

Report on the iron-rich material from Clayfarm – Ecopark Phase 1, Dublin (16E0610)

Paul Rondelez

Macroom, Co. Cork

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Description of the material and interpretation

During excavations ahead of construction at Clayfarm Ecopark in Leopardstown, Dublin an area with archaeological potential was uncovered. The low-lying area had various cut features and charcoal-rich deposits from which lithics were recovered.

Within one of the charcoal-rich deposits (360), a large block of iron-rich material was uncovered. No other potential remains of metalworking were found.

The complete piece was lifted and made available for visual examination. It was also checked with a magnet. A small fragment was removed to look at under a binocular microscope.

The material consisted of a rather soft, brown iron-rich matrix with frequent inclusions of mica, quartz and charcoal and no cavities. None of the material reacted to the magnet.

As such, the material is best interpreted as a natural accretion of iron-rich material, in essence a kind of bog iron ore. Bog ore grows as a result of bacterial activity. The requirements for this to take place – a wet environment, iron in solution and carbon-rich material – were all present at the Clayfarm site.

It is unclear if the bog ore formed before or after the archaeological activity on the site. The charcoal inclusions in the fragment examined, which was from the outer edge of the block, would suggest that, at least towards the end of its growth, the charcoal was already present. Little research has been done on bog iron ore formation, but a similar substance, Swedish lake iron ore, is recorded as fully re-growing within 30 years.