

ARCHAEO-MAGNETIC DATING  
FORE STREET, IPSWICH : IAS 5902

Medieval pottery kiln

Measurement Ref. AML-8650300

Report date  
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## SUMMARY

Archaeomagnetic measurements on the medieval pottery kiln at Fore Street, Ipswich (IAS 5902), gave a date for the final firing of cal AD 1275 - 1315 at the 68% confidence level.

ARCHAEOLOGICAL DATING: FORE STREET, IPSWICH : IAS 5902

Medieval pottery kiln

Excavator: County Planning Department, Suffolk County Council Sampled 2 October 1982

### INTRODUCTION

This kiln was located during the excavation of the Fore Street site prior to redevelopment. It was of the twin flue type, with the firing chamber, which was lost, supported by a pedestal. The north-west side of the combustion chamber and much of the pedestal had been destroyed by a modern foundation. Samples were taken from the parts that appeared most stable, the clay floor of the north-east flue, adjacent to stokehole Context 0011, and the much slighter floor of the south-east side of the combustion chamber, Context 0013, both of which were based on firm gravel natural.

Seventeen samples were taken by the disc method (see notes), and orientated by gyro theodolite. All samples were treated at 10 microtesla AF demagnetisation to remove a small amount of viscous magnetisation. Some of the samples from the combustion chamber gave results indicating that there had been disturbance of this very thin layer, and four of them were rejected.

The type of pottery manufactured in the kiln was reported to have been produced only from 1270 - 1375/50.

### RESULTS

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Based on 13 samples

Dec = 3.7°E; Inc = 57.7°; alpha-95 = 1.5°

Date: cal AD 1275 - 1315 at the 68% confidence level

## NOTES

1. If it is used in the site report, all parts of this report printed in heavy type should be quoted as a minimum. In addition to the date and reference number, it is important that the basic measurement figures should be readily accessible to those with a technical interest; and it is also desirable to include as much as possible of the associated discussion. Fuller data will be published in consolidated lists elsewhere.

2. Dec refers to the declination, or bearing relative to true north, of the mean remanent magnetic field of the samples, and Inc is the angle of inclination or dip of this field. Alpha-95 is a measure of the precision of the determination: the smaller its value the better. Dates are prefixed by 'cal', for consistency with the internationally agreed convention for calibrated radiocarbon dates.

3. Dates are normally given at approximately the 68% confidence level, making allowance for the quality of the measurement and the estimated reliability of the calibration curve, as at present known, for the period in question. Due to crossovers and contiguities in the curve, alternative dates may be given. It may be possible to choose the correct alternative by reference to any archaeological, radiocarbon or thermoluminescence data that are available. References for calibration curves:

Clark, A. J., Tarling, D. H. and Noel M., 1988. Developments in archaeomagnetic dating in Britain. *Journal of Archaeological Science* 15, 645-667. [1000 cal BC - present].

Turner, G. M. and Thompson, R., 1982. Detransformation of the British geomagnetic secular variation record for Holocene times. *Geophysical Journal of the Royal Astronomical Society* 70, 789-792. [10000 - 1000 cal BC].

4. As the thermoremanent effect is reset at each heating, all dates for fired material refer to the final heating.

5. Sampling methods: Hard materials, typically fired clay, are sampled by the disc method. A number of small levelled plastic discs are glued to the feature, marked with an orientation line related to true north, and then removed with a small piece of the material attached. Soft materials, typically silts, are sampled by the tube method. Small pillars of the material are carved out from a prepared platform, and encapsulated in levelled plastic tubes by means of plaster of Paris, the orientation lines being marked on the top of the plaster. Alternatively, the tubes can be pushed directly into softer silts. Measurements are made in a Molspin spinner magnetometer, with partial demagnetisation in an alternating field (AF) to remove viscous magnetic components if necessary. This is measured in millitesla, and any figures quoted are the peak value of the treatment.

6. Comments from excavators on the archaeological acceptability etc of results would be welcomed.