K1543 Condition Report

Conservation Started: 08/02/2013
Conservation Finished: 08/02/2013
Conservator: Ciarán Lavelle
Time Taken: 2.5 hours
Including digital photography, report, conservation and packing.

Dimensions: (H) 6mm; (W) 7mm (Shank diam.) 1mm (Th. sheet) <0.5mm
Weight before: 0.69g
Weight after: 0.48g
Catalogue number: 669

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: K1543, X-Ray: L44

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

Silver-lead alloy, boss with a copper alloy washer beneath.

Associated Objects: None known at present

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

The object is a silver alloy domed cap, with what looks like a ring near the base of the dome. At the top of the dome there appears to be a circular section that may be a break edge for a missing section. On the side of the dome, close to the top there is a growth of possible corrosion products. Attached beneath the dome it appears as if there is a cylindrical shaped fragment of CuA or at least CuA corrosion products. The centre of this cylinder of CuA is a silver rivet shaft that has been cut off to the same level of the surrounding CuA. CuA corrosion is visible on the object surface. The object is covered in a moderate layer of loose and compact soil. The object is covered in a light/moderate layer of loose and compact soil.

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 object is a silver alloy domed cap, with a CuA cylindrical section at the base of the dome. There is a ring near the base of the dome under which the CuA section begins. The dome appears to be silver and possibly a copper alloy; there is silver tarnish, corrosion products visible across the surface. At the top of the dome is a circular indentation that may be a break edge for a missing segment. There was a section of possible corrosion on the side of the dome that was removed and sampled; it is now stored within the packing in a plastic tube.

The CuA cylinder appears to predominantly corrosion product, in which the surrounding soil is locked in place. The CuA was mainly intact but is corroded and delaminated in nature with one section that has suffered damage and loss. The majority of the soil surrounding the CuA section was removed but some was left in-situ as removal would have resulted in further loss of the CuA surface. In the centre of the CuA cylinder is a possible silver rivet shaft that may be connected to the silver dome. This may indicate that the CuA is a washer.

There were pronounced insoluble crustations across the top surface of the dome that slightly disfigures/obscures the surface so it was removed with a scalpel. Some of this corrosion product and insoluble crustation was left in place to prevent the potential of further damage to the silver surface. The surface of the object is covered in a series of nicks and scratches. There was insufficient soil for a viable sample.

Key Features:
- Domed object with a CuA base.
- Possible circular break edge on top of the dome.
- Silver rivet in the middle of the CuA section on the base.

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

Samples:.
Sample 1 – Possible corrosion fragments from the dome section.

References: