observed that the largest bone fragments were at the top and the smallest at the bottom, as would occur in a shaken vessel.[112] While, as previously discussed, it is possible to collect bones from a pyre and place them in a container in anatomical order, the disturbed nature of the vessel means that any such element ordering has been lost.

[111] McKinley 1994, 340–1.
[112] Phil Parkes, pers. comm.

ONLINE TABLE 2. WEIGHT OF BONE BY FRACTION TO DETERMINE LEVEL OF FRAGMENTATION

Context	>10mm weight	>10mm %	10-5mm Weight	10-5mm %	<5mm Weight	<5mm %
RA 21 (lead urn)	336.3	82	27.7	7	46.8	11

Pyre technology

Cremation efficiency is influenced by the way a pyre is constructed, the quantity of wood used, the position of the body, the extent to which it is tended, weather, cremation duration and pyre temperature.[113] The nature of the cremated bone remaining after a pyre has finished burning is dependent on the temperatures achieved during the cremation process. Cremated bone may range in colour from brown or black (slightly charred), through hues of blue and grey to the brilliant white associated with full oxidisation.[114]

Adults cremate better than children due to higher levels of body fat, while parts of the body with little fat, such as the hands and feet, may not burn as well as the torso. The position of the corpse on the pyre may also affect the pattern of burning; for example, if the hands and feet lay on the outside of the pyre they would receive less direct heat.

The bone was predominantly white in colour with some variation, especially in the spongy areas or internal aspects, where it was grey. This suggests good pyre technology and complete combustion of the body. The pyre must have reached over 645°C for sufficient time and the whole of the individual must have been within the hottest area. However, the pyre probably did not burn long enough to entirely oxidise the bone.

Ageing, sex and pathology

All remains were from an adult and there were no repeat or differing sized elements to suggest more than one individual. No definitively diagnostic elements were present to enable determination of sex, however the size of the bone (despite shrinkage due to cremation) may very tentatively suggest a male. There were Schmorl's nodes present on three thoracic vertebrae (one inferior only, the other two superior and inferior). These indentations on the

[113] McKinley 2000a, 407; McKinley 1994, 82–4.
[114] A temperature over 645°C quoted by McKinley 2000a, 405; over 750°C quoted by Lyman 1994, and greater than 800°C quoted by Schmidt and Symes 2008.

vertebral bodies are most frequently found archaeologically in those aged between 36 and 45 years[115] and in clinical samples more commonly in those over 45 years; this may suggest the individual was a mature or older adult.

In order to contextualise the cremated bone from Barnwood Road, the weight of the bone has been compared with that from other urned burials from Roman sites in Britain (ONLINE TABLE 3). The other sites demonstrate that there is considerable variation in the weight of bone recovered from Roman cremations in Britain. The selection of specific elements appears not to have been a general trend, being recorded only very occasionally at other sites, notably a lack of cranial fragments at Pepperhill and Brougham. It is of interest that this appears to have been the case at Barnwood Road, although the uncertainty regarding whether or not bone was lost when the vessel was opened by the building contractors necessitates interpretative caution.

Cremated remains within lead urns (or *ossuaria*) are relatively rare finds from Roman Britain. Philpott[116] listed only 28 examples, predominantly from urban centres. Those from non-urban contexts are usually associated with high-status burials, such as the one found at North View Hospital, Purton, Wiltshire.[117]

ONLINE TABLE 3. COMPARISON OF BONE WEIGHTS FROM SELECTED URNED CREMATIONS FROM BRITAIN

Roman site with urned burials	**Weight of bone**	**Reference**
Barnwood Road, Gloucestershire	410.8g	This report
Pepperhill, Kent	2–1462g	Boston and Witkin 2006
Eastern Cemetery, London	573–1713g, average 845/743g	McKinley 2000b, 270
Westhampnett, West Sussex	190–618g, average 333.5g	McKinley 1997b, 250
Brougham, Cumbria	14.1–1324g, average 397g	McKinley 2004, 295
St Stephen's cemetery, St Albans, Hertfordshire	71–1447g, average 899g	McKinley 1992

[115] McNaught 2006.
[116] Philpott 1991.
[117] Chandler 1994.

