SHORTER CONTRIBUTIONS

A ROMAN LEAD TANK FROM TRUDOXHILL

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In September 2017, Steve Mills, a metal detectorist searching a pasture field in Trudoxhill found the corner of a large lead sheet item with raised decoration. Realising the significance of his find and, thinking at first it might be a Roman coffin, he contacted me in my role as Finds Liaison Officer for Somerset and Devon. With the assistance of the County Archaeologist, Robert Croft, and the agreement of the landowners Revd Angela Steele and Mr Richard Brooks we organised an excavation to identify and possibly retrieve the item.[1] The landowners kindly supported this excavation and have donated the item to the Somerset Museum Service; it is hoped that it will be placed on display after conservation. To date, it has only had preliminary cleaning.

As the item was exposed it became clear that it was not a coffin but instead was a large pile of folded, decorated lead sheet which, as more was exposed, was identified as a circular based lead tank, cut up in antiquity and folded and squashed into a pit. With the tank, folded between two sections, was a lead spout. Such tanks are very rare with around 30 known nationally and this is the first example found in Somerset. From examples found in context, and on stylistic grounds, they are thought to be 4th century in date (Crerar 2012, 137) and distinguishable from later groups of similar tanks based on their decoration. The spout is not paralleled with other tanks. This note is a preliminary report of the item and it is hoped further research will be undertaken and reported in this journal, or elsewhere, as appropriate. The tank is also published on the PAS database, ref: SOM-D21663.

Fig. 1 The tank in-situ with the end of the spout visible towards the centre, looking south-east; scale 1 metre

The excavation

The full excavation report, (Graham 2018), including drawings of the pieces in situ, is available from the Somerset Historic Environment Record. Figure 1[2] shows the tank in situ – the deposition hole has been excavated to the level of the tank. Excavation revealed that the hole appears to have been open for very little time suggesting it was dug for this deposition and refilled rapidly.

The tank

A full reconstruction drawing can be found as Figure 2.[3]

Form

The tank was formed of a thicker base sheet and thinner sides formed of two sheets. It appears to have had a flat circular base, estimated as c.800-900mm in diameter. The base sheet varies between 17 mm and 7.5 mm thick and appears plain.

From the flat base the base sheet curved up to vertical before the seam joining it to the sides; the seam is c. 50-70 mm above the base. The sides are therefore of a greater diameter than the base, estimated at c.950mm, 0.95m and the circumference is estimated at just under 3m. The horizontal seam between the base and sides is formed of a probably overlapping join which has been soldered on the inside so, where complete, it is visible only as a differently patinated, darker

