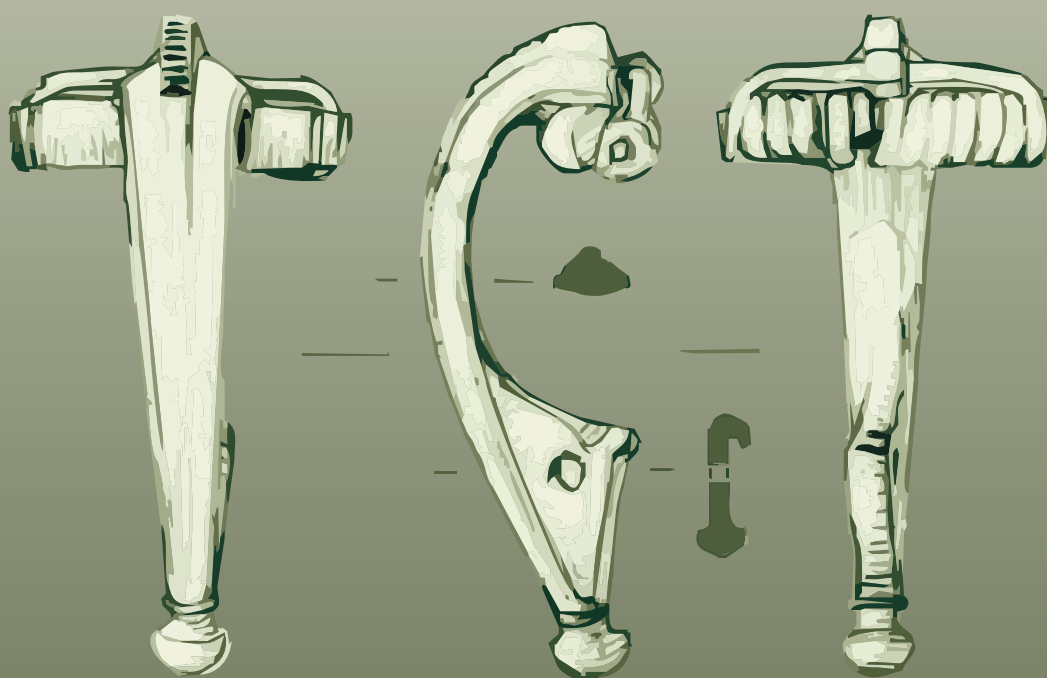


# Landscape Evolution in the Middle Thames Valley

## Heathrow Terminal 5 Excavations Volume 2

### Metal Finds

(Section 6)



*by Ian R Scott*

## SECTION 6

### METAL FINDS

*by Ian R Scott*

#### Introduction

The metalwork assemblage from excavations at Heathrow Terminal 5 (PSH 02) comprises 601 objects (or 682 fragments) (**Table 1**). The metalwork was recovered from contexts ranging in date from the Bronze Age to the post-medieval and modern periods. Although the assemblage is quite large it comprises a large portion of material which is from modern contexts (n = 94) or unstratified or unphased (n = 142). The bulk of the material is iron (n = 369), and much of the ironwork comprises nails (n = 139), hobnails (n = 115) and miscellaneous pieces (n = 62). There is a sizeable assemblage of copper alloy (n = 146). There are 58 lead objects, though much of the lead comprises melted waste or offcuts and 24 pieces of silver, most of which comprise tiny droplets and/or splashes. All Tables are located at the end of this document.

#### Methodology

The complete metalwork assemblage was recorded, although not all objects were recorded with the same level of detail, for example nails were not measured, and the presence of unidentifiable fragments was merely noted. All objects were assigned to a functional category (see **Table 1**) to assist analysis and discussion of phase assemblages. The report consists of a discussion of the material by the broad chronological periods – Bronze Age, Iron Age, Romano-British, etc – although some of the larger period assemblages such as the Romano-British material are also considered in narrower chronological phases. A catalogue of selected illustrated objects from the site assemblage is also included. Certain categories of material – namely hobnails and military finds – have been tabulated.

## **The Assemblage: Provenance and Composition (Table 1)**

### ***Finds from Bronze Age contexts***

A single item of Bronze Age metalwork was recovered from the PSH 02 excavations, a copper alloy basal looped spearhead (**ILL. 1**) (see Appendix 1 below for details of spearhead and ring (**ILL. 2-3**) from Perry Oaks (WPR 98) excavation). The spearhead is of a distinctive form, belonging to the latter part of the Middle Bronze Age. This particular example falls within the Rowland's group 2 (Rowlands 1976, 58), that is spearheads with broad blades, with internal bevels, lozenge section midribs and basal loops with lozenge or leaf-shaped plates. It is very similar to a spearhead from Midford, near Bath (ibid, pl. 58, no. 1581). Basal looped spearheads of group 2 are found with concentrations in eastern and south-eastern England, and in particular in the Thames Valley, and with a less marked spread in the south-west (Rowland 1976, map 16). Basal looped spearheads are found in a wide range of sizes from 150 mm to 450 mm in length; this example is towards the lower end of the size range (ibid. 58 & fig. 3).

This spearhead was recovered from the fill of a waterhole 641097, and the radiocarbon date from the basal fill of the feature 1450-1370 cal BC suggests that the spearhead is contemporary with the deposition of the lowest fill of the feature.

A further seven metal finds came from contexts that are Bronze Age in date. These comprise six small pieces of iron and one piece of copper alloy, and include four nails and possible vessel fragment. In addition there is an unidentified object (comprising ten fragments) from a context broadly dated to the 1st millennium BC. All the iron objects must be intrusive. The remaining object is a cut piece of a ring, or a bangle or bracelet, and is highly polished on one side. This too is probably intrusive and later Roman in date.

