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Report 2009/46

Evaluation of archaeometallurgical residues from the N8 Fermoy-Mitchelstown, Gorture, Co. Cork (E2410)

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22nd November 2009

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Abstract

Only two of the items submitted as possible archaeometallurgical residues were confirmed as such. One was a sandstone pebble that had been strongly vitrified. The high temperatures required for this means there is a strong possibility that this happened within a metallurgical context, although, since this was a topsoil find, vitrification might also have occurred through accidental incorporation of a piece of sandstone with the coal fuel in an agricultural steam engine.

The second piece was probably part of a large smithing hearth cake, although it is possible that it was an entire, highly irregular, example. If from a large cake, then this would be suggestive of a post-Iron Age date.

Other materials included natural stone, some corroded iron and a small piece of goethite iron ore. Although this ore might be indicative of metallurgical activity it is also possible that it is present through entirely natural agency.

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Methods

All investigated materials were examined visually, using a low-powered binocular microscope where necessary. For microscopic residues a general statement of the nature of each assemblage was recorded (Table 1). As an evaluation, the materials were not subjected to any high-magnification optical inspection, nor to any other form of instrumental analysis. The identifications of materials in this report are therefore necessarily limited and must be regarded as provisional.

Results

Only two of the items submitted as possible archaeometallurgical residues were confirmed as such. One was a sandstone pebble that had been strongly vitrified. The high temperatures required for this means there is a strong possibility that this happened within a metallurgical context, although, since this was a topsoil find, vitrification might also have occurred through accidental incorporation of a piece of sandstone with the coal fuel in an agricultural steam engine (in which case the pebble would form part of the clinker). The vitrification has different colours on opposing faces: one side is maroon, a common surficial colour in clinker-related materials, the other green, a more common glaze colour where the vitrification has occurred in contact with wood ash.

The second piece was probably part of a large smithing hearth cake (SHC), although it is possible that it was an entire, highly irregular, example. If from a large cake, then this would be suggestive of a post-Iron Age date. No context was given for this find.

Other materials included natural stone, some corroded iron and a small piece of goethite iron ore. Although this ore might be indicative of metallurgical activity it is also possible that it is present through entirely natural agency.

Interpretation

The materials examined provide evidence for a very slight scatter of metallurgical residue in the area. It is unlikely that there was any significant metallurgical activity within the area examined.

Evaluation of potential

Unless specific questions need to be asked of the material for particular archaeological reasons, this material has little potential for yielding useful information from further detailed analysis.

The material is not high priority for retention.

sample	*context*		*label*	*weight*	*no*	*notes*
640	A1		field 5	35	1	vitrified sandstone pebble -green one side maroon the other
641	300	pit c302	field 5	25	1	fragment of good quality iron ore, brown goethite, locally botryoidal, becoming yellow around voids
643	689	clearance feature	field 5	16	1	corroding iron
644	1138	pit c1063	field 5	50	1 (2)	natural rottenstone
642	none		field 4	214	1	probably the margin of a large, dense SHC ,but might be an entire small one, top has raised flow lobes, base dimpled with a few dribbles on the edge leaking from the lobes above

Table 1: summary catalogue by context

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