K1150 Condition Report

Conservation Started: 10/5/2011
Conservation Finished: 11/5/2011
Conservator: Cymbeline Storey
Time Taken: 8 hours
Including digital photography, report, conservation and packing.

Dimensions: (L) 29 mm (W) 12 mm (D) 2 mm
Weight before: 2.28g
Weight after: 1.42g
Catalogue number: 363

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: BA 1971, SSH 09, K16, 1001, 478 (in a triangle), 12/08/09

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

Object is a partial gold sword hilt plate with square to rectangle cloisonné garnet decoration on the sides and one lidded cell at the point of the intact end. ~75% of the object is missing.

Associated Objects: None

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

Approximately 80% of the object is covered with compact, sandy soil containing some organic material (plant matter). Specks of green corrosion product are visible in the soil on both sides. Some apparently empty garnet cells can be seen. The visible gold has a few minor scratches/dents. Soil removal is necessary to assess the condition of this object.

Treatment: Carried out using a Meiji stereo microscope
Purpose: Analysis/Study; object is being cleaned to facilitate SEM/XRF analysis in Cardiff
Aim: Total cleaning
Materials: Soft natural/synthetic brushes, cotton swab, cocktail stick, thorn in pin vice/holder, water/IMS on metals, water on garnets

The granular soil on the exterior/interior surface 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.

Five exposed foils required consolidation; HMG brand Paraloid B72 (ethyl methacrylate copolymer) diluted with acetone to about a 10% concentration was applied using a small brush. For details of consolidated areas see document 'K1150 Treatment Details'.

The paper K number was adhered to the bottom 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 constructed to house 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:

Removal of soil revealed cloisonné garnet decoration around the edge of the plate. There are 22 cells total (2 partial on the ends and 20 intact). 4 contain foiled garnets, 9 have foils but no garnets, and 9 are empty or contain orange to green residue/paste and some soil.

One cell contains a blue-green material that appears to be different in texture than other, more powdery residues seen in other cells on this and other objects in the hoard. Part of this material detached and was retained in sample vial 7. The remainder was left in situ for future analysis (deteriorated glass? paste? something else?). See document 'K1150 Treatment Details' for location.

Two varieties of foils are present. One is a small waffle pattern and one is a larger pattern with bumps that appear slightly pointy at the tips. Of the exposed foils, 7 are small waffle and 2 are large. Two foils are positioned with the bumps facing down, while 7 are positioned with the bumps facing up. See micrographs.

Three empty rivet holes were exposed during cleaning. These were punched through from the top surface. There is an additional, apparently unintentional, hole near the intact end that is probably the result of burial. See document 'K1150 Treatment Details' for location.

On one side of the object the flat hilt plate has peeled up from the cloisonné garnet rim. Due to compression the central area of the plate is folded. See photos.

Samples:

1. Soil from exterior
2. Green corrosion in soil on bottom
3. Green corrosion in soil on top
4. Organic material in soil on top
5. Unknown object (organic?) found on break edge.
6. Small fragment of gold that detached from object
7. Green-blue material (paste? deteriorated glass?) that detached from cell