### ***Finds from Iron Age contexts***

The range of material from Iron Age contexts is very limited, and there is nothing that is typologically dated to the Early or Middle Iron Age periods.

*Finds from general Iron Age contexts*

The finds from Iron Age contexts number six and include two nails, which are probably intrusive, a lead washer, a small broken iron ring, a copper alloy spiral finger ring (**ILL. 12**) and buckle (**ILL. 16**). The latter, which is from a context dated to the mid/late Iron Age, is clearly a buckle of Roman military type.

*Finds from late Iron Age/early Roman contexts*

Another four finds are from contexts dated late Iron Age/early Roman. They comprise a length of wire, a nail, a possible Colchester brooch and a pair of tweezers (**ILL. 15**).

***Roman finds***

The number of metal finds from Roman contexts is 182, but includes 114 hobnails and 32 nails. In terms of numbers the finds come predominantly from later Roman contexts, but these include good numbers of hobnails. A number of finds are from contexts dated simply Roman (**Table 1**). There are also Roman finds are from post-Roman contexts or unstratified. The typologically dated Roman material is predominantly early.

The range of material from Roman contexts is limited, and marked by an absence of household items – the only household item is a cast iron saucepan fitting of more recent manufacture – and security items, with an almost total lack of structural items. The majority of nails are from post-medieval and later contexts. The only items relating to crafts and transport are two net weights (context 678026) and a bell (**ILL. 17**), although a socketed reaping hook from an unphased context could easily be Iron Age or Roman.

The Roman assemblage is dominated by personal items of ornament – seven *fibulae*, and a disc brooch, possibly Roman, finger rings and a bead – and hobnails. Six of the *fibulae* – a Simple One-piece brooch (**ILL. 4**), two possible Colchester brooches, two Two-piece Colchester brooches (**ILL. 5-6**) and a T-shaped brooch (**ILL. 7**) – are from contexts of early to mid Roman date, and the seventh, a Trumpet brooch (**ILL. 8**), is unphased. The disc brooch (**ILL. 9**) is undecorated and from an early to mid Saxon

context, where it may be residual. There are two stratified finger rings are from mid to late and late Roman contexts, and two others (**ILL. 11-12**) that are Roman but from a later or unphased contexts. Two rings have simple expanded bezels, one is iron (**ILL. 11**) and the other copper alloy (**ILL. 12**). Of the two stratified fingers rings one is formed from copper alloy wire and the other has a plain band made from copper alloy strip. None of the rings are not of great quality, and the latter pair may be what are sometimes referred to as trinket rings (Robinson 1978). The final item of personal adornment is a bead from an early Roman context.

The hobnails are from a small number contexts and are of later Roman date (**Table 2**). There is little or no Roman evidence of a domestic or craft nature, which suggests that range of activities carried out within the areas excavated was very limited.

In addition to the stratified finds there are objects which can be dated to the Roman period typologically. The Trumpet fibula (**ILL. 8**) has been noted; there are also two possible hollow cast fragments of a statuette (sf 13058 and 13003), which may be Roman in date, and two finger rings (**ILL. 10-11**) and two possible bangle fragments (**ILL. 14**). The bangles would be of later Roman date.

Overall most of the Roman finds, with the exception of the hobnails, are from early Roman contexts and this accords with the dating of the *fibulae* and to a lesser extent the finger rings. There is a small later Roman element represented by the possible bangle fragments and the hobnails from burials (**Table 2**).

#### *Finds from general Roman contexts*

Fifty items came from contexts simply dated Roman. These included 39 hobnails, 37 of which come from context 591052 (**Table 2**), a single nail, two miscellaneous fragments, and five small unidentified fragments. There is also a modern bolt with a machine-cut thread at one end, a thick washer or ring, and silver droplet (context 523187). The latter may well be intrusive, since another 18 small silver droplets were recovered from unphased contexts.

#### *Finds from Early Roman contexts*

Early Roman contexts have produced only eight objects from seven contexts. These include three nails and a single hobnail. The most interesting finds are two *fibulae* (**ILL. 4 and 6**) and a bead (sf 13278). The brooches are both first century types. The one piece brooch (**ILL. 4**) could date to before the Roman Conquest, while the two-

piece Colchester brooch (**ILL. 6**) dates to the mid 1st century. The bead is not closely dateable.

*Finds from Early/mid Roman contexts*

These contexts of early to mid Roman date have produced only three objects, from three contexts. They include two fibulae. One is a T-shape hinged brooch (**ILL. 7**) dating to the later 1st century, and the other is a badly eroded Colchester brooch (sf 29140) of 1st century date. The third object is an unidentified irregular lump of iron.

*Finds from Mid/late Roman contexts*

Eighteen objects came from eight contexts dated mid to late Roman. These include five nails and seven miscellaneous fragments. The remaining six items include a single hobnail, two possible lead weights formed from rolled sheet, a T-staple, a possible barb-spring padlock key and an unidentified small flat fragment of iron.

*Finds from Late Roman contexts*

Late contexts have produced 103 objects from ten contexts. The finds include 23 nails and 73 hobnails, 63 of which derive from a single context (644033) (**Table 2**). The remaining seven pieces include a length of modern pipe (context 670025) and a cast iron attachment plate for a modern saucepan (context 527388). There is a length of copper alloy wire, a probable split spike loop, a socket, possibly from a tool or weapon head, a possible copper alloy finger consisting of a plain band (**ILL. 13**), and finally a neatly made cast harness bell (**ILL. 17**). The latter cannot be closely dated but is a good Roman type.

*Early/middle Saxon Finds*

Saxon contexts have produced only four objects, but they include a plain disc brooch (**ILL. 9**) and a zoomorphic brooch (**ILL. 18**). The other finds are a nail stem or wire fragment and small unidentified fragment. The zoomorphic brooch (**ILL. 18**) is in the form of a stag and is quite unusual. The disc brooch is a plain (**ILL. 9**) and could be Roman or later in date (see above). In addition to the stratified finds there is an unstratified fragment of a small-long brooch (**ILL. 19**) of 5th- to 6th-century date.