ONLINE TABLE 4. SUMMARY OF ANIMAL BONE BY NISP (NUMBER OF INDIVIDUAL SPECIMENS)

Context	Feature	Feature label/ description	Period	Cattle	Sheep/ Goat	Pig	Dog	Horse	Other mammal	Unidentified mammal	Bird
6018	6076	Finds-rich fill of Quarry Pit 2	1A	6	5	1	4	-	-	21	-
6072	6076	Finds-rich fill of Quarry Pit 2	1A	1	-	1	-	-	-	2	-
6072	6076	Finds-rich fill of Quarry Pit 2	1A	4	2	1	-	-	-	2	??1
6073	6076	Finds-rich fill of Quarry Pit 2	1A	1	1	-	-	-	-	-	-
6086	6085	Finds-rich fill of Quarry Pit 2	1A	8	1	1	-	-	-	5	-
6055	6102	Pit	1A	-	-	-	-	-	-	3	-
6116	6168	Quarry Pit 2	1A	-	-	-	-	-	-	2	-
508	509	Ditch 3	1B	2	-	-	-	-	-	-	-
6027	6026	Enclosure ditch 1	1B	1	-	-	-	-	-	-	-
6036	6037	Enclosure ditch 1	1B	-	-	-	-	1	-	-	-
6084	6083	Enclosure 1	1B	1	-	-	-	-	-	-	-
6035	6033	Enclosure 2	1C	1	-	-	-	-	-	-	-
6123	6125	Enclosure 2	1C	5	-	-	-	-	-	-	-
6068	6069	Ditch 7	1D	-	-	-	-	-	-	1	-
511	510	Quarry Pit 3	2	1		1					
6007	6008	Pit	2	1	-	-	-	-	-	3	-
6063	6016	Pit	2	-	-	-	-	-	-	1	-
6051	6052	Pit	2	-	-	-	-	-	1 rabbit	1	-
6079	6081	Quarry Pit 3	2	4	6	1	-	-	-	15	-
6080	6081	Quarry Pit 3	2	2	-	-	-	-	-	13	-
6087	6081	Quarry Pit 3	2	1	-	-	-	-	-	-	-
6095	6161	Ditch 10	2	1	-	-	-	-	-	-	-
			Totals	**40**	**15**	**6**	**4**	**1**	**1 rabbit**	**69**	**1**

SECTION 12. ANIMAL BONE *By* Philip Armitage and Sarah Cobain

A total of 4.1 kg (139 fragments) of animal bone was recovered from Period 1 Roman ditches and pits and Period 2 medieval pits (ONLINE TABLE 4). The animal bone from across the site was highly fragmented, moderately to poorly preserved and as such the assemblage provided little interpretative data. Identified species included cattle (40 bone fragments), sheep/goat (15

fragments), pig (6 fragments), dog (4 fragments; all part of a dog's front leg/foot, recovered from the finds-rich fill of Quarry Pit 2) and horse (1 fragment). The mixture of bone recorded most likely originates from domestic waste; however the high level of abrasion/erosion and silt encrusted bone suggests residual material. A small number of burnt bone fragments were identified, which could be related to funerary activity; however given the low numbers and their lack of association with cremated human remains, they are likely to be associated with domestic waste.

SECTION 13. PLANT MACROFOSSILS AND CHARCOAL *By* Sarah Cobain

Four bulk soil samples were processed and analysis was undertaken on the plant macrofossil and charcoal remains. The results are presented in ONLINE TABLES 5 and 6.

METHODOLOGY

Plant macrofossil and charcoal remains were retrieved by standard flotation procedures using a 250-micron sieve to collect the flot and 1 mm-mesh to retain the residue. The residue was dried and sorted by eye and the floated material scanned and seeds identified using a low power stereo-microscope (Brunel MX1) (x10–x40). Identifications were carried out with reference to images and descriptions by Cappers *et al.*[118] and Neef *et al.*[119] Up to 100 charcoal fragments of the >2 mm sieve fraction were fractured by hand to reveal the wood anatomy on radial, tangential and transverse planes. The pieces were then identified using an epi-illuminating microscope (Brunel SP400) (x40–x400). Identifications were carried out with reference to images and descriptions by Gale and Cutler,[120] Schoch *et al.*[121] and Wheeler *et al.*[122] Nomenclature and habitat description follow Stace.[123]

DISCUSSION

Contexts 6018 and 6072, both finds-rich fills of Quarry Pit 2, contained relatively small