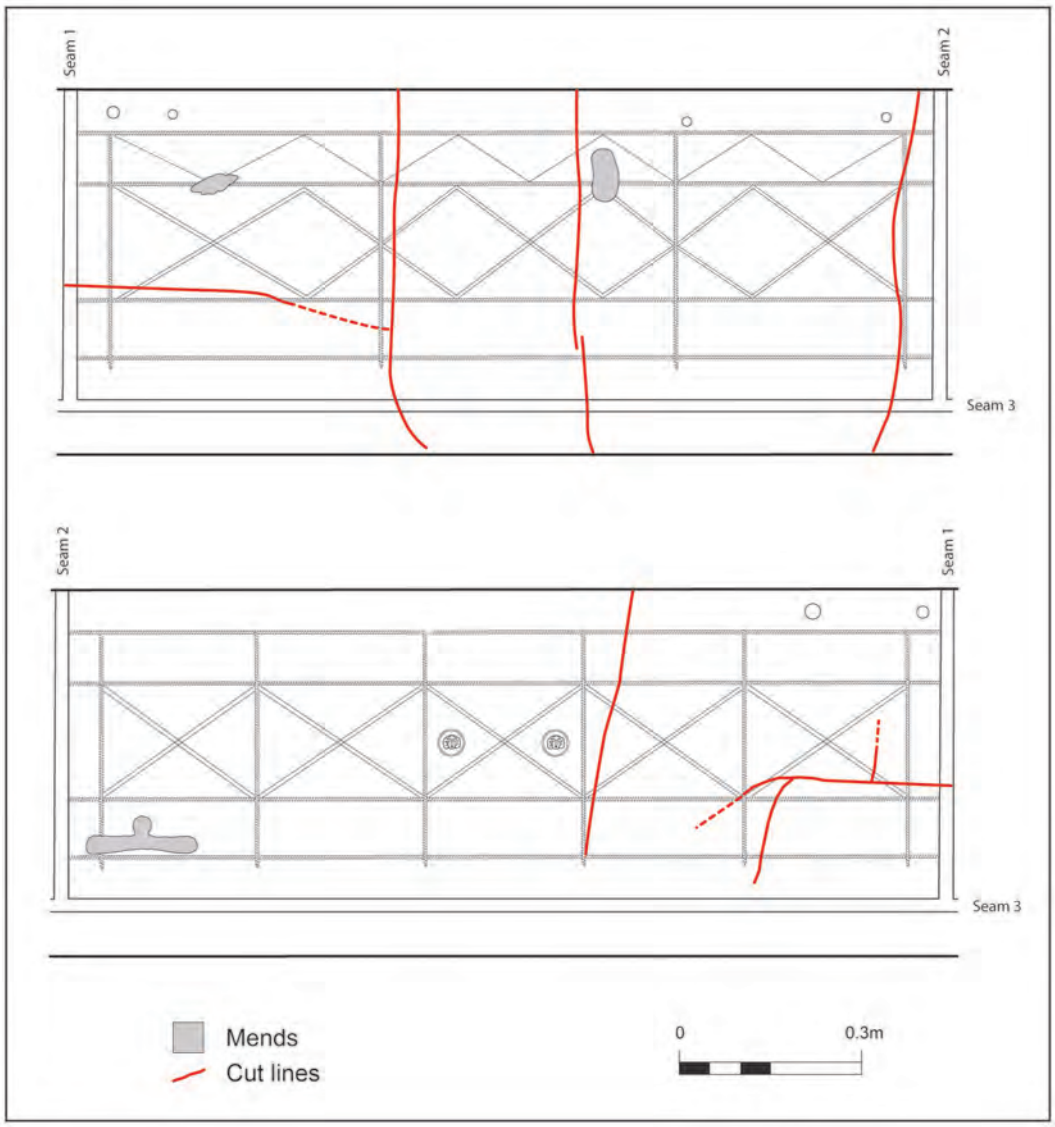

Fig. 2 Drawing of the two sides of the tank, to scale, with the cuts, areas to be refitted and ancient repairs indicated. Drawing by RMA Trevarthen

grey area. Vertical seams, in two places down the sides, are made in the same way and again almost invisible on the inner face. The tank is estimated to be 620mm tall.

The sides were vertical with the upper edge folded outwards and downwards to form a rim c. 30mm tall and c.20mm thick.[4] On the top of the sides are c.10 regularly spaced sub-square holes punched from the inside. This fold is damaged and opened out in places. It appears possible a reinforcing ring, perhaps wooden, was placed around the upper edge and nailed onto the lead on the outer face by nails that went from the inside out, then concealed by folding the outer face over. The gap where this fold remains suggests a ring 16mm by 5mm. Similar holes found on an example from Bourton-on-the-

Water were interpreted as evidence for wood lining to the inside (Herdman 1934, 379): if so it was held only at the top. The sides are thinner than the base, varying from 3.7mm to 5mm. There is no evidence of the pierced side lugs found on some examples.

Decoration

The base is not decorated. The exterior sides are decorated with integrally cast raised ropework designs with are broadly the same all around the circumference, but with some variation. Around the entire exterior run four horizontal lines of cablework defining narrower bands at the top and bottom and a wider one in the centre. These horizontal bands are divided by vertical cablework lines into cells of varying widths. The cells in the lower band are all plain. Those in the upper band are plain on one side (ie in a semicircle between the vertical seams) and decorated with a broad zig-zag on the other. The larger cells in the central band are decorated with saltire crosses and half saltires formed of pairs of plain lines running corner to corner and crossing in the middle.

In addition, one central cell contains two cast bosses, 47.8mm in diameter, placed one each side of the central crossing point, each with circular plain line border surrounding a raised moulded en-face mask. The bosses have identical human faces with rounded chins, raised mouths and noses surrounded by thick tendrils of waving hair and prominent central jewels on the foreheads formed of an oval in an oval frame; it is not clear if the lines to the sides of the jewels are hair, the rest of the diadem or wings as found on many gorgon heads. Figure 3 shows a close up of one of the faces. It is possible further conservation will reveal more detail.

