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Evaluation of archaeometallurgical
residues from the N9/N10 Waterford-
Kilcullen, Site AR050, Sheepstown, Co.
Kilkenny (E2516)

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Abstract

This site produced a small quantity of archaeometallurgical residues, probably all from the smithing of iron, from within a very restricted section of the burnt mound complex. The material is rather poorly preserved, but includes a moderately large SHC which suggests (but does not prove) an early medieval or younger age for the section of the stratigraphy.

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Identification and description of all these pieces is hindered by a high degree of weathering, probably due to leaching in the wet conditions.

In addition to the macroresidues, 17 sieved samples were inspected for potential microresidues. Of these two samples (s78 from [c032] and s76 from [c036]) contained ferruginous particles which resembled slag, but in neither case could this identification be certain. Material from [c032] could have been from a natural olivine-bearing rock, such as basalt, and that from [c036] comprised iron-rich weathering crusts on material whose primary nature could not be identified. None of the other 15 samples contained archaeometallurgical residues ([c021 / 006], [c022], [c031], [c035], [c048], [c055], [c064], [c066], [c067], [c103], [c107], [c111], [c127], [c201] and [c202]).

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.

Interpretation

The assemblage comprised a small quantity of smithing residues, with the main component being a medium-sized SHC. SHCs of 700g are rare in the Irish Iron Age, so a younger age is more likely.

Results

Archaeometallurgical material from this site is restricted to a very small section of the stratigraphy of the burnt mound. A single large slag piece comes from deposit [c060] (platform?) close to cut [c030] and six pieces of slag came from a fill [c022] within cut [c030].

The single slag block from [c060] is a moderately large (716g) smithing hearth cake (SHC). The SHC shows considerable debris on its upper surface derived from disintegration of the tip of the tuyère employed to blow the hearth.

The material from [c022] comprises six fragments of slag, varying from charcoal-rich types through to "lining" slags. All of the pieces are non-diagnostic, but entirely compatible with an origin in iron working (smithing) as with the piece from [c060].

Evaluation of potential

The material has little potential for further research to reveal additional data to assist with the interpretation of the site or metallurgical process.

This material does not have a high priority for retention.

Table 1: Summary catalogue by context and sample

c	s	wt	no	notes
60 (near 30)	#85	716	2	highly weathered, irregular SHC containing multiple fragments from failed tuyère tip, 100x150x60mm
22	84	28	1	highly weathered lobate nub of lining slag
		24	1	rounded lag nub, possibly lobate, with lining slag inclusion
		30	1	weathered slightly lobate rounded slag lump with charcoal inclusion
		10	1	weathered vesicular slag
		2	1	weathered slag fragment
22	84	144	1	very charcoal-rich slag, almost more concretion than slag, possibly part of small charcoal-rich SHC?

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