### *Medieval finds*

Thirty two objects were recovered from medieval contexts. Twenty four came from contexts dated 'medieval', one from an 'early medieval' context and seven from contexts dated 'late medieval'.

As with the Roman assemblage there is little domestic or craft equipment, and a dearth of structural and security items from stratified medieval contexts (**Table 1**). The tools from medieval contexts comprise a probable spindle whorl (sf 13050) and a pair of modern pincers (context 559272).

Stratified transportation and trade items comprise a good medieval horseshoe (context 513029) and two medieval 'fiddle key' horseshoe nails (contexts 529071 and 529087), as well as a probable medieval cloth seal (**ILL. 20**). In addition there is a star rowel (context 516222), which is unphased but typologically of late medieval or early post-medieval date, and a medieval armorial pendant (**ILL. 21**) from a modern context. There are lead weights or tokens (**ILL. 22-25**) which might be medieval or post-medieval in date, but are all unstratified or from late contexts.

The only stratified household item is a post-medieval knife. There are small vessel fragments, which are from post-medieval, modern and unphased contexts, which could be medieval or post-medieval in date (eg. **ILL. 26**). Personal items comprise a single stratified biconvex pewter button (sf 13158), but there are some medieval finds from later contexts or that were unstratified: there is a buckle of good medieval form (**ILL. 27**), a strap loop (**ILL. 28**), a belt plate (**ILL. 29**), which is possibly late medieval in date, and a second biconvex pewter button (sf 13215). There is third biconvex button (sf 13006) which may be medieval. It was unstratified, and it is hollow and made of copper alloy, with originally an iron wire loop.

### *Finds from general medieval contexts*

Finds from medieval contexts include seven miscellaneous fragments, seven nails and two small unidentified fragments. Other finds include a knife (context 559533), which from its form is probably post-medieval in date, part of a bracelet or bangle, probably of late Roman date (**ILL. 14**), a pewter biconvex button (sf 13158) and lead spindle whorl or weight (sf 13050). There are also a socketed object or ferrule (context 525100), a washer (context 559131) and an early medieval horseshoe (context 513029) and two 'fiddle key' horseshoe nails (contexts 529071 & 529087).

*Finds from early medieval contexts*

The sole find from an early medieval context is fragment of curved iron sheet (context 553039).

*Finds from late medieval contexts*

The finds from late medieval contexts comprise two fragments of iron bar (context 529135), a thin lead washer (context 543353), a post-medieval musket ball which must be intrusive (context 527162), a pair of modern pincers (context 559272) again intrusive, and two small unidentified fragments.

***Post-medieval finds***

There are 126 items from post-medieval contexts, including 18 miscellaneous fragments, 65 nails and 10 unidentified small fragments ('Unknown') (**Table 1**). Crafts might be represented by the tools from post-medieval contexts: a fragment of sickle blade (context 542052), a possible chisel (context 588303), and a lead net weight (context 532019), none of which are closely dateable typologically. There is also a fragment of hand made post-medieval thimble from an unphased context (502001). Transport is represented by four horseshoes. There are a number of lead weights and probable cloth seal (**ILL. 22-5 and 20**) which could be post-medieval, or medieval, in date.

Household items are represented by a small fragment of a cast copper alloy vessel (context 549172). Other fragments of vessels (eg. **ILL. 26**) could be post-medieval, or medieval, in date. The stratified post-medieval personal items were a hat or hair pin (context 555798) and a strap loop (**ILL. 28**), which is probably medieval rather than post-medieval in date. There were also four post-medieval buckles (**ILL. 30-2** and sf 13163) ranging in date from 16th to early 18th centuries, and two 18th-century shoe buckles (sf 13022 & sf 13098). These buckles are either unphased, unstratified or from modern contexts.

There are also a number of musket and pistol balls, and some small shot, as well as a well as powder holder cap (**ILL. 33**), which could all be of post-medieval date (**Table 3**). Three musket balls have diameters of 15 mm, and one has a diameter of 12 mm, which makes them on the small size for musket shot. Civil War examples from



Beeston Castle (Courtney 1993, 159 & table 40) fell into three size ranges 11-13 mm, 15-16 mm, and 18-19 mm. Civil War shot from Sandal Castle fell into similar size ranges with shot of around 16 mm being predominant (Credland 1983, 261-63). Shot from Camber Castle, which probably date to 16th and early 17th centuries were slightly larger at 17 mm and 18 mm (Scott 2001b, 198 & 200). The 15 – 16 mm shot equated to 20 shot to the pound (i.e. 20 bore), whereas the larger size equate 12 shot to the pound. The one possible pistol ball measures 8 mm and two measure 9 mm in diameter. One of the latter was almost barrel-shaped. Other shot were smaller and measured between 3 mm and 5 mm in diameter. These may be small or grape shot, and may be later in date. The lead powder holder cap is comparable to examples of Civil War date. A toy wheel lock pistol (**ILL. 34**) of probable 17th century date was unstratified.

*Finds from post-medieval contexts*

The finds from post-medieval contexts include a musket ball (context 525258), a musket or pistol ball (context 514026) and two small shot (context 525258). The tools comprise a sickle (context 542052), a possible chisel (context 588303), a lead net weight (context 532019), but also two fragments from a cast iron plough share and coulter (contexts 524018 and 570567), and a machine made thimble (context 555801), which could be modern. There are four horseshoes or fragments of horseshoes (contexts 522047, 527399, 555798 and 568065) which are probably post-medieval in date.

