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Ancient Monuments Laboratory
Report 198/87

IDENTIFICATION OF SLAG SAMPLES FROM KING HARRY LANE, ST. ALBANS, HERTFORDSHIRE.

Michael Heyworth

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Summary

A total of 23.5 kg of material from an Iron Age/ Romano-British excavation at St. Albans was identified. The majority of the material was smithing slag, with smaller quantities of fuel ash slag, hearth lining and metallic iron. Fragments of copper alloy and vesicular lava were also identified.

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A total of about 23.5 kg of material was submitted for examination of the processes involved (AML Nos. 870247, 870248).

The majority of the material was smithing slag, though there were also small quantities of fuel ash slag, hearth lining and some small pieces of metallic iron. Some of the smithing slag was in the form of roughly plano-convex 'buns' which had collected at the bottom of the smith's hearth; they ranged in size from about 10 to 12 cms (maximum diameter).

All of the types of material identified could have been produced in a blacksmith's hearth. The fuel ash slag would have been formed from the reaction of the ash with silica-rich material at high temperatures, this would have been a by-product of the smithing operation. The smithing slags are produced during the working of the smelted iron (the bloom) when the trapped slag is squeezed out by the smithing and collects at the bottom of the smith's hearth where it sticks together and forms an open, porous iron silicate slag (Bayley 1985: 42). Further smithing slag is formed when the metallic iron is worked into objects. The quantities of slag here suggest the latter stage of metalworking, the secondary smithing.

The slag was recovered from a large number of contexts within the site and probably represents a background spread of material, such as is found on most occupation sites. It suggests that iron smithing was being carried out in the general area of the site, though not specifically within the excavated area.

Three contexts contained small fragments of copper alloy. Two contexts also contained fragments of vesicular lava.

Reference

Bayley,J. 1985 "What's what in ancient technology: an introduction to high-temperature processes" in P.Phillips (Ed) The Archaeologist and the Laboratory, CBA Research Report 58, 41-44.