K1462 Condition Report

Conservation Started: 19/02/2013
Conservation Finished: 19/02/2013
Conservator: Ciarán Lavelle
Time Taken: 2 hours
Including digital photography, report, conservation and packing.

Dimensions Rivet: (L). 18mm; (W). 7mm
Dimensions Small Sheet: (L). 13mm; (W). 9mm; (H). 2mm
Dimensions Medium Sheet: (L). 13mm; (W). 11mm; (H). 2mm
Dimensions Large Sheet: (L). 18mm; (W). 8mm; (H). 2mm
Weight of all before: 1.82g
Weight after: 1.80g
Catalogue number: 393

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: K1462. X-RAY: L64.

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

Silver-alloy fragment, from the side of a flanged hilt-plate and rivet pin

Associated Objects: None known at present.

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

The object is made up of 4 fragments, a rivet with a washer near the head, a small, a medium and a larger fragment of metal, all of which have a lip in an 'L' shape. All the fragments have one edge which are possibly defined edges, whereas all other edges are visibly break edges with missing material. The surface of both the front and reverse has tarnish, CuA corrosion visible as well as white corrosion products. The top surface may also be gilt along with a red coloured tarnish/corrosion product. The object is covered in a light layer of loose and compact soil, especially the rivet.

Treatment: Carried out using a Meiji stereo microscope
Purpose: Display / Study / Analysis
Aim: Total cleaning / Stabilisation
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

The granular soil on the front/back 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.

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.

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 objects required little conservation cleaning, the reason for this is that there was little dirt on the surfaces and it was decided to leave the powdery corrosion products on the surface so as to preserve them in-situ for future analysis. The soil and some silver corrosion products (possibly silver chloride) was removed from the head of the rivet and sampled in a plastic tube.

The three silver sheets have an 'L' shape with a flat surface and a lipped end. These three pieces go together to form the rivet end of a hilt plate which has been bent , warped and broken. The lips represent where the hilt plate has been bent in on itself and snapped. There are break edges on all sides with material missing except the true edges for the hilt plate which is obvious when the three are placed in the right order.

The object appears to be silver with a copper alloy corrosion products coving the majority of the surface; there is silver tarnish, corrosion products and copper corrosion products visible across the surface, with possible gilt visible under the corrosion and tarnish. The green/black corrosion layer appears to be a combination of corrosion products the silver and the copper content and is prominent on the back. The red corrosion layer on the top surface is not identified at present, but it may be a red coloured silver corrosion product and/or iron corrosion products on the surface of the object. There are possibly some corrosion growths that may indicate presence of iron products on the surface. There are areas of insoluble crustations on the surface. As there were no decorative features on the object, some of this corrosion product and insoluble crustations was left in place to prevent the potential loss of further to the metal surface.

Key Features:

- One rivet with washer and three fragments of narrow flat fragments with a slight bend/lip and break edges on either side.
- Heavily corroded silver/CuA/iron corroded surface with evidence of possible gilt.

Analysis Undertaken:
XRF analysis of the object was performed. See document 'KXXX XRF Report'.

Samples:
Sample 1 - Soil and silver corrosion product from the rivet.

References: