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SLAGS AND OTHER FINDS FROM RAMPTON, NOTTS

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The material submitted for examination comprised about 850 gms of slag (AM 822850), two crucible fragments (AM 822851-2) and some copper alloy objects and fragments (AM 822853-7).

The slag was virtually all fuel ash slag, i.e. silica-rich material such as clay which had been strongly heated in contact with the ash in a fire. The ash fluxes the clay forming a glassy and usually vesicular slag. In addition there was one small piece of hearth lining, the clay surface of a hearth that has been similarly fluxed (but on one side only) and three pieces of iron smithing slag (in samples 40, 41 and 49). Sample 65 was an irregular lump of mixed red and grey clay. The smithing slag indicates iron-working but the small quantity suggests the activity was not actually taking place in the excavated area. The fuel ash slags could have been produced in metal-working hearths but they could also have formed in accidental fires as when a wattle and daub building burnt down. They are often associated with metallurgy but need not be.

Both crucibles had traces of metal corrosion products on their surfaces. The larger fragment (AM 822851) was about a quarter of a deep, triangular crucible. This type is common in the late iron age while earlier iron age crucibles tend to be relatively shallow though still triangular in plan. X-ray fluorescence (XRF) analysis suggests the metal being melted was a bronze containing a small amount of lead. The smaller fragment (AM 822852) probably came from a similar vessel though in this case the metal would appear to have been a gunmetal (copper with both tin and zinc present).

None of the metal objects are waste from metal working; all appear to be parts of objects though only two are large enough to be recognisable. AM 822853 is the head of an Aucissa type brooch and AM 822857 the major part of a trumpet brooch with a head-loop and tab. The elements present in the metal objects were determined by

XRF and are tabulated below. They show a range of alloys in use on the site. There is one surprise; the Aucissa brooch is a gunmetal while almost all previously analysed examples have been shown to be brass with at most only a trace of tin.

Table of XRF Results

<u>Object</u>	<u>Elements detected</u> (in order of decreasing signal strength)	<u>Alloy</u>
AM 822853	Cu Zn Sn Pb	Gunmetal
AM 822854	Cu Pb Sn	Leaded bronze
AM 822855	Cu Sn	Bronze
AM 822856	Cu Sn Pb	Bronze
AM 822857	Cu Pb Zn Sn	Leaded bronze/ gunmetal

The only finds which indicate metal-working are the crucibles and the smithing slag. The form and fabric of the crucibles suggest a late iron age date while the zinc-containing metal deposit on one of them is more likely to be post conquest. A mid first century date would be acceptable from both points of view.

The interim report in the East Midland Archaeological Bulletin for 1966 mentions a "..... smelting hearth for working bronze". While copper alloys were undoubtedly melted, there is nothing in the finds examined to suggest the metals were smelted on site; the final report should be worded to make this point clear.