AML Report 3407
copy with the excavator

Site 87

Some crucibles and other vitrified material from the Silchester Collection.

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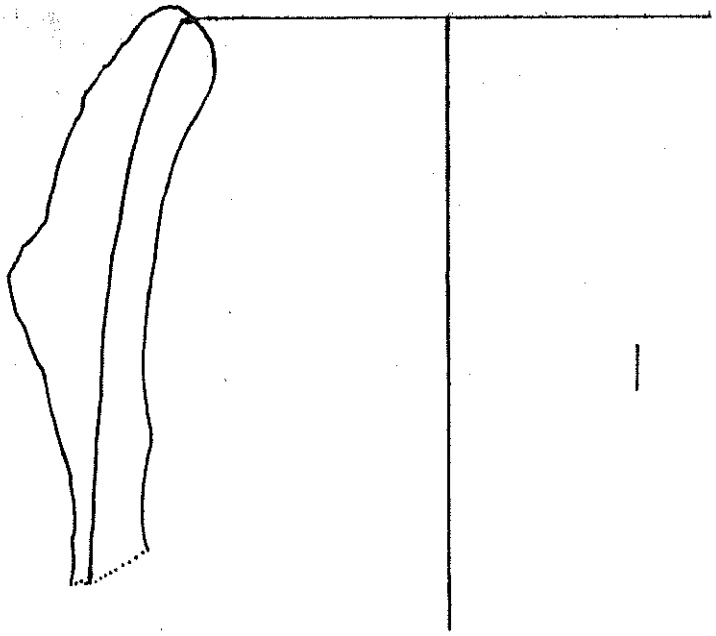
The crucible fragments came from a pit to the south of the West gate of the Roman town. The label with them also bore the inscription (1909). They comprised two rim pieces from different vessels, one wall sherd and two bases.

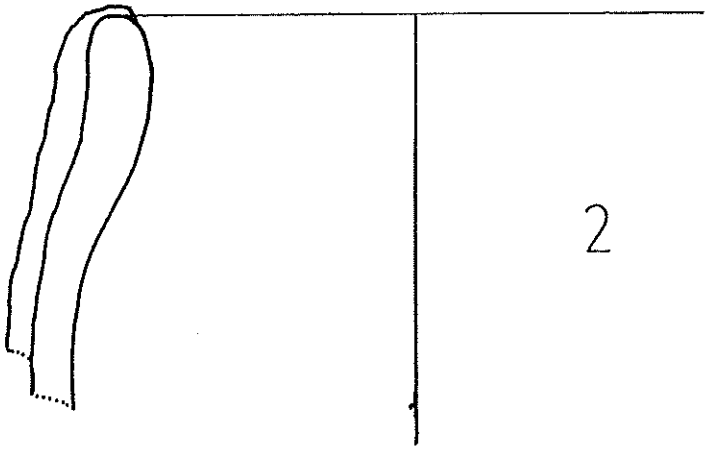
All but the larger rim fragment (no. 1) were of a similar fabric which was a pale grey colour. The temper was numerous semi-rounded quartz grains (sand) of a range of sizes. The odd sherd had fired to a darker grey colour and the temper was again quartz grains, but more abundant and of a more uniform but smaller size.

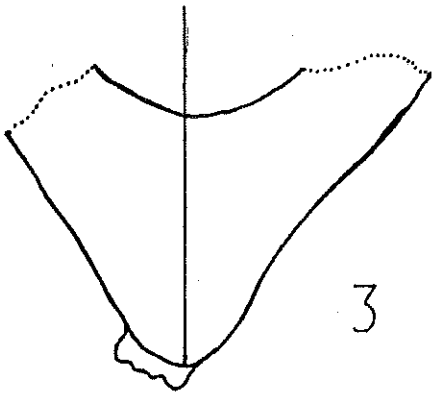
All but the smaller base (no. 3) had an extra outer layer of varying thickness applied to the crucible. These were less refractory than the crucibles but contained a little sand and/or some (?)crushed flint. They were extensively vitrified and had a vesicular structure.(The small base had no applied outer coating but the sherd itself was slightly vitrified and had a thin glassy coating.)The outer surfaces of all the coatings were coloured red in part. This colour is due to the presence of small amounts of copper in the vitrified (glassy) outer coating and indicates that copper or one of its alloys were melted in these crucibles. This use is confirmed by the presence of blobs of copper alloy (now corroded) trapped in the vitreous inner coating (a crucible slag) on sherd no. 1 and in the fracture of the larger base (no. 4). Analysis by energy dispersive x-ray fluorescence demonstrated the presence of copper, zinc and small amounts of lead on the sherds and tin too on no. 1.