[118] Cappers *et.al.* 2006.
[119] Neef *et al.* 2012.
[120] Gale and Cutler 2000.
[121] Schoch *et al.* 2004.
[122] Wheeler *et al.* 1989.
[123] Stace 1997.

numbers of plant remains, including barley (*Hordeum vulgare*) and spelt wheat grains (*Triticum spelta*), along with indeterminate cereal grain fragments. Charcoal included ash (*Fraxinus excelsior*), oak (*Quercus*) and alder/hazel (*Alnus glutinosa/Corylus avellana*) fragments. Spelt wheat and barley are typical of the period and these burnt remains were probably residual, from domestic waste.

Burnt pulses and cereals identified within fill 6243 in pit 6244, located within the centre of Enclosure 2, were of greater interest. Feasting and food offerings are a well-recognised part of Roman funerary rituals, although evidence for this is rare due to the destructive high temperatures of funeral pyres.

Thirty-seven complete cotyledons and 42 larger pulse fragments were identified. Unfortunately the hilia were not preserved, preventing definitive identification, although all these cotyledons resembled celtic beans (*Vicia faba*) in their size and shape. Smaller fragments exhibiting similar 'flattened' morphology but which could not be confidently identified have been placed within the pulses category (*Vicia/Lathyrus/Pisum*). Seven false oat-grass tubers (*Arrhenatherum elatius*) and a small number of spelt wheat and barley grains were also identified.

As processing celtic beans does not require exposure to fire, their charred remains are usually only found in small quantities, usually where they have been accidently burnt during food preparation. The large number of charred cotyledons within pit 6244 is therefore suggestive of deliberate charring associated with funerary activities. Since whole cotyledons were preserved, it suggests the beans were burnt whilst still raw, rather than as part of a cooked dish.

It is not clear whether the deposit within pit 6244 represents pyre material, thereby a food offering, or whether the material is made up of charred hearth debris associated with funerary feastings (although the presence of nails and hobnails in the sample suggest the former scenario). Comparative evidence is limited; however celtic beans and vetches/peas were identified within cremation burials at the Eastern Cemetery of London,[124] Prescot Street, London,[125] and Pepper Hill, Southfleet, Kent.[126]

Charred false-oat grass tubers are commonly seen in cremation burial deposits, as at Ryknield Street, Wall, Staffordshire (Site 12)[127] and at the Late Roman cemetery at Lankhills,

[124] Davis 2000, 371, 374–5.
[125] Clapham 2010.
[126] Davis 2006, 4–5.
[127] Gray 2008, 176.

Winchester,[128] and are believed to represent either tinder used in cremation pyres or incidental inclusions during pyre construction in grassy areas. The presence of charred cereal grains may also relate to some form of food offering, or they may have been accidently incorporated with cereal chaff/straw used as tinder. It is unclear whether ash charcoal from pit 6244 represents pyre or other hearth debris; there was insufficient material to carry out any further charcoal analysis.

ONLINE TABLE 5. PLANT MACROFOSSIL IDENTIFICATIONS

(A = arable weeds; D = opportunistic species; P = grassland/pasture species; E = economic species; ++++++ = >500 items)

Context number				6072	6024	6018	6243
Feature label				Finds-rich fill of QP2	Finds-rich fill of QP2	Finds-rich fill of QP2	Pit 6244
Sample number (SS)				1	2	3	5
Flot volume (ml)				<1	4.5	3	20
Sample volume processed (l)				4	40	40	9
Soil remaining (l)				0	0	0	0
Period				Period 1A	Period 1A	Period 1A	Period 1C
Plant macrofossil preservation				Moderate	Moderate	Moderate	Good
Habitat Code	**Family**	**Species**	**Common Name**				
D/A	Amaranthaceae	*Chenopodium* L. (*Blitum* L.)	Goosefoots	1	–	–	–
E	Fabaceae	*Vicia faba* L.	cf Celtic Bean (whole)	–	–	–	1
E		*Vicia faba* L.	cf Celtic Bean (cotyledon)	–	–	–	36
		Vicia faba L.	cf Celtic Bean (cotyledon fragments >2mm)	–	–	–	42
E		*Lathyrus* L./*Vicia* L./ *Pisum* L.	cf Celtic Bean (fragment >2mm)	–	–	–	195
E		*Lathyrus* L./*Vicia* L./ *Pisum* L.	cf Celtic Bean (fragment <2mm)	–	–	–	++++++
P/D	Poaceae	*Arrhenatherum elatius* (L.) P. Beauv. ex J. & C. Presl	False oat-grass	–	–	–	7
E		*Hordeum vulgare* L.	Barley grain	–	11	–	2
P/D/A		*Poa* L.	Meadow-grasses	1	–	–	–
E		*Triticum spelta*	Spelt wheat grain	2	15	7	16
E		*Poaceae*	Indeterminate cereal grain (fragment)	3	15	6	15
E		*Poaceae*	Grass species stem	–	–	–	1
			Total	**7**	**41**	**13**	**315**

[128] Challinor 2010, 439–41.

ONLINE TABLE 6. CHARCOAL IDENTIFICATIONS

+ = 1–4 items; ++ = 5–20 items; +++ = 21–49 items; ++++ = 50–99 items; +++++ = 100–500 items; ++++++ = >500 items

Context number			6072	6024	6018	6243
Feature name			Finds-rich fill of QP2	Finds-rich fill of QP2	Finds-rich fill of QP2	Pit 6244
Sample number (SS)			1	2	3	5
Flot volume (ml)			<1	4.5	3	20
Sample volume processed (l)			4	40	40	9
Soil remaining (l)			0	0	0	0
Period			Period 1A	Period 1A	Period 1A	Period 1C
Charcoal quantity			++	+++	++	++++
Charcoal preservation			Moderate	Moderate	Moderate	Moderate
Family	**Species**	**Common Name**				
Betulaceae	*Alnus glutinosa* (L.) Gaertn./*Corylus avellana* L.	Alder/Hazel	1	9	–	–
Fagaceae	*Quercus petraea* (Matt.) Liebl./*Quercus robur* L.	Sessile Oak/ Pedunculate Oak	1	1	–	10
Oleaceae	*Fraxinus excelsior* L.	Ash	1	–	10	–
		Total	**3**	**10**	**10**	**10**

SECTION 14. BIBLIOGRAPHY

Bird, J. 2011: 'The decorated samian', in Hill and Rowsome 2011, 299–300 (and full catalogue on CD)

Bishop, M.C. 1988: 'Cavalry equipment of the Roman Army in the first-century AD', in J.C. Coulston, *Military Equipment and the Identity of Roman Soldiers: Proceedings of the Fourth Roman Military Equipment Conference*, BAR International Series 394, Oxford, 67–195

Boston, C., and Witkin, A. 2006: *Human Remains from the Roman Cemetery at Pepper Hill, Southfleet, Kent*, Channel Tunnel Rail Link (CTRL) Specialist Report Series, http://archaeologydataservice.ac.uk/archiveDS/archiveDownload?t=arch-335-1/dissemination/pdf/PT2_Spec_Reps/05_Human_remains/HUM_research_reports/HUM_Reports/HUM_PHL_text.pdf (accessed 9 January 2015)

Brickley, M., and McKinley, J. 2004: *Guidelines to the Standards for Recording of Human Remains*, IFA Paper 7

Cappers, R.T.J., Bekker, R.M., and Jans, J.E.A. 2006: *Digital Seed Atlas of the Netherlands*, Groningen Archaeological Studies 4, Eelde, http://dzn.eldoc.ub.rug.nl/ (accessed 28 November 2014)

Challinor, D. 2010: 'Charcoal and charred plant remains from the cremation burials', in P. Booth, A. Simmonds, A. Boyle, S. Clough, H.E.M. Cool and D. Poore, *The Late Roman Cemetery at Lankhills, Winchester: Excavation 2000–2005*, Oxford Archaeology Monograph 10, Oxford, 437–43

Charlesworth, D. 1974: 'Glass vessels', in M. Hassall and J. Rhodes, 'Excavations at the New Market Hall,

Gloucester 1966–7', *Transactions of the Bristol and Gloucestershire Archaeological Society* 93, 75–7

Chandler, C.J. 1994: *Excavations at the Romano-British Walled Cemetery, Northview Hospital, Purton*, unpub. monograph, Swindon

Clapham, A. 2010: *Prescot Street, Charred and Waterlogged Plant Remains*, http://www.lp archaeology.com/prescot/about/assessment-palaeo-environmental (accessed 2 December 2014)