Fig. 3 One of the two bosses with part of the saltire visible to the left

A large number of ancient cuts and scratches are visible on the vessel; all appear, on initial inspection, to be accidental but are being further examined in case any were deliberate designs.

Several crude, ancient repairs are visible on the tank. Planned analysis of their composition may identify which, if any, are contemporary with production and which later.

Parallels

As noted, the tank is a type of vessel found in late Roman Britain with around 30 partial or complete examples known nationally. They are most common in East Anglia with the only other South-Western examples being two from Bourton-on-the-Water, Gloucestershire (Herdman 1933), one from Preshute, Wiltshire (Dierks 2017) and one from Enford, Wiltshire (Vatcher 1967). Circular and rectangular examples are known, but most are circular and the new example is within the known range of sizes, fitting well with a large group of tanks 700 to 950mm in diameter (Crerar 2012, Appendix 1). The construction, with vertical side seams and a horizontal seam joining the base is common. Well preserved examples from Wigginton, Oxfordshire (Booth and Cameron 2011) and Burwell, Cambridgeshire (Crerar 2012, fig. 1) have a similar form with curved up sides to the base meeting a raised horizontal seam.

Similar holes were found on the rim of several tanks, including those from Bourton-on-the-Water already noted, Pulborough (Curwen 1943) and possibly Perry Oaks (Petts 2006).

There is some variation in decoration on these tanks but all feature cast raised designs and usually line-work, often cablework. A regular arrangement of rectangular cells divided by ropework and containing saltires is found on other examples including those from Perry Oaks, Pulborough, Preshute and one of the pair found at Bourton-on-the-Water (Petts 2006, Dierks 2017, Curwen 1943; Herdman 1934).

The faces are not paralleled on other examples of lead tanks although very similar designs of an en-face Gorgon masks in a circle are found on many other objects in Roman Britain and across the Empire, including lead coffins (Huskinson 1996, 60). While initially thought to be a gorgon the presence of a diadem argues against this interpretation. Imperial portraits were often en-face and diademed in the 4th century but the luxuriant wavy hair is very unlike the imperial image. Possible identifications include Bacchus, Eros and

Venus all of whom are sometimes shown diademed with similar hair. Venus is shown wearing a diadem on the Low Ham Mosaic, to give a local, contemporary, example.

The lead

The material used for the tank and repairs has not yet been scientifically analysed, although this is planned in future. Given the findspot, some association with the Mendip lead industry might be expected, but these items are uncommon in lead mining areas suggesting a ready source of material was not significant in their production or place of use.

Fig. 4 Lead spout showing the seam down one face

The spout

The spout (Figure 4) is circular in cross-section and appears complete. It narrows from c.85mm in external diameter at the attachment end, 53mm internally, to c.66mm externally by the mouth, 55mm internally. At the mouth is a thickened external plain band, 20mm wide and 9mm thick. The mouth appears complete and unbroken with some damage to one side. A seam is clearly visible down one face of the spout, indicating where the lead sheet was jointed.

At the attachment end are a series of ridges projecting out at 90 degrees to the spout and each ending in a cut line. It seems probable the spout here had two sheet collars projecting out at right angles. These flanked whatever it was joined to in an H joint. The spout was removed by cutting through these two collars and whatever lead item it was joined too, leaving parts of all three attached to the spout.

From the current refit of the tank pieces (Figure 2) it seems likely the spout was not attached to it; the only possible current location is low down on one side to the right of the panel with the faces and it is likely as the smaller, plainer pieces are located this possibility will disappear. No other lead tanks have been found with a spout, or a hole for one. Drainage channels are common on stone and tile built fonts (Petts 2016 669) of the period, but the use of a long spout rather than a simple hole seems surprising for drainage. It seems more likely that this is a spout to bring water into the tank as well attested in drinking fountains and baths in the Roman world (Aryamontri 2009, 326). It is also possible the spout was not directly associated with the tank in use.