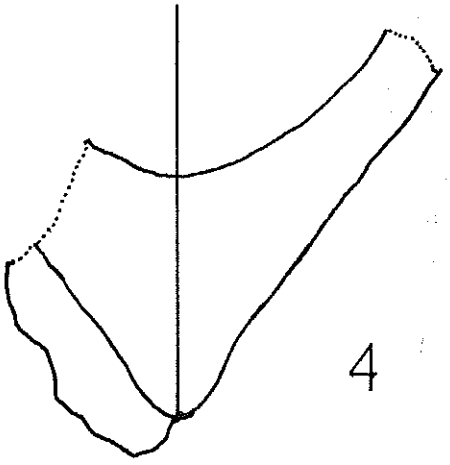
It had been suggested that these crucibles might have been used for melting red glass. This has been disproved as the appearance and analyses are totally consistent with metal melting. Crucibles used for melting glass normally have the main vitreous deposits on their inner surfaces and these are of a fairly uniform colour throughout. Roman red glass (enamel) is a high lead glass and so can readily be distinguished from red coloured crucible slags such as these examples on the basis of the lead content.

The non-crucible material was three reduced fired clayey lumps with glassy surfaces coloured turquoise and/or green. They would appear to be accidentally fluxed, the vitreous coatings being produced by the action of ash on the siliceous material (clay) at high temperatures. This could have happened in a metal working hearth or in any other fire that was hot enough. The green and turquoise colours are due to the presence of small amounts of iron, probably coming from the clay itself.

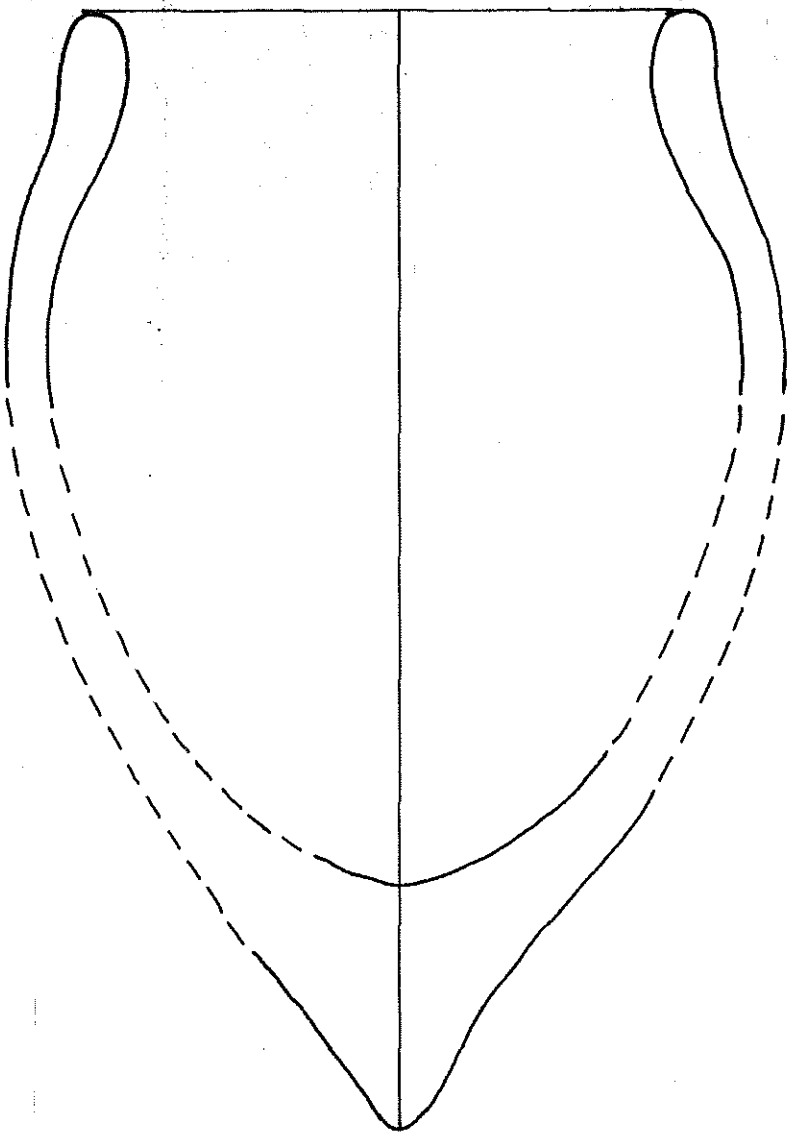








The crucibles



A possible reconstruction based on sherds 2 and 4.