Clarke, D.V., Breeze, D.J., and Mackay, G. 1980: *The Romans in Scotland: An Introduction to the Collections of the National Museums of Antiquities of Scotland*, Edinburgh

Clifford, E.M. 1961: *Bagendon: a Belgic Oppidum: Excavations 1954–1956*, Cambridge

Cool, H. 2008: 'The small finds', in A. Simmonds, N .Marquez-Grant and L. Loe, *Life and Death in a Roman City: Excavation of a Roman Cemetery with a Mass Grave at 120–122 London Road, Gloucester*, Oxford Archaeology Monograph 6, Oxford, 104–15

Cool, H.E.M. 2014: 'The Roman glass vessels', in P. Ellis and R. King, 'Gloucester: the Wotton Cemetery Excavations 2002', *Britannia* 45, 110–15

Cool, H.E.M., and Price, J. 1987: 'The Roman glass', in P.J. Ellis, 'Sea Mills, Bristol: the 1965–1968 excavations in the Roman town of Abonae', *Transactions of the Bristol and Gloucestershire Archaeological Society* 105, 92–9

Dannell, G.B. 1993: 'Further work on the collections of the Abbé F. Hermet and D. Rey', *Annales de Pegasus* 2, 24–34

Dannell, G.B. 1999: 'Decorated South Gaulish samian', in R.P. Symonds and S. Wade, *Roman Pottery from Excavations in Colchester 1971–86*, Colchester Archaeological Report 10, Colchester, 120–36

Dannell, G.B. 2006: 'The Samian pottery mould-makers Lupus II, Sabinus III and their connections', in P. Ottaway (ed.), *A Victory Celebration: Papers on the Archaeology of Colchester and Late Iron Age–Roman Britain presented to Philip Crummy*, Colchester, 83–104

Darling, M.J. 1985: 'Roman pottery: wares other than Samian', in Hurst 1985, 67–86

Davis, A. 2000: 'The plant remains', in B. Barber and D. Bowsher, *The Eastern Cemetery of Roman London; Excavations 1983–1990*, MoLAS Monograph Series 4, London, 368–78

Davis, A., 2006: *The Charred Plant Remains from Pepper Hill, Southfleet, Kent (ARC NBR98)*, Channel Tunnel Rail Link (CTRL) Specialist Report Series. http://archaeologydataservice.ac.uk/archiveDS/archiveD ownload?t=arch-335-1/dissemination/pdf/PT2_Spec_Reps/06_Palaeoenvironmental/ENV_res earch_reports/ENV_Charredplants_PHL_text.pdf (accessed 2 December 2014)

Follmann-Schulz, A.B. 1988: *Die römischen Gläser aus Bonn*, Koln

Gale, R., and Cutler, D.F. 2000: *Plants in Archaeology: Identification Manual of Artefacts of Plant Origin from Europe and the Mediterranean*, Kew

Goodall, I.H. 1980: *Ironwork in Medieval Britain: an Archaeological Study*, unpub. PhD thesis, University of Cardiff

Gray, L. 2008: 'Charred plant remains', in J.I. McKinley, 'Ryknield Street, Wall (Site 12)' in A.B. Powell, P. Booth, A.P. Fitzpatrick and A.D. Crockett, *The Archaeology of the M6 Toll 2000–2003*, Oxford Wessex Archaeology Monograph 2, Oxford/Salisbury, 173–6

Greene, K.T. 1979: *Report on the Excavations at Usk, 1965–1976: The Pre-Flavian Fine Wares*, Cardiff

Harden, D.B., and Price, J. 1971: 'The glass', in B. Cunliffe, *Excavations at Fishbourne. Volume II: The Finds*,

London, 317–68

Hartley, B.R., and Dickinson, B.M. 1982: 'The samian', in Wacher and McWhirr 1982, 119–46

Hartley, B.R., and Dickinson, B.M. 2008: *Names on Terra Sigillata. Volume 2 (B to CEROTCUS)*, Bulletin of the Institute of Classical Studies Supplement 102–02, London

Hartley, B.R., and Dickinson, B.M. 2011: *Names on Terra Sigillata: Volume 8 (S to Symphorus)*, Bulletin of the Institute of Classical Studies Supplement 102–08, London

Hartley, B.R., and Pengelly, H. 1976: 'Samian ware', in M. Stead, *Excavations at Winterton Roman Villa and Other Roman Sites in North Lincolnshire, 1958–1967*, Department of the Environment Archaeological Reports 9, London, 102–16

Hill, J., and Rowsome, P. 2011: *Roman London and the Walbrook Stream Crossing: Excavations at 1 Poultry and Vicinity, City of London*, MoLA Monograph Series 37, London

Hurst, H.R. 1985: *Kingsholm*, Gloucester Archaeological Reports 1, Cambridge

Isings, C. 1957: *Roman Glass from Dated Finds*, Groningen/Djakarta

Knorr, R. 1919: *Töpfer und Fabriken verzierter Terra-sigillata des ersten Jahrhunderts*, Stuttgart

Knorr, R. 1952: *Terra-Sigillata-Gefässe des ersten Jahrhunderts mit Töpfernamen*, Stuttgart

Lemaître, C. 1974: 'Découvertes Lexoviennes. Étude de plusieurs lots de céramique sigillée recueillis à Lisieux (14) de 1946 à 1963', *Forum* 4, 3–8

Loeschcke, S. 1919: *Lampen aus Vindonissa*, Zurich

Lovejoy, C.O., Meindl, R.S., Pryzbeck, T.R., and Mensforth, R.P. 1985: 'Chronological metamorphosis of the auricular surface of the illium: a new method for determination of adult skeletal age-at-death', *American Journal of Physical Anthropology* 68, 15–28

Lyman, R.L. 1994: *Vertebrate Taphonomy*, Cambridge

Mays, S., Brickley, M., and Dodwell, N. 2004: *Human Bones from Archaeological Sites: Guidelines for Producing Assessment Documents and Analytical Reports*, Swindon

McKinley, J. 1992: 'Cremation and inhumation burials from St. Stephen's cemetery, StAlbans', unpub. report for R. Niblett, Verulamium Museum, St Albans

McKinley, J. 1994: 'Bone fragment size in British cremation burials and its implications for pyre technology and ritual', *Journal of Archaeological Science* 21, 339–42

McKinley, J. 1997a: 'Bronze Age "barrows" and funerary rites and rituals of cremation', *Proceedings of the Prehistoric Society* 63, 129–45

McKinley, J. 1997b: 'The cremated and inhumed human bone from burials and cremation-related contexts at Westhampnett', in A.P. Fitzpatrick, *Archaeological Excavations on the Route of the A27, Westhampnett Bypass, West Sussex, 1992. Volume 2: The Late Iron Age, Romano-British, and Anglo-Saxon Cemeteries*, Wessex Archaeology Report 12, Salisbury, 55–73

McKinley, J. 1998: 'Archaeological manifestations of cremation', *The Archaeologist* 33, 18–20

McKinley, J. 2000a: 'The analysis of cremated bone', in M. Cox and S. Mays (eds), *Human Osteology in Archaeology and Forensic Science*, London, 403–21

McKinley, J. 2000b: 'The cremation burials', in B. Barber and D. Bowsher, *The Eastern Cemetery of Roman London: Excavations 1983–1990*, MoLAS Monograph Series 4**,** London, 264–77

McKinley, J. 2004: 'The human remains and aspects of pyre technology', in H.E.M. Cool, *The Roman Cemetery*

at Brougham, Cumbria, Britannia Monograph 21, London, 283–309

McNaught, J.M. 2006: *A Clinical and Archaeological Study of Schmorl's Nodes: Using Clinical Data to Understand the Past*, unpub. PhD Thesis, University of Durham

Meindl, R.S., and Lovejoy, C.O. 1985: 'Ectocranial suture closure: a revised method for the determination of skeletal age at death based on the lateral-anterior sutures', *American Journal of Physical Anthropology* 68, 29–45

Millett, M. 1987: 'Boudicca, the first Colchester Potters' Shop, and the dating of Neronian samian', *Britannia* 18, 93–123

Monteil, G., and Silvéréano, S. 2011: 'De Britannia à Narbo Martius: réflexions croisées autour d'assemblages sigillés d'époque néronienne', in *Société Française d'Etude de la Céramique Antique en Gaule, Actes du Congrès d'Arles, 2–5 Juin 2011*, 119–58

Morin-Jean, 1913: *La Verrerie en Gaule sous l'empire romain*, Photographic reprint 1977, Paris

