

## K13 Condition Report

**Conservation Started:** 10/03/2011

**Conservation Finished:** 11/03/2011

**Conservator:** Cymbeline Storey

**Time Taken:** 3.5 hours

Including digital photography, report, conservation and packing.

**Dimensions:** (L) 17.5mm (W) 20mm (H) flange 3mm (Th) 1mm

**Weight before:** 2.84 g

**Weight after:** 2.46 g

**Catalogue number:** 379

### 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 SS1709 (or SSH09? - handwriting is illegible)  
1002 XX 218 (in triangle) 31/07/09

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

The object is a fitting, a relatively flat piece of metal with two raised ridges visible on the front and one raised ridge visible on the back. Compacted, sandy soil that contains a small amount of plant matter covers ~25% of the front and ~95% of the back of the object. The front of the object features three holes; two are apparently empty and filled with compacted soil and one contains what appears to be the head of a round rivet. The holes are in a triangular formation, with the empty holes at the top and bottom left and the filled hole at the bottom right.

**Associated Objects:** K382?

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

Front: About 25% of the surface is obscured by soil. The visible surface is dark grey in colour, with patches of gold colour. There are many fine, superficial scratches on the surface.

Back: ~95% of the surface is obscured by soil. Cleaning is required to assess condition.

**Treatment:** Carried out using a Meiji stereo microscope

**Purpose:** Display / Study (can a join be made with K382?)

**Aim:** Total cleaning

**Materials:** Soft natural/synthetic brushes, cotton swabs, cocktail stick, thorn in pin vice/holder, water on garnets, water/IMS on metals

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 50:50 water:IMS.

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 interior surface with Paraloid B72 (ethyl methacrylate copolymer) 10% w/v in acetone, applied with a fine paint brush.

A new storage box padded with white polyethylene foam was constructed to house the object.

### **Post-Conservation Condition/Findings:**

Cleaning revealed areas of green and black corrosion products on much of the front and sides of the object and three open but stable cracks at the edges (see photographs). A few specks of waxy, purple corrosion product (probably silver chloride) were observed on the left half of the front of the object. All corrosion was left in situ.

Two of the three rivet holes are empty; soil was removed from these spaces. No residues or other foreign matter were observed in the empty holes. The third rivet hole contains a rivet. The rivet holes appear to have been punched from the front of the object, as a ridge of metal is seen around the holes on the back.

The ridge observed on the back is, in fact, the rivet pin, bent so that it is lying parallel to the surface. The pin has a blunt end and rotates  $\sim 45^\circ$  in its hole, though it is in no danger of detaching.

The front of the object has many dents and scratches, some deep. All appear to be old. The back of the object has a rough, unfinished texture. The side edges are smooth and show consistent, long scratches (possibly from working?), while the top and bottom edges are jagged and appear broken/torn.

### **Samples:**

1. Soil removed from object
2. Fragment of silver (gilt?) - became detached during transit to Washington DC, Oct 2011

### **Analysis Undertaken**

XRF analysis showed that this object is silver alloy with gilding on the front. See 'K13 XRF Report'.

Surface and subsurface analysis was carried out using the Bruker Mistral M1 XRF. This analysis formed part of the silver pilot study for the English Heritage programme. To access the core (sub-surface) of the object a small area on the surface was removed from the edge of the hilt-plate. Due to errors detected another area had to be prepared on a flat surface.