

# GeoArch

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Analysis of a ceramic fragment from  
Aghaloo, Co. Tyrone (AE/05/116)

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## Abstract

*Analysis of a fragment of reduced fired clay, possibly a sherd from a crucible, was undertaken in an attempt to confirm the identification. ED-XRF analysis showed the slagged surface to be enriched in iron, but with copper, tin, lead, zinc, silver and gold all below detection. The fragment is therefore unlikely to be from a crucible and is probably a piece of hearth ceramic associated with the previously identified iron-working.*

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## Methods

This report concerns a single, small fragment of reduce-fired clay (s9 from c109, part of the fill of hearth c127), which was tentatively suggested as a possible crucible sherd (Young 2006).

The fragment was examined using the Energy Dispersive X-Ray Fluorescence (ED-XRF) Eagle II instrument at English Heritage, Fort Cumberland, Portsmouth. The sample was analysed in a normal atmosphere to produce qualitative indications of metal presence.

## Results

Spot analyses were made at various locations on the slagged surface and on the opposite fractured surface.

The slagged surface showed strong enrichment in iron, but other potential metallic contaminants (Ag, Au, Cu, Pb, Sn, Zn) were not detected. The fractured surface did not show contamination by non-ferrous metals either. One single quartz grain in the temper did show an elevated copper content, but the location of this anomaly within the temper, rather than the ceramic matrix indicates this is associated with the original mineralogy of the temper. It is likely that the quartz had a small pyrite inclusion.

## Interpretation

The sherd is unlikely to be from a crucible, although that possibility cannot entirely be excluded. The iron-enrichment of the slag and the relatively soft fabric are both suggestive of this being a piece of hearth ceramic (lining or tuyère) associated with the iron-working on the site.

## Reference

YOUNG, T.P. 2006. Evaluation of metallurgical residues from Aghaloo, Co. Tyrone (AE/05/116). *GeoArch Report 2006/13*. 3pp.

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