The household items from a post-medieval contexts comprise a small rim fragment from a cast copper alloy vessel (context 549172) and a modern fitting possibly for gas (context 588303). The personal items comprise a hat, or hair, pin (context 555798), a fragment of an iron finger ring with blue intaglio (**ILL. 10**), which is Roman in date, a strap loop (**ILL. 28**), which is probably medieval rather than post-medieval, and two copper alloy buttons with wire loops, one flat and one slightly domed (contexts 538263 and 556114) and a heel iron (context 549199). The buttons and heel iron are probably quite modern.

The only structural item, other than nails, is a T-staple (context 643038). The remaining eight items are objects or fragments of unidentified function, and a piece of lead waste (context 543350) and small silver casting spill (context 556107).

### ***Modern contexts and Unphased contexts***

The finds assemblages from modern contexts and unphased contexts are not considered in detail, but a number of individual items, which can be dated typologically, have been referred to above and some have been catalogued and illustrated. Amongst the unphased finds are 18 splashes or droplets of silver. These must represent some activity involving the melting of silver, but precisely what that activity was and to what period it dates is not known. The discovery of a single silver droplet in a Roman context does not date the activity.

### **Catalogue of illustrated metalwork**

The following illustration catalogue is ordered approximately by date.

#### ***Bronze Age metalwork***

1. **Basal looped spearhead**, with pronounced lozenge section mid rib and slight internal bevels. Copper alloy. L: 180 mm; max. blade W: 36 mm. PSH 02 641043 Middle-late Bronze Age waterhole; SF 27117.
2. **Spearhead**, Taunton phase Middle Bronze Age type, cast with a hollow socket and side loops. Length 247 mm, max blade width 32.4 mm; with plain, flat blades without bevel; the midrib is angular throughout the length of the leaf-shaped blade but blends into the oval cross-section of the long, hollow cast socket. Context 149042 (recut of a Bronze Age field boundary); SF 25
3. **Ring**, formed from coiled stout rod of oval section with smoothly rounded ends. The rod is coiled almost three times to form a short cylinder. Height: 19.6mm; max. ext. diam. 29.7 mm; of rod c 7 mm high; 3.5 mm thick. Good condition, mottled pale and dark green surfaces with slight sheen. Context 125004 (upper fill within a Bronze Age well (157243)); SF 2.

#### ***Late Iron Age/Roman metalwork***

4. **Simple one-piece brooch**, the so-called 'Nauheim derivative' with plain bow and solid triangular catchplate. One piece sprung (Spring and pin lost). Early to mid 1st Century. Copper alloy. L 43 mm. PSH 02 SG cut 636076 ctxt 659037 sf 26104. Early RB.

5. **Two-piece Colchester brooch.** Two piece brooch with sprung pin and external chord. The bow has a decorated ridge, two transverse ribs at the foot, and the catch plate has a triangular cutout. Mid 1st Century. Copper alloy. L 54 mm; W 22 mm. PSH 02 u/s sf 13271. Unphased.
6. **Two-piece Colchester**, two part fibula with sprung pin and external chord. Foot is decorated with a terminal knob and the catchplate has a single small hole. The pin is missing. Mid 1st Century. Copper alloy. L 40 mm; W 20 mm. PSH 02 SG cut 614217 cxtxt 539387 sf 13291. Early RB
7. **T-shaped brooch** with hinged pin, now somewhat eroded. The bow is flattened, but still has a raised triangular panel flanked by diagonal hatching, visible toward head. The foot is decorated with a double moulding. Late 1st century. Copper alloy. L 44 mm; W 40 mm. PSH 02 SG cut 539392 cxtxt 539393 sf 12046. Early/mid RB.
8. **Trumpet Brooch.** The bow is narrow with ribbed decoration. At the waist there are transverse mouldings and below these the bow is broken. The foot and catch plate are missing. There is a broken head loop. Late 1st and 2nd century. Copper alloy. L 36mm; W 11mm. PSH 02 u/s sf 13186. Unphased.
9. **Disc or plate brooch** with apparently thin plain concave front. Evidence for the catch plate and pin on the back. These are concreted with corrosion products and traces of mineralised wood. Copper alloy. D 40 mm. PSH 02 SG cut 525287 cxtxt 525288 sf 20068. Early/mid Saxon.
10. **Finger ring** formed from a spiral of thin copper alloy strip, perhaps tapering to each end. Copper alloy. D 20 mm. PSH 02 SG cut 650008 cxtxt 650007 sf 26100. Iron Age.
11. **Finger ring**, with simple expansion for intaglio. Has a plain royal blue stone. Iron. L 17 mm; W 9 mm. PSH 02 SG cut 543366 cxtxt 543359 sf 13282. Post-medieval.
12. Fragment of simple **finger ring** with an expanded oval setting for a stone. Most of the band is missing as is the stone. Copper alloy. L 16 mm. PSH 02 u/s sf 13008. Unphased.
13. **Finger ring** comprising broad band of thin lenticular section, with a buckle motif, complete with tongue, formed from thin wire brazed to the face of the band. Adjacent to the 'buckle' are a pair transverse lines creating the effect of a strap loop, then single dot, representing a hole in the belt and V cut the end of the belt. Copper alloy. D 20 mm. PSH 02 u/s sf 13192. Unphased.
14. Possible **bangle** fragment. . Curved, tapering fragment of leaded bronze, of plano-convex section. The broad portion has parallel grooves, somewhat worn, then there are diagonal cuts on each side a pair of transverse lines, a plain section then the eroded tip or terminal. Copper alloy. L 35 mm; W 8 mm. PSH 02 SG cut 655071 cxtxt 655042 sf 26102. Medieval.
15. **Tweezers** formed from narrow strip. Bent, deliberately? Originally about 63mm long. Copper alloy. L 39 mm. PSH 02 SG cut 658188 cxtxt 658189 sf 27121. Late IA/early RB.

