Rapid assessment of possible metallurgical slag and related residues from the Fosseway, Warwickshire.

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This report covers the rapid assessment of an assemblage of possible industrial residues recovered during archaeological excavation work at the Fosseway, Warwickshire. The assemblage contains material recovered from two excavated areas on the site. The main aims of the assessment have been to provide a provisional identification of the residues in the assemblage and give an idea of their research potential. Recommendation for further action and curation are also provided.

The assemblage consists of fine 'micro-residues' that are typically under 4mm^3 in size, as well as larger fragments (macro-residues) that are over 4mm^3. The largest fragments of macro-residue in the assemblage are around 100mm^3 in size.

All of the macro-residues were subjected to a rapid visual inspection and following the results of this a 10% random selection of micro-residues were inspected. To enable the assessment to be completed within the available timeframe, it has only been possible to quantify the residues by weight. A brief description and quantity of residues by context is given in Table 1.

At this stage, no detailed examination or instrumental analysis of any of the residues has been carried out, so the results of this initial assessment should be regarded as provisional.

Initial interpretation of assemblage

The total weight of sub-assemblage recovered from Area 1 is 3470g. All of the residues from this area appear to be fragments of iron rich geological material, and the sub-assemblage from this area does not appear to contain any anthropogenic material.

The sub-assemblage from Area 2 weighs 8545g in total, and it appears to be chiefly composed of the same iron rich geological material as Area 1. However, unlike Area 1, there are some fragments of potential metallurgical slag and these weigh 4835g in total. The initial brief examination of the latter suggests that they relate to iron production, possibly the forging (smithing) of iron.

No primary evidence of metal production in the form of furnaces or related hearths was found in Area 2, and the fragments of potential metallurgical slag were recovered from secondary contexts, such as the fills of pits and ditches.

It is possible that metal production or working was being carried out in the vicinity when the site was originally occupied, but it may have been located in an area just outside the area of excavation.

Recommendations

It is recommended that the assemblage is re-examined in more detail to check for any more anthropogenic residues present, particularly from Area 2.

At this stage, no instrumental analysis is recommended until the assemblage has been re-assessed in detail. The fragments of potential iron working slag are significant, but the lack of primary evidence means that it is difficult to justify instrumental analysis.

If the re-examination does identify some fragments of industrial residue that do warrant instrumental analysis this should be carried out in advance of the final site report. It is suggested that provision is made for up to three samples of slag to be investigated using analytical Scanning Electron Microscopy.

Once the assemblage has been re-examined and any instrumental analysis required completed, a more detailed written interpretation of the results should be produced for the final report.