Deposition

Original cuts are visible on the tank in several places suggesting it was cut up into at least five pieces, the largest almost a quarter of the vessel, the others smaller. The cuts are mostly straight with several places that the angle of the cut made the blade go awry leading to the cut swinging to one side and being restarted, leaving a ragged edge of points. Since the cuts appear straight with no compression from each side, it suggests that a blade was used rather than shears. The cut around the end of the spout also suggests a blade as it would not be possible to use shears in this way, at least until the cut was started. Further micro-examination may establish the tool used more precisely.

The pieces of tank had been folded either after cutting or to fit them in the pit and compressed, either before or by burial. Many had broken along the folds due to the weakness at this point. The position in the soil and surrounding clay made clear these breaks had happened post burial, although many are patinated suggesting the breaks happened some time ago. The almost pure clay subsoil the piece was buried in may have also added stresses from shrinkage and expansion movement as it dried out. It is clear the areas on the base of the stacked assemblage have suffered much greater corrosion and, in places, the lead has entirely crumbled. It is likely the pieces, as well as bearing greater weight, were also in water for some time as the clay base of the pit would hold rainwater that filtered down from the looser filling around the vessel.

Many of the other known examples show evidence of similar deliberate pre-deposition cutting; Petts (2006) suggests the example for Perry Oaks was cut with an axe. Folding to fit the

pieces into a pit was found in excavated examples at Wigginton, Flawborough and Perry Oaks (Booth and Camerton 2011, Elliot and Malone 1999, Petts 2006) and examples that were not professionally excavated appear to have also been folded, such as that from Preshute, Wiltshire (Dierks 2017). Similarly, where other examples have been found in context they are usually, like this example,with the possible exception of the spout, buried on their own, not with other lead scrap, suggesting they were not simply being gathered for recycling.

Context

The excavation was focussed only on the deposition pit and did not find any evidence of surrounding context. The pit appears to have been dug for this purpose and rapidly filled in. No other finds were made in the pit or topsoil. The lack of Roman pottery is particularly surprising. Further study around the findspot with geophysical survey techniques is planned for 2018.

Tank fragments from near Luford, Lincolnshire were also deposited in a pit dug specifically for this purpose (Daubney 2005), whereas others have been in reused pits such as the Perry Oaks example (Petts 2006) deposited in a waterhole.

The tank was deposited very near a small stream albeit on a high raised bank and not physically within the water. The surrounding topography suggested it may have been on a spur where a side channel or spring met the main stream. This association with water is also seen in many of the deposition contexts (Petts 2016, 670)

Function

While other similar tanks are decorated with chi-rho symbols and even the possible depiction of a baptism (e.g. Walesby; Petch 1961), this example does not have any explicit Christian symbolism. The use of the saltire, sometimes interpreted as a *crux decussata* is common on many decorated lead items of the period. The use of an imperial portrait or possibly pagan deity is also explicitly non-Christian although not necessarily Pagan; mosaic designs incorporating Roman deities and mythology are often seen as demonstrations of elite 'classical' learning rather than religious (Petts 2016, 673) and could potentially be seen as generally apotropaic. In a similar way the Preshute example was decorated with an erect phallus, also apotropaic (Dierks 2017).

Despite the clear Christian symbols on many examples the precise function of these objects is uncertain. Often interpreted as baptismial fonts (e.g. Thomas 1981, 221–5), Watts has suggested that they may instead be for ritual foot washing (1991, 171). Crerar (2012), in contrast, argues some at least may have a secular use, perhaps related to bath houses and the broader range of apotropaic symbols now known, including on this example and that from Preshute, might support her argument. Such a function would also accord well with the spout found with this example. 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 2016, 670). It is hoped this complete example, left in situ by the finder and professionally excavated, will help with the development of the debate on this class of object's use and potentially regionality.

NOTES

1 The item was initially supposed to be a coffin so consideration was given as to the appropriate action: the option of leaving the burial in situ was considered to respect the potential wishes of the deceased, but a Ministry of Justice licence for exhumation was acquired in case exhumation was required.

2 Photograph taken by A. Graham.

3 The drawing was funded by the SANHS Maltwood Fund and I gratefully acknowledge this support.

4 There is considerable variation in the degree of folding and some of the rim is now unfolded apart from the upper edge which is folded out but parallel tension scars suggest most was originally folded.

ACKNOWLEDGEMENTS

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In the development of this note I would like to thank Maxime Ratcliffe for directing me to a South Western example I had missed and to Bob Croft

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