16. **Oval buckle frame** attached to ?rectangular buckle plate. The plate has 5 rivets with upstanding (?decorated) heads. RB military buckle. Copper alloy. L 41 mm; W 27 mm. PSH 02 SG cut 636149 ctxt 646083 sf 29119. Mid/late Iron Age.
17. Cast copper alloy **bell** with iron clapper. The bell has been cast with pierced a transverse lug at the top for suspension. The bell is sub-rectangular in section with a rectangular flared mouth. There are clear traces that the sell was finished with a file. Copper alloy. L 28 mm; W 20 mm. PSH 02 SG cut 651136 ctxt 651053 sf 29102. Late RB.

### *Post-Roman metalwork*

18. **Zoomorphic brooch** in the form of a stag standing possibly standing in water. Copper alloy. L 40 mm; W 37 mm. PSH 02 SG cut 525340 ctxt 525322 sf 20071. Early/mid Saxon.
19. Fragment of probable **small-long brooch**, comprising square plate with fixing point for hinged pin and the small bow. The pin appears to be sprung and secured between two pierced lugs. 5th to 6th century. Copper alloy. L 27 mm; W 18 mm. PSH 02 ctxt 516222 sf -. No phasing.
20. **Cloth seal**, with faint ?standing figure on one face and an indistinct pattern of pellets and ? on the other face. D 21 mm. PSH 02 ctxt 502002 sf 13094. Modern.
21. **Armorial pendant**, possibly a harness pendant, lozenge-, or diamond-, shaped, with slightly curved front. Inlaid on the front with a cross with slightly flared ends. There is a small suspension loop, which was probably hinged to another metal component, and not directly attached to leatherwork. Copper alloy. L 47 mm; W 26 mm. PSH 02 ctxt 502002 sf 13025. Modern. For examples of diamond-shaped pendants see Goodall and Woodcock 1991, fig. 14: 27 & 28.
22. Flat circular **weight** with slightly angled edges. Two letters are inscribed on the upper face: a small upper case 'I' and large 'P'. The object weighs 230 gm. It is 9mm thick. Lead. D 51 mm. PSH 02 u/s sf 13082. Unphased.
23. **Weight** or **token**. Stylised/abstract pattern on both faces. Wt 8 gm. Lead. D 21 mm. PSH 02 ctxt 502002 sf 13099. Modern.
24. **Weight** or **token**, comprising a lead disc with five large pellets or dots in quincunx pattern on one face. Wt 5 gms. Lead. D 19 mm. PSH 02 u/s sf 13180. Unphased.
25. Possible **weight** consisting of a square block of lead with rounded edges. Lead. Wt 25 gm. L 20 mm; Thickness 9 mm. PSH 02 u/s sf 13235. Unphased
26. **Vessel rim fragment**, from a large shallow bowl? Cast. Fragment is too small to establish the vessel diameter. Copper alloy. L 28 mm; W 20 mm. PSH 02 ctxt 502002 sf -. Modern.
27. Small **oval buckle frame with elongated rectangular plate**. The frame has a small extension where the pin rested on the outer edge (L 13mm x W 17mm). Now detached from simple

elongated rectangular plate formed from thin sheet copper alloy. Two pieces of plate (each 25mm x 9 or 10mm), each with 2 rivets/ rivet holes with fragment of ? leather originally sandwiched between. Medieval form. Three fragments. Copper alloy. L 38 mm; W 17 mm. PSH 02 u/s sf 13036. Unphased.

28. **Strap loop**, comprising small sub-rectangular loop with short length of thin bar extending from the middle of one of the long sides. Medieval. Copper alloy. L 16mm; W 12 mm. PSH 02 SG cut 525269 ctxt 525258 sf-. Post-Medieval.
29. **Belt plate** with volute decoration. The fixings on the back have been bent out too far, resulting in the bending of the plate itself. Possibly Late medieval. Copper alloy. L 33 mm; W 17 mm. PSH 02 ctxt 502001 sf -. Unphased.
30. Asymmetrical **double looped buckle**. Very small. One half trapezoid with decorated outer edge; the other side oval with 'fleur-de-lys' decoration on outer edge. Early post-medieval form, 16th - 17th century. Copper alloy. L 17 mm; W 13 mm. PSH 02 ctxt 502002 sf 13223. Modern.
31. **Oval double loop buckle**, plain cast. Late 17th-early 18th C. Copper alloy. L 30 mm; W 23 mm. PSH 02 ctxt 502002 sf 13147. Modern.
32. **Double oval buckle** with plate. Copper alloy. L 40 mm; W 24 mm. PSH 02 ctxt 502002 sf -. Modern.
33. **Powder holder cap**, from a bandolier, or 'collar'. Cast lead cap in the form of a truncated cone with flat top and small opposed loops or lugs for the strings. There is a pronounced casting line down one side. Ht max 18mm, generally 16mm. Diameter at base 22 x 23mm. Overall measurement with loops 24mm. 17th century. Lead. L 24 mm; Ht 18 mm. PSH 02 SG cut 561046 ctxt 561047 sf 13070. Unphased. Compare Civil War examples from Beeston Castle (Courtney 1993, 160 & fig. 109: 40-43) and Sandal Castle (Credland 1983, 263 & fig. 12: 1-4).
34. **Toy wheel lock pistol**. It has the distinctive long curve and tapering butt with a large terminal knob. The barrel is approximately hexagonal in section and may be hollow. It appears to be broken, or shortened. There are a number of small holes - two on either side near the underside at the top end of the butt. Another underneath the body of the pistol and a fourth beneath the barrel facing forward. There is no evidence for a model of the lock mechanism, although there is an irregular hole on the right side of the pistol where such a lock would be. Probably 17th century. Copper alloy. L 100 mm. PSH 02 u/s sf 13142. Unphased. For a discussion of toy pistols see Forsyth with Egan 2005, 98-103. This particular example cannot be assigned to a specific identified design although it is broadly similar to Type 2 design 1 (ibid, 101, no.1.44).

