CAT 597: Warriors Left Panels

K237, K435–K436, K813, K828, K933, K1319, K1332, K1373, K1382–K1383, K1392, K1400, K1405, K1407, K1416–K1417, K1420, K1423, K1480, K1495, K1503, K1556, K1562, K1596, K1636, K1664, K1690, K1694, K1770–K1771, K1774, K2012

Condition Report

Conservation Started: June 2015
Conservation Finished: April 2016
Conservator: Kayleigh Fuller, Giovanna Fregni
Time Taken: 15 hours
Including digital photography, report, conservation and packing.

Dimensions: 52mm (L Largest), Th <0.5mm
A rectangular die c. W. 51mm; H. 47mm
Weight before: 8.50g
Weight after: n/a

Digital photography:
Taken with a Canon EOS digital camera under daylight bulbs and Photomicrographs taken using Keyence VHX-1000 3D digital microscope with LED and/or fibre optic lights, 20-200x magnification.

Description: Visual and microscopic examination using Meiji stereo microscope 7-75x magnification.
MULTIPLE SHEET PANELS IN SILVER-GILT SHOWING THREE WARRIORS MARCHING LEFT. Seventy fragments, from an estimated minimum of six identical panels; only one survives to full width. A rectangular die (c. W. 51mm; H. 47mm) was used to impress the pattern on the reverse of the sheet metal. One panel was cut down, presumably to fit the available remaining space, but cuts to other panels may relate to removal rather than manufacture. A few fixing-holes only occur, but their general absence is probably the result of the lack of edging that could be certainly attributed; many fragments with the same type of beaded border remain unassociated (**606**), as it was common to multiple panels and bands (**593–596, 598, 600, 602**). The fragments overall, allow almost the entire design to be reconstructed. Three warriors are shown parading to the left with spears held point-down, carried on the side away from the viewer. On the side open to view, shields are carried at waist height. Scabbarded swords are worn the same side (on the left of the body), the pommels shown just above the rims of the shield (missing for the lead figure, due to fragment coverage). The first and third warriors wear knee-length tunics, belted at the waist, but with different 'textile' patterns. The central figure wears a belted hauberk, with a dotted texture (compare with **596**). All look skyward as they march, and they wear helmets with cheek-pieces and bird-headed crests; the beaks are curved like raptors and the helmet caps are filled with herringbone pattern. They appear shoeless. (CF)

Label information
X-Ray L95

Association:
Helmet material

Pre-Conservation Condition: Visual and microscopic examination using Meiji stereo microscope 7-75x magnification.

The silver decorated sheet is highly fragmented, distorted and weak due to embrittlement of the silver sheet over time. One surface is gilded, however it is highly worn on the surface and brown corrosion products are present on the gilded surface along the band. Some of the die impressed patterned sections have been flattened in the burial environment.

Treatment: Carried out using a Meiji stereo microscope
Purpose: Study
Aim: Cleaning/ Reassembly
Materials: Soft natural/synthetic brushes, thorn in pin vice/holder, IMS on metals, 50:50 water/IMS on metals, cotton wool swabs, cocktail stick, Paraloid B72

Treatment at British Museum Prior to treatment at Birmingham Museums Trust
The granular soil on the front and back was mechanically removed or reduced where possible using a fine thorn tip secured in a pin vice and a small pure bristle brush. 50:50 IMS/water was used to soften the soil to facilitate removal. Loose particles of soil were then removed with a small swab of IMS.

The corrosion products were left in situ; corrosion was not active and can be further cleaned or stabilised at a later date.

The paper K number was adhered to the back with HMG brand Paraloid B72 (ethyl methacrylate copolymer) from the tube, applied with a cocktail stick.

Appropriate packing in Plastazote cut outs and crystals boxes.

Joins made at British Museum
Fragments were adhered together using HMG Paraloid B72. In some cases sections had been backed with a nylon gossamer material to further support the frieze.

Joins across K numbers:
(4 frags) K1319+K1405+K1407+K1400.
(5 frags) K1690+K1694x3.
(9 frags) K1664x5+K435x3+K436.
(5 frags) K1495+K1771+K1774x3.
(13 frags) K1423x7+K1416x3+K1417.
(3 frags) K1416+K1420+K1503.
(3 frags) K1420+K1417+K1416.
(9 frags) K1382x2+K1392x6+K1383.
(2 frags) K1332+K795.

Joins within K numbers: K828, K237.

Other possible fragments: K237, K1016, K1392, K1409, K1460, K1562, K1577, K1596, K1636.
Possible border fragment: (3 frags) K1416x2+K1412

Further treatment at Birmingham Museum
Additional fragment associations were made and adhered to the frieze with 35%W/V Paraloid B72 in

Acetone. Some fragments were removed and placed in a different location as appropriate. An additional support of unwoven polyester netting was added by way of a reverse facing to the back of the larger section using 10% W/V Paraloid B72 in Acetone.

Final K numbers associated with the 6 panels

K237, K435–K436, K813, K828, K933, K1319, K1332, K1373, K1382–K1383, K1392, K1400, K1405, K1407, K1416–K1417, K1420, K1423, K1480, K1495, K1503, K1556, K1562, K1596, K1636, K1664, K1665, K1690, K1694, K1770–K1771, K1774, K2012

Panel 1.1

K435 (3 frags), K436, K1664 (5 frags) = 0.88g

Panel 1.2

K1480 (2 frags), K1495 (5 frags), K1770- K1771, K1774 (3 frags) = 1.05g

Panel 1.3

K1690, K1694 (3 frags) = 0.21g
K1636 (2 frags) = 0.11g
K1416 (3 frags), K1417, K1423 (8 frags) = 1.38g
K828, K1332, K1373, K1562 (4 frags) = 0.48g (only two fragments joined K1332 and K1562)

Panel 1.4

K1416, K1417, K1420 = 0.27g
K813 = 0.13g
K237 = 0.16g
K1382 (2 frags), K1383, K1392 (6 frags), K1495, K1596 = 2.33g

Panel 1.5

K1319, K1400, K1405, K1407 (4 frags) = 0.73g
K2012 =0.01g
K1556 = 0.11g
K933 = 0.16g

Panel 1.6

K1332 = 0.09g
K1416, K1420, K1503 = 0.40g

Each of the die impressed sheet panels were appropriately packed into their respective 1 of 6 panels in individual crystal boxes with inserts cut out of the plastazote lining in the suspected position of the original die pattern. Fragments or sections likely to become loose then had a piece of surgical steel adhered to the back (with an interleaf of unwoven polyester netting) using 20% W/V Paraloid B72 in Acetone. This then meant that the fragments could be tied onto the plastazote lining. This prevents

fragments becoming further broken or disassociated with the frieze through transit and other activities. This also aided in correct final photography of the main die impressed sheet panels.

Post-Conservation Condition/Findings:
The 6 panels fit around the helmet in order to decorate the main circumference of the item.

Key features:

- **Die impressed sheet depicting warriors**
- **Helmet decoration**
- **6 panels**

Samples:
None – insufficient soil.

References:
E.S. Blakelock, XRF analysis of silver foils from the Staffordshire Hoard. British Museum Science Report PR0744-14, British Museum Research Report, (2014) unpublished

Shearman, F., 2014 'Silver gilt sheet/Friezes 1,3,5 Warriors moving to left Condition Report' British Museum reports

Shearman,F., Camurcuoglu, D., Hockey, M., and McArthur, G. 2014 *Department Of Conservation And Scientific Research: Staffordshire Hoard Die-Impressed Sheeting Conservation Report.* Unpublished report for the British Museum