

ANCIENT MONUMENTS LABORATORY

REPORT

2714

CONSULTANT

SERIES/No

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5.1.79

AUTHOR

Wedge from Colchester Castle

TITLE

Wedge from Colchester Castle - 705545.

From its shape this was either a wedge, feather or drift. It cut easily with a saw and therefore was clearly not a hardened steel. After polishing and etching it showed "ghosts" cutting across the grain boundaries which usually indicate high phosphorus content. The metal consisted entirely of ferrite with very little slag. Near one surface there were signs of "burning", i.e. the intergranular penetration of oxide due to heating to very high temperatures ($\sim 1200^{\circ}$) in an oxidising atmosphere.

The hardness is 224 HV1 which, in the absence of carbon, confirms the high phosphorus content.

This is a piece of bloomery iron with too high a phosphorus content to be modern. It has been well smithed resulting in almost complete slag removal. As it is not a hardened steel it must have been intended as a wedge rather than a drift or rock-wedge (feather). It does not show much sign of use.

Jan 5th 1979

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