*Uncertain*

- 35. Decorated sheet fragment**, with punched decoration, of dots and curvilinear lines. Broken irregular edge on each long side. One end of the fragment has a perforated lug. Copper alloy with silvering or tinning. Function unclear. L 27 mm; W 10 mm. PSH 02 ctxt 502001 sf -. Unphased.
- 36. Decorative cast belt stud**. It has a prominent central point, set in low central panel, surrounded by eight petal-like features forming an approximate diamond shape. There is cast lug on the back and washer to secure the stud. L 23 mm; W 16 mm. PSH 02 u/s sf 13195. Unphased.
- 37. Diamond-shaped belt mount**, silvered or tinned on face. Hollow back and bevelled or angle edges. There are two fixing points on back. Copper alloy. L 20 mm; W 12 mm. PSH 02 ctxt 502002 sf -. Modern.

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Metalwork Tables

Table 1: Summary Quantification of the Metalwork by Phase and Function

Phase	Function																Totals
	Arms	Tools	Transport	Measure	Personal	Household	Door	Security	Structural	Bindings	Nails	Misc	Query	Industrial	Waste	Unknown	
1st millennium BC													1			1	
BA											1					1	
BA early/mid											1					1	
BA mid	1										1					1	
BA mid/late						1									1	2	
BA later											1					1	
BA late/IA early					1											1	
IA					1											1	
IA early/mid									1			1				2	
IA mid/late					1						2					3	
IA late/RB early					2						1	1				4	
RB					39				2		1	1		1	1	50	
RB early					4						3					8	
RB early/mid					2										1	3	
RB mid/late		2			2				2		5	6				18	
RB late			1		74	1			1		23	2	1			103	
Saxon early/mid					2						1				1	4	
Med		1	3		2	1			1		7	7	1		1	24	
Med early													1			1	
Med late	1	1										3				7	
post Med	4	6	4		6	2			1		65	18	8	1	1	126	
modern	2	8	7	3	14	8		2	3	1	20	6	13		1	94	
no info			2		3						3	1	2			13	
unph	4	11	8	3	35	5	2	2	1	1	4	15	14	18	1	130	
Void														1		1	
Function Totals	12	29	25	6	188	18	2	4	12	2	139	61	41	21	4	37	601

**Table 2: Hobnails: Summary  
Quantification by Phase and Context**

Phase	Context	hobnails
RB early	539387	1
RB mid/late	678026	1
RB late	644033	63
	651051	4
	651052	1
	651053	5
RB	527347	1
	591053	37
	658167	1
unph		1
<b>Total</b>		<b>115</b>

**Table 3: Distribution of Militaria by Phase**

Identification	Phase				Totals
	later medieval	post Med	modern	unphased	
bandolier cap				1	1
musket ball	1	2	1		4
pistol ball			1	2	3
small shot		2		1	3
<b>Totals</b>	<b>1</b>	<b>4</b>	<b>2</b>	<b>4</b>	<b>11</b>

## APPENDIX 1

### BRONZE AGE METALWORK FROM PERRY OAKS (WPR 98)

*by Andrew J Lawson*

The small assemblage comprises two objects from different, secure contexts, both recovered during hand excavation. Neither object has been metallographically analysed but their outward appearance suggests they are made from copper alloys, presumably bronze.

1. **Ring**, formed from coiled stout rod of oval section with smoothly rounded ends. Context 125004 (base of a large pit); SF No. 2; Conservation No. CD990128

The rod is coiled almost three times to form a short cylinder. Height: 19.6mm; max. ext. diam. 29.7 mm; of rod *c* 7 mm high; 3.5 mm thick. Good condition, mottled pale and dark green surfaces with slight sheen.

Objects of this form are found in contexts of widely different dates. However, their earliest appearance in Britain is during the middle Bronze Age following an origin and spread from Northern Europe (Smith 1959, 149; Rowlands 1976, 96). Associated pottery from the context of this find confirms a middle Bronze Age date and an attribution to Needham's (1996) Period 5 (1500-1150 cal BC). At this time, coiled rings are not common but are occasionally found associated with other ornamental types in hoards belonging to the Taunton Phase of metalworking: for example, at Hollingbury and Stump Cross, Sussex (Smith 1959, fig. 4) or Durnford/Lake, Wilts (Moore and Rowlands 1972, 61-3). They are normally regarded as personal ornaments, as finger rings, on the basis of continental contexts, but they could have performed other functions.

2. **Spearhead**, cast with hollow socket and side loops.  
Context 149042 (recut of a field boundary); SF No. 25; Conservation No. CD990112

Length 247 mm, max blade width 32.4 mm; with plain, flat blades without bevel; the midrib is angular throughout the length of the leaf-shaped blade but blends into the oval cross-section of the long, hollow cast socket. This bears a single perforated loop with parallel sided protective plate on either side, midway between the rounded blade and the end of the socket: the casting flashes have been smoothed but remain distinct. A large fragment of wood (identified as ash) is lodged within the socket. The surface bears an olive green patina extensively pock marked by areas of light green and brown corrosion.

The spearhead is clearly a middle Bronze Age side-looped spearhead but is at the extreme of the length distribution (Rowlands 1976, fig. 2). The chronological position of this type has been discussed at length (for example, Ehrenburg 1977, 7-9; Rowlands 1979, Ch. II 3), while associated radiocarbon dates have been assessed by Needham *et al.* (1997). Although Needham *et al.* (*op cit.*, 85) admit to a certain imprecision in the dating of metalwork of the Taunton phase as a result of the re-use and long functional life of spearheads, a date between 1450 and 1250 cal BC would seem appropriate.

