K1 Condition Report

UPDATE 27.07.15 – Now boxed with K127, K463, K643, K681, K712, K1313, K5005

Conservation Started: 23/02/2012
Conservation Finished: 02/03/2012
Conservator: Cymbeline Storey
Time Taken: 10 hours
Including digital photography, report, conservation and packing.

Dimensions: (L) 45mm (W) 44mm (D) 24mm
Weight before: 21.49g
Weight after: 20.23g
Catalogue number: 544

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.

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

Gold strip with geometric garnet cloisonné inlay. Garnet shapes are square, mushroom, and various geometric shapes, many of which have some curved and some angular edges. Both long edges are decorated with a single beaded gold wire. One short edge is plain, finished gold and tapers into a point. The other short edge is a jagged break edge. The garnets are purplish-red to cherry-red in colour and are backed by gold foils with bumps facing upward.

Associated Objects: Same garnet pattern seen on: K712, K270, K643, K843, K1313

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

Bent into distorted S shape with one end torn and folded over onto itself. The break edges are jagged and covered with soil. The original profile of the object was probably straight and flat.

Front: ~70% covered with compact, sandy soil that is unremarkable apart from one small speck of fluffy, white material (probably mould) and a small amount of plant matter. The soil layer is thick in places, particularly around the folded-over section.

The gold has many superficial scratches but no particularly distinctive ones. There are a few small areas of light orange tarnish.

Some of the garnets are flush with the top surface while others are sunken or tilted in their cells. Visible garnets are highly lustrous and generally in good condition. At least one garnet is broken and some are missing. One exposed backing foil is visible.

There is major disruption to cells in the area of the bends, with dislocation of garnets and cell walls, some of which jut proud of the surface. Some garnets are missing in these areas, though it is not possible to determine how many due to soil coverage. A dark residue is visible on several interior cell walls (paste residue?).

Back: ~50% covered with compact, sandy soil that is thick in places. There is one large, translucent, milky white stone embedded in the soil and one patch of unusually light brown soil. There is one dark inclusion in the soil (garnet chip?).

The gold is plain with a slightly bumpy profile resulting from the impression of the cell walls showing through. There are a few small areas of light orange tarnish. There are some consistent, parallel, old-looking scratches around the slanted end that appear to be tool marks from manufacture. There is one additional straight scratch that might be a maker's mark; soil would have to be removed to confirm this.

One fastening hole is visible near the slanted end. It appears to be empty apart from soil. It has an uneven, raised rim, indicating that it was punched through from the front.

Short edges: One short edge is slanted and tapers into a point. This edge is plain gold and features a number of consistent, parallel, old-looking scratches that appear to be tool marks from manufacture. The other short edge is a jagged break edge covered with soil.

Long edges: Both long edges are finished and feature a single beaded gold wire and a slightly extended lip. On one side the beaded wire runs the entire length of the object apart from a 2mm gap between the end of the wire and the slanted edge. ~25% of the beaded wire on the other edge is missing (in the area of the folded-over section). Soil surrounds both beaded wires.

Treatment: Carried out using a Meiji stereo microscope
Purpose: Display / Study
Aim: Partial cleaning
Materials: Soft natural/synthetic brushes, cotton swab, cocktail stick, thorn in pin vice/holder, water on garnets, water/IMS on metals

The granular soil on the front and one section of the back (toward the tapered end) 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.

Two cells containing fractured garnets required consolidation to prevent loss of material. These cells were consolidated using Paraloid B72 (ethyl methacrylate copolymer) 10% w/v in acetone applied with a small paint brush. See 'K1 Treatment Details' for locations.

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.

Post-Conservation Condition/Findings:

Front: Cleaning revealed additional missing or broken garnets, particularly around the two bends. Some garnets are sunk or tilted in their cells. There is a large deposit of whitish material in the soil in the folded-over area; this was left in situ for future study.

Back: The decision was taken to remove soil on the back around the tapered end because this area features filing marks, a fastening hole, and one scratch that seemed as if it might be deliberate. Cleaning revealed one additional fastening hole, but with the edges filed down almost flush with the surface, in sharp contrast to the fastening hole with the raised lip that is right next to it. The additional fastening hole is apparently empty apart from soil.

Soil around the major bend was reduced around the top edge for display purposes. Several unidentified dark inclusions were found in the soil in this area and retained in a sample vial.

Key Features:

- Geometric cloisonné garnet decoration with textured gold backing foils
- Slanted finished end that tapers into a point
- Two visible empty fastening holes
- Filing/working marks on back and on finished short edge
- White deposit in soil

Analysis Undertaken:

XRF analysis of the object was performed. See 'K1 XRF Report'.

Samples:

1. soil – front
2. soil – back ADDED TO SAMPLE 1
3. soil – sides ADDED TO SAMPLE 1
4. white deposit in soil – front DISPOSED
5. white material (mould?) in soil – front DISPOSED
6. plant matter in soil – front DISPOSED
7. plant matter in soil – sides DISPOSED
8. garnet chips in soil – front DISPOSED
9. black inclusions in soil – back, at bend DISPOSED
10. black inclusions in soil – back, near fastening holes DISPOSED

A garnet and foil fell out of the piece during examination for FTIR sampling. The garnet and foil were placed in a labeled glass vial and added to sample box K1- the existing set of samples for this object.