Neef, R., Cappers, R.T.J., and Bekker, R.M. 2012: *Digital Atlas of Economic Plants in Archaeology*, Groningen Archaeological Studies 17, http://depa.eldoc.ub.rug.nl/ (accessed 28 November 2014)

Peacock, D.P.S. 1967: 'Romano-British pottery production in the Malvern district of Worcestershire', *Transactions of the Worcestershire Archaeological Society 3, series* 1, 15–28

Peña, J.T. 1990: 'Internal red-slip cookware (Pompeian Red Ware) from Cetamura del Chianti, Italy: mineralogical composition and provenience', *American Journal of Archaeology* 94, 647–61

Philpott, R.A. 1991: *Burial Practices in Roman Britain*, BAR British Series 219, Oxford

Polak, M. 2000: *South Gaulish Terra Sigillata with Potters' Stamps from Vechten*, Rei Cretariae Romanae Fautorum Acta Supplement 9, Nijmegen

Price, J. 1991: 'Decorated mould-blown glass tablewares in the first-century AD', in M. Newby and K. Painter (eds), *Roman Glass: Two Centuries of Art and Invention*, Society of Antiquaries of London Occasional Papers 13, London, 56–75

Price, J. 1995: 'Glass vessels', in W.H. Manning, J. Price and J. Webster, *Report on the Excavations at Usk 1965–1976: The Roman Small Finds*, Cardiff, 139–91

Price, J., and Cool, H.E.M. 1985: 'Glass (including glass from 72 Dean's Way)', in Hurst 1985, 41–54

Price, J., and Cottam, S. 1998: *Romano-British Glass Vessels: a Handb*ook, CBA Practical Handbook in Archaeology 14, York

Pryor, F. 1984: *Excavation at Fengate, Peterborough, England: The Fourth Report*, Northamptonshire Archaeological Society Monograph 2, Royal Ontario Museum Archaeology Monograph 7, Northampton/Ontario

Rayner, L. 2011: 'The shop assemblage pottery', in Hill and Rowsome 2011, 295–304

Rigby, V. 1982: 'The coarse pottery', in Wacher and McWhirr 1982, 153–204

Roe, F. 1999: 'Worked stone', in C. Parry, 'Iron Age, Romano-British and medieval occupation at Bishop's Cleeve, Gloucestershire: excavations at Gilder's Paddock 1989 and 1990–1', *Transactions of the Bristol and Gloucestershire Archaeological Society* 117, 89–118

Schmidt, C.W., and Symes S.A. (eds) 2008: *The Analysis of Burned Human Remains*, London

Schoch, W., Heller, I., Schweingruber, F.H., and Kienast, F. 2004: *Wood Anatomy of Central European Species*, www.woodanatomy.ch (accessed 28 November 2014)

Stace, C. 1997: *New Flora of the British Isles*, Cambridge

Stanfield, J.A., and Simpson, G. 1990: *Les potiers de la Gaule Centrale*, Revue Archéologique Sites, Hors-série 37, Recherches sur les ateliers de potiers de la Gaule Centrale, Tome V, Lezoux

Suchey, J.M., and Brooks, S. 1990: 'Skeletal age determination based on the os pubis: a comparison of the Acsádi-Nemeskéri and Suchey-Brooks method', *Human Evolution* 5, 227–38

Timby, J. 1990: 'Severn Valley wares: a reassessment', *Britannia* 21, 243–51

Tomber, R., and Dore, J. 1998: *The National Roman Fabric Reference Collection: A Handbook*, London

Vince, A.G. 1986: 'The medieval and post-medieval pottery', in H. Hurst (ed.), *Gloucester: The Roman and Later Defences*, Cambridge, 72–80

Wacher, J.S., and McWhirr, A.D. 1982: *Early Roman Occupation at Cirencester*, Cirencester Excavations 1, Cirencester

Webster, P. 1976: 'Severn Valley Ware: a preliminary study', *Transactions of the Bristol and Gloucestershire Archaeological Society* 94, 18–46

Wheeler, E.A., Baas, P., and Gasson, P.E. 1989: 'IAWA list of microscopic features for hardwood identification', *International Association of Wood Anatomists Bulletin n.s.* 10 (3), 219–332

Wild, F. 1985: 'Samian ware', in Hurst 1985, 56–67