The radiocarbon date derived from the associated wood fragment (R26802/7; 2932±55 BP) of 1308 BC to 940 BC (2 sigma) therefore appears late in comparison with the anticipated typological date. However, it serves to emphasise both the potential for the reuse of functional bronzes or the deliberate deposition of inherited or 'heirloom' objects in which the antiquity of the object is recognised and valued.

Side looped spearheads are widely distributed throughout southern Britain with a marked concentration in the Thames Valley (Rowlands 1976, Map 15). They have been found both in hoards and as isolated finds, sometimes on settlements and occasionally in burials. Variations in the circumstances of discard or burial suggest that different groups of people in the middle Bronze Age disposed of spearheads in different ways (for example, in wet places, in ditches or in hoards) and presumably for different reasons (Lawson 1999, 100).

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## APPENDIX 2

### THE ROMAN LEAD TANK FROM PERRY OAKS (WPR 98)

by David Petts

Context 155026

Feature No. 135087

SF Number 68

The partial remains of a circular lead tank of late Roman date was found in the base of a late Roman waterhole at Perry Oaks. The tank had clearly been damaged or dismantled. Part of the sides and base had been detached and discarded elsewhere. The surviving side had been folded down onto the base.

#### **Dimensions and Construction**

The tank was constructed from lead sheet (0.06m thick). The surviving part of the base had two straight sides (0.66 m; 0.40 m) which had been cut in the process of dismantling the object, and a curved outside edge to which the surviving side panel of the tanks was attached (surviving circumference 0.79 m). The base was joined to the side of the tank by a thick, soldered seam. The two sheets may have been inserted into an H-bar and then soldered, though it is not possible to be certain without further investigation. The remaining side was 0.34 m high and 0.79 m long. A small hole may have been punched in the very edge of the left-hand side of the tank, but the tank is badly damaged at this point, and it cannot be verified. Holes have been found on the rims of similar tanks from Pulborough (Curwen 1943) and Bourton-on-the-Water (Donovan 1934).

#### **Decoration**

The decoration of the tank was very simple. The top of edge of the side had a simple beaded rim. The side was divided into a series of panels by a horizontal strand of cable pattern. This was in relief and appeared to be cast, rather than applied. The only panel which survived in entirety was 0.37 m wide. The use of single cable moulding to border and divide up space is typical of late Roman lead work, and can be seen on Roman coffins (eg Toller 1977, fig.4), other lead tanks (eg Flawborough, Notts.; Elliot and Malone 1999) and lead caskets (Toynbee 1964, 345–57).

Within each panel was a floating saltire or *crux decussata* drawn with similar cable strand. *Crux decussata* are also found on a similar lead tank from Pulborough and one of the pair found at Bourton-on-the-Water (Curwen 1943; Donovan 1934). The *crux decussata* may have some Christian significance, and was recognised as a Christian symbol in the fourth and fifth centuries (Watts 1991, 159–60). However, it is a relatively simple symbol, and need not carry any overt religious message.

#### **Destruction**

Attempts had clearly been made to damage or destroy the tank. Only part of the base and some of the side was present. The left edge of the side had been damaged at the top and appeared badly distorted, but the below the top c 0.10 m the edge was straight and may have been sawn. The right-hand edge was distorted for its full length and the lead appears to have been torn. Both cut edges of the base show signs of having been chopped, and the impressions of an axe blade (0.05 m wide) can be seen in several places along the chopped edge. The side of the tank had then been folded down onto the base plate before being placed in the pit. One or two small holes were seen in the side plate, but these appeared along creases of the lead sheet and were probably due to post-depositional processes. The bottom left-hand side of the tank showed some signs of sooting, though there is no sign of any melting of the metal, suggesting that any exposure to fire was only brief.

Signs of such attempted destruction are common on this class of objects (Guy 1981, 275). The remains of the tank from Flawborough had been folded in on itself in a similar manner (Elliot and Malone 1999).

#### **Context**

The tank was found in at the base of a late Roman pit or waterhole. The placement of such lead tanks in such pit-like or watery contexts is common (see Petts 2004). The examples from Ashton were found in a well (Guy 1977; Hadman and Upex 1977, 8), as was that from Caversham (Frere 1989, 319).

### **Date**

The pit in which the object was deposited has a late/post-Roman date. This fits in with other stratigraphically secure examples of such lead tanks which appear to have a broad 4th century date.

