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Evaluation of Archaeometallurgical residues from the M7/M8 Contract 2: Doon 2 (E2155)

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Abstract

Archaeometallurgical residues from Doon 2 comprised three smithing hearth cake fragments from fill F5 of pit F3. The pit may itself have been a smithing hearth of unusually deep morphology, or may have been an abandoned basal pit from a slagpit iron smelting furnace. The pieces suggest blacksmithing, but are not indicative of age.

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Methods

All investigated materials were examined visually, using a low-powered binocular microscope where necessary. All significant materials were summarily described and recorded to a database (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

Material

The material from Doon 2 comprised 3 fragments of smithing hearth cakes (SHCs). All of the material had a rusty, concretion adhering to outside, which contained charcoal fragments. A single SHC appeared to be complete, and weighed 330g, placing it in the typical range for slag cakes from blacksmithing, but which is not indicative of age..

Distribution

All the fragments came from F5, a fill of what was described as a "bowl furnace", cut F3, 0.38m in diameter and 0.30m deep. The slag appears to have been present at the very bottom of the cut.

Interpretation

The assemblage is clearly from iron smithing, but the feature containing the slag is not a typical smithing hearth. It is possible that this is the basal pit of a slagpit iron smelting furnace, for it is of a typical size of such a pit, but contains no slag indicative of smelting. The assemblage must be considered therefore either to have been dumped into an abandoned smelting furnace, or this was an unusually deep smithing hearth.

Evaluation of potential

This assemblage has little potential for benefit from additional analysis. It is possible that the soil sample (stated to have been taken in the stratigraphic report, might yield micro-residues capable of clarifying the origin of the pit itself.

There is no especial need for retention of this material.

<i>F</i>	<i>find</i>	<i>sample</i>	<i>context wt</i>	<i>wt</i>	<i>no</i>	<i>notes</i>
5			594	74	1	small SHC crust fragment
5				186	1	dense and slightly folded SHC fragment
5				330	1	major part of small dense SHC (all quite strongly rusted, with charcoal in rust)

Table 1. Summary catalogue.

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