

Dating of a timber from Farningham, Kent.

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A section of one timber associated with riverine structures at Farningham, Kent, was submitted for dendrochronological analysis via the Ancient Monuments Laboratory of the DoE late in 1975. The date of the timber was unknown, but was thought to be early medieval.

The timber, used as a pile, was of oak (Quercus sp.), its cross-section being 33 x 20cm. It consisted of the entire trunk hewn down to a rectangular cross-section, with all the outer sapwood removed.

The section was reduced in size and the surface cleaned with sharp knife and plane to reveal the annual rings, which were measured and plotted on semi-logarithmic paper ready for comparison. The ring-width values are given below (Table 1). A total of 103 rings could be measured, varying widely between .5 and 12mm, and the tree had evidently grown under conditions of great environmental extremes.

In the absence of any guide as to date from the archaeological context, dendrochronological dating is difficult, particularly when only one timber has been sampled; the growth pattern based on a mean curve of several timbers is far more reliable for dating than that from one, and it may have been possible to determine the number of trees involved in the construction. Visual and computer comparisons of the Farningham curve with several dated reference curves spanning many centuries were made, but no certain matches could be found and are unlikely to be in the future unless further sampling could be carried out.

As an alternative, a sample of wood was cut from the outermost 20 heartwood growth rings of the timber and submitted to Harwell for C14 determination. The result of 1360 ± 70 (HAR 2265) was achieved.

FARNINGHAM

14C

103

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| 7 | 9 | 11 | 15 | 13 | 15 | 22 | 20 | 15 | 15 | 18 | 12 | 20 | 13 | 14 | 19 | 20 | 11 | 24 | 32 | 29 | 23 | 14 | 11 | 19 |
| 20 | 19 | 35 | 35 | 21 | 16 | 15 | 9 | 12 | 17 | 28 | 27 | 21 | 13 | 12 | 18 | 13 | 8 | 6 | 5 | 5 | 7 | 10 | 12 | 16 |
| 14 | 14 | 15 | 10 | 13 | 11 | 12 | 15 | 8 | 4 | 13 | 13 | 16 | 20 | 17 | 14 | 12 | 11 | 17 | 18 | 19 | 27 | 29 | 23 | 33 |
| 28 | 48 | 22 | 16 | 10 | 12 | 16 | 27 | 24 | 24 | 21 | 19 | 15 | 20 | 27 | 35 | 24 | 18 | 15 | 18 | 19 | 12 | 16 | 35 | 37 |
| 38 | 25 | 36 | | | | | | | | | | | | | | | | | | | | | | |

Table 1. Annual ring-width values for the Farningham oak timber. (0.1mm)