

K1056 Condition Report

Conservation Started: 12/02/2013

Conservation Finished: 13/02/2013

Conservator: Natalie Harding

Time Taken: 5 hours

Including digital photography, report, conservation and packing.

Dimensions: (L) distorted 71mm (W) distorted 16.5mm (H) cloisonné band 5mm (Th) sheet 0.5mm

Weight before: 21.51g

Weight after: 19.26g

Catalogue number: 362

Digital photography:

Taken with a Nikon Coolpix 4500 digital camera, under daylight or bulbs and Meiji Techno RZ Stereo microscope with an Infinity 1 camera (with analyses capture software) and fibre optic lights, 7-75x magnification. Taken before, during and after.

Annotation on any of the storage bags or boxes: K1056, SS09, 152 (in triangle), Gold & Garnet 30/7/09, BA 1971 1001 M8.

Description: Visual and microscopic examination using Meiji stereo microscope 7-75x magnification

X-Ray: L19

Gold and garnet hilt-plate, of sheet-metal construction, from the underside of the lower guard, with a band of cloisonné around its edge; misshapen and bent, with multiple cloisons ruptured, and garnets lost and sunken. An aperture for a blade runs for much of the central length, with a single pin/rivet hole at each end; no pins/rivets remain. The garnet cloisonné decoration comprises a repeating pattern of simple stepped cell forms, each stone backed with a stamped waffle-pattern foil [obscured by mud; review]. Menghin *Type ***** [check]. [cf. 691 – same construction and decoration]. Chris Fern.

Associated Objects: n/a

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

The piece is damaged; bent and twisted in a figure of eight shape, or 'V' shape. The major bent/twist is in the centre of the piece where many garnets appears to have fallen out or have been damaged. The piece has been flattened at one end. Although this damage has disfigured the piece, it seems to be stable at the moment.

Treatment: Carried out using a Meiji stereo microscope

Purpose: Study / Analysis

Aim: Total cleaning as far as possible

Materials: Soft natural/synthetic brushes, thorn in pin vice/holder, IMS on metals, 50:50 water/IMS on metals, water on garnets, cotton wool swabs, cocktail stick, Paraloid B72.

The granular soil all over was mechanically removed or reduced where possible using a fine thorn tip secured in a pin vice and a small pure bristle brush. IMS or water was used to soften the soil to facilitate removal. Loose particles of soil were then removed with a small swab of IMS.

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.

A storage box padded with white polyethylene foam was made for housing the object. A strip of Tyvek (spun bound polyethylene fibres) was used as a cushion for the object and to help lift it out of the foam.

Post-Conservation Condition/Findings:

The piece remains in good stable condition at one end with mostly all the garnets intact and secure. At this better condition end a pin or rivet hole has been pierced and is approximately 2mm in diameter. Around this hole on the front, multiple deep scratch marks surround the hole. The more damaged end of the piece also has a pin or rivet hole pierced and around this hole there are deep scratch marks surrounding the hole, similar to the other rivet/pin hole. Surrounding both holes are faint impressions of circular bosses. This damage looks deliberate and may suggest that this was the point where these pieces were pulled off the sword, where a tool may have been used to wedge under the boss and rivet and prized off, thus creating these kinds of similar scratch marks.

Gold foils can be seen behind the garnets and are of the squared 'dot' or waffle pattern.

On the front towards the centre of the hilt plate linear abrasions marks the surface.

Towards the centre where the piece is twisted garnets are lost and damaged. The cells with the missing garnets are soil filled intermingled with a black coloured substance, possibly tarnish or paste? In some places the soil has been left in situ as this is what may be holding some of the damaged garnets in place.

On the reverse side, towards the centre of the piece, two rows of three of inscribed 'X' 's can be seen. One row of three 'X' 's is on the plate and one row has been inscribed on the lower section of the garnet housing.

There are also two sets of vertical lines further along the non-damaged area that dissects the aperture.

The gold is a bright yellow colour with small amounts of black tarnish and iron staining in areas.

Key Features:

- Alternating 'T' shaped cut garnets.
- Waffle patterned gold backing foils.
- Black substance fills some cells, possibly paste.
- Scratch marks around the rivet holes, possibly where the piece was pulled apart.

Analysis Undertaken: n/a

Samples:

1. Soil from all over.

References: Chris Ferns conservation list 1000- 1776.