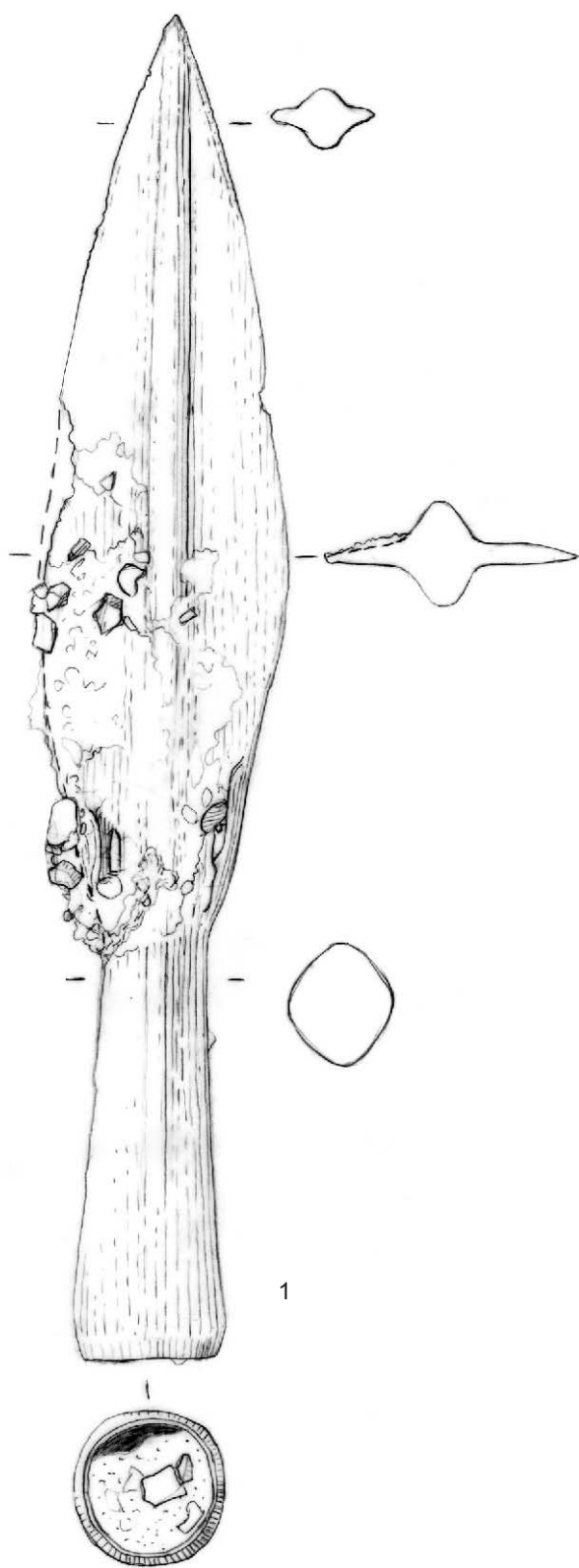
### **Discussion**

This object clearly belongs to a group of around twenty late Roman Christian lead tanks, found only in Britain (Guy 1981; Watts 1988). Predominantly found in the East Midlands and East Anglia this object is towards the southern edge of their distribution; its nearest neighbour was one found at Caversham, near Reading (Frere 1989).

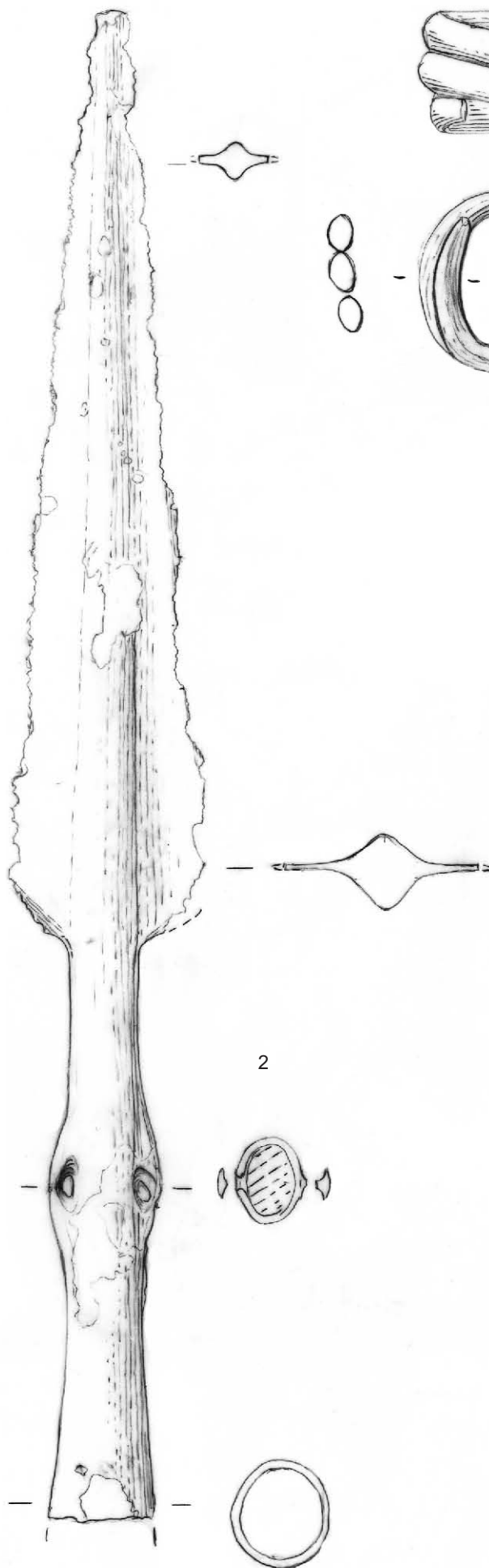
Although, beyond the saltire shaped decoration which may be a *crux decussata*, this object bears no other possible indications of a Christian function, other members of this group are decorated with *chi-rho* symbols, *orans* figures (Flawborough; Elliot and Malone 1999) and even the probable depiction of a baptism (Walesby; Petch 1961). Their precise function is, however, uncertain. Thomas has argued that they were used for the rite of baptism by affusion (the pouring of the baptismal water over the head of an unclothed candidate) (Thomas 1981, 221–5). Watts has however suggested that they may instead be related to the rite of *pedilavium*, a ritual washing of the feet (Watts 1991, 171). Their final placement in pits and watery contexts is common, and there may well be a ritual element to their disposal in such a manner, reflecting a wider late Romano-British tradition of depositing lead and pewter objects in such contexts (Petts 2004). Its presence at the site is certainly an indicator of a small Christian community in the surrounding area, and adds to the relatively sparse evidence for Christianity in the London region.

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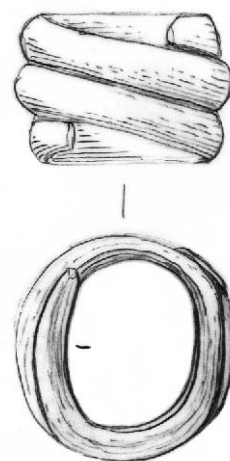
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1



2



3

0 50 mm

Metalwork - Bronze Age



Metalwork - Late Iron Age/Roman





Metalwork - Post-Roman

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