

### **CAT 600 - Silver panel of animal art with gilded borders**

K24, K75, K120, K146, K153, K191, K195, K210, K226, K229, K502, K510, K518, K520–K521, K527, K540, K542, K600–K601, K606, K613, K640, K746, K757, K763, K785, K795, K830, K838–K840, K910, K934, K960, K1023, K1057, K1070, K1081, K1088, K1095, K1099, K1117, K1161, K1176, K1271, K1291, K1303, K1326, K1350, K1363, K1473, K1533, K1577, K1596, K1670, K1677, K1690, K1714, K1778, K1865, K1906, K1912, K1952, K2057, K2150, K2191, K5030, K5077

### **Condition Report**

**Conservation Started:** April 2015

**Conservation Finished:** May-June 2016

**Conservator:** Kayleigh Fuller, Giovanna Fregni

**Time Taken:** 21 hours

Including digital photography, report, conservation and packing.

**Dimensions:** 107mm (Largest Length), Th <0.5mm

**Weight before:** 9.77g

**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.

FRAGMENTS OF A LARGE SHEET COVERING IN SILVER WITH MULTIPLE PANELS OF ANIMAL ART AND GILDED BORDERS.

Assembled from ninety-six fragments, and largely incomplete; around thirty are fragments of gilded border. Altogether the remains can be interpreted to suggest a large covering of sheet with a concave curve to one edge and with symmetrically organised panels holding the animal art, which was die impressed from the reverse. Multiple dies were probably used, including possibly separate dies for the borders. These are mostly beaded, but one dividing frame is in the pattern known as herringbone-with-spine. The covering was largely left ungilded, except for a thick frame that surrounds the largest surviving panel. A fixing-hole pierces the frame and one other hole pierces a panel. (CF)

#### **Label information**

##### **Associated Material:**

Part of Helmet

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

The silver decorated sheet is fragmented but primarily in large sections. The silver is slightly embrittled with fragile edges. The sections are torn and warped and not all fragments directly join. Sections of border are associated and have flat gilded edge sections which have slight abrasion and wear.

**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.

Joins made at the British Museum are as following and fragments were adhered using HMG Paraloid B72. Nylon Gossamer was used to support some of the joined fragments:

K785+K146, K521+K24, K839 +K840, K795+ K1186 K216+K1694

Potential association were made with the following additional K numbers

K15, K75, K155, K170, K212, K218, K226, K520, K527, K757, K790, K813, K838, K1088, K1161, K1574, K1589, K1676, K1690

Appropriate packing in Plastazote cut outs and crystals boxes.

**Further treatment at Birmingham Museum**

Additional fragment associations were made and adhered to the frieze with 35%W/V Paraloid B72 in Acetone. An additional support of unwoven polyester netting was added by way of a reverse facing to the back of some sections using 10% W/V Paraloid B72 in Acetone.

Additional fragments joined/ associated

K521+ K24 with K1690= 1.23g

K1088+K1690 = 0.70g

K75+K746+K527+K510+ K520+ K5030 = 4.95g

K153 + K838+ K795 = 1.97g

K146 +K785 realigned= 3.65g

K1690x2 =0.71g

K1690 =0.10g

K1690= 0.20g

Each of the die impressed sheet sections were appropriately packed in the suspected arrangement in plastic box with sections cut into the plastazote lining to house the sections securely. The box was then filled with additional topping layers of plastazote so that the fragments would not move about during

transit and become further broken or disassociated with the panels. All associated fragments were packed with the frieze. This also aided in correct final photography of the main die impressed sheet panels.

Frieze is constructed of 68 fragments from K numbers

K24, K75, K120 (0.21g), K146, K153, K195(0.17g), K229 (0.04g), K502 (0.03g), K510, K520–K521, K527, K540 (0.06g), K542 (0.05g), K600 (0.08g)–K601 (0.05g), K606 (0.04g), K640 (0.14g) , K746, K757 (0.17g), K763 (0.17g), K785, K795 (0.67g), K830(0.13g), K838–K840 (0.22g), K910 (0.11g), K934(0.24g), K1023 (0.21g), K1070 (0.03g), K1088, K1095 (0.37g), K1099(0.17g), K1117 (0.20g), K1176 (0.23g), K1271(0.04g), K1533 (0.17g), K1577(0.08g), K1596 (0.20g), K1690 , K1714 (0.21g), K1912 (0.12g), K2057 (<0.07g), K2150 (0.32g), K2191 (0.06g), K5030, K5077 (0.11g)

### **Main sections photographed dimensions**

K75+K746+K527+K510+ K520+ K5030 = 72mm(L) x 40mm (W) x <1mm (Th)

K146 +K785 = 63mm (L) x 28mm (W) x <1mm (Th)

K153 + K838+ K795 = 39mm (L) x 38.5mm (W) x <1mm (Th)

K521+ K24 + K1690= 31mm (L) x 23mm (W) x <1mm (Th)

K763=11mm(L) x 9mm(W) x <1mm (Th)

K795= 20mm (L) x 15mm (W) x <1mm (Th)

k934= 13mm (L) x 13mm(W) x <1mm (Th)

K1023= 10mm(L) x 10mm (W) x <1mm (Th)

K1088+K1690= 25.5mm(L) x 17.5mm (W) x <1mm (Th)

K1690= 7.5mm (L) x 6mm (W) x <1mm (Th)

K1690x2 = 36.5mm (L) x 17mm(W) x <1mm (Th)

K1690= 12.5mm(L) x 10mm(W) x <1mm (Th)

K2150 = 15.5mm (L) x 12.5mm(W) x <1mm (Th)

### **Other fragments**

K1176= 8mm (L) x 7mm (W) x <1mm (Th)

K1099 = 9mm (L) x 7mm (W) x <1mm (Th)

K1117 = 11.5mm (L) x 7mm (W) x<1mm (Th)

K1577= 6mm (L) x 7mm (W) x<1mm (Th)

K195= 8.5mm (L) x 8mm (W) x<1mm (Th)

K120= 13mm (L) x 7mm (W) x<1mm (Th)

K600+K606 (joined)= 3.5mm (L) x 7mm (W) x<1mm (Th)

K910 = 6mm (L) x 7mm (W) x<1mm (Th)

K1596 = 11mm (L) x 6.5mm (W) x<1mm (Th)

K5077= 6.5mm (L) x 7mm (W) x<1mm (Th)

K757= 10mm (L) x 10mm (W) x<1mm (Th)

K1070= 12.5mm (L) x 11mm (W) <1mm (Th)

K839 +K840= 10mm (L) x 12mm (L) <1mm (Th)  
 K1714= 12mm (L) x 7mm (W) <1mm (Th)  
 K1912= 10mm (L) x 6.5mm (W) <1mm (Th)  
 K746= 8.5mm (L) x 6.5mm (W) <1mm (Th)  
 K640 = 11mm (L) x 8mm (W) <1mm (Th)  
 K2191= 9mm (L) x 7mm (W) <1mm (Th), 7mm (L) x6mm (W) <1mm (Th)  
 K830= 7mm (L) x 6mm (L) <1mm (Th)  
 K75= 8mm (L) x 7mm (W) <1mm (Th)  
 K1533= 5mm (L) x 4mm (W) <1mm (Th), 9mm (L) x 5mm (W) x <1mm (Th)  
 K1271= 5mm (L) x 6mm (W) <1mm (Th)  
 K795= 5mm (L) x 3mm (W) <1mm (Th)  
 K542= 8mm (L) x 6mm (W) <1mm (Th)  
 K601= 8mm (L) x 3.5mm (W) <1mm (Th)  
 K229= 5mm (L) x 5mm (W) <1mm (Th)  
 K502= 3 frags too small  
 K1690= 6mm (L) x 3.5mm (W) <1mm (Th) (largest of three frags)  
 K520= 7mm (L) x 3mm (W) <1mm (Th) 1 of 2 frags

Additional fragments of border/ other which go with frieze were later identified and added to box

K number	Weight (g)	Type	Dimensions
K210	0.19	Gilt border	11.5mm (L) x 7.5mm (W) x <1mm (Th)
K1778	0.24	Gilt border	13mm (L) x 8mm (W) x <1mm (Th)
k1473x 2	0.09	DIS	
K1350	0.19	Gilt border	11mm (L) x 7mm (W) x <1mm (Th)
K1363	0.12	Gilt border	7mm (L) x 6.5mm (W) x <1mm (Th)
K613	0.02	DIS	5mm (L) x 3.5mm (W) x <1mm (Th)
K1677	0.06	0.17g	9mm (L) x 4.5mm (W)/ 10mm (L) x9mm (W) x <1mm (Th)
K1291	0.04	DIS	
K1057	0.02	DIS	11mm (L) x 6mm (W) x <1mm (Th)
K1303x2	0.01	DIS	
K785	0.04	DIS	5mm (L) x 5mm (W) x <1mm (Th)
K1161	0.1	DIS	8.5mm (L) x 6mm (W) x <1mm (Th)
K960x2	0.2	Border	8.5mm (L) x 6mm (W) x <1mm (Th) 6.5mm (L) x 6mm (W) x <1mm (Th)
K518	1.03	Border	41.5mm (curvature diameter)x 7mm (W) x <1mm (Th)
K191	0.2	Border	17mm (L) x 7mm (W) x <1mm (Th)
		DIS	

K226	0.03	DIS	6.5mm (L) x 5mm (W) x <1mm (Th)
		Border	24.5mm (L) x 7.5mm (W) x <1mm (Th)
K1670	0.44	DIS	
K1906	0.17	Border	11mm (L) x 11.5mm (W) x <1mm (Th)
K1952	0.11	Border	9mm (L) x 7mm (W) x <1mm (Th)
K350d x2	0.28	0.28g	
K1336	0.08	DIS	7mm (L) x 5mm (W) x <1mm (Th)
K1326	0.06	DIS	7mm (L) x 4mm (W) x <1mm (Th)
k1081	0.17	Border	9.5mm(L) x 9mm (W) x <1mm (Th)
			8.5mm (W) x 13mm(L) x <1mm (Th)
K1865 x2	0.29/ 0.27	DIS	15mm (L) x 10mm (W) x <1mm (Th)

**Post-Conservation Condition/Findings:**

Part of helmet

**Key features:**

- Animal Art
- Silver Zoomorphic panels
- Helmet

**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

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