

# OUTBUILDINGS, 19 CHURCH STREET, BINGHAM, NOTTINGHAMSHIRE

## TREE-RING ANALYSIS OF TIMBERS

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### SUMMARY

Analysis by dendrochronology of four samples obtained from beams within the outbuildings to the rear of this property has resulted in the dating of two timbers individually.

The earlier individually dated timber, the front or east purlin of the south outbuilding (the one nearest the house), has an estimated felling date of sometime between 1615 at the earliest and 1640 at the latest. The later individually dated timber, the rear or west purlin of the south outbuilding, has an estimated felling date of sometime between 1737 at the earliest and 1762 at the latest.

The two remaining samples, both from the timbers of the north outbuilding, remain undated.

### INTRODUCTION

This property, facing south on to Church Street, in Bingham, Nottinghamshire (SK 706 399, Figs 1a/b), would appear to be of relatively modern, probably late-nineteenth century date. To the rear, a range of low outbuildings, divided into two parts, extend northwards. Although a number of timbers within these outbuildings are relatively modern and of softwood, there are also a series of clearly reused, apparently earlier, oak timbers. These form either parts of a truss and/or purlins to the northern outbuilding, and purlins to the southern outbuilding.

### SAMPLING

Core samples were obtained from the four oak timbers which appeared suitable for tree-ring dating by reason of having sufficient rings for reliable analysis, and by appearing to be pertinent to the development of the building.

Each sample was given the code BNG-H (for Bingham – site 'H'), and numbered 01–04. Details of the samples are given in Table 1, including the timber sampled and its location, the total number of rings each sample has, and how many of these, if any, are sapwood rings. The individual date span of each dated sample is also given. In this Table the rear of the building is taken to be facing north onto the courtyard and garden, the front to be facing south onto Church Street.

Sample number	Sample location	Total rings	Sapwood rings*	First measured ring date (AD)	Heart/sap boundary (AD)	Last measured ring date (AD)
BNG-H01	Tiebeam, north barn	70	h/s	-----	-----	-----
BNG-H02	Rear purlin, north barn	62	h/s	-----	-----	-----
BNG-H03	Front purlin, south barn	106	3	1489	1600	1603
BNG-H04	Rear purlin, south barn	59	2	1666	1722	1724

\*h/s = the sample has the heartwood/sapwood boundary, ie. only the sapwood rings are missing

## ANALYSIS

Each of the four samples obtained from the various timbers of the outbuildings was prepared by sanding and polishing, and the widths of their annual growth rings were measured. The data of these measurements were then compared with each. There was, however, no cross-matching between them. Each of the four samples was, therefore, compared individually with the full corpus of reference data, this indicating cross-matches and dates for two of them.

The earlier individually dated timber, the front or east purlin of the south outbuilding (the one nearest the house), and represented by sample BNG-H03, has 106 rings, these rings dated as spanning the years 1489–1603. This sample does not retain complete sapwood (the last ring produced by the tree before it was cut down) and it is thus not possible to give a precise, single year, date of felling. The sample does, however, retain the heartwood/sapwood boundary (denoted by 'h/s' in Table 1), this being dated to 1600. Thus, given that the amount of sapwood on oak trees generally lies within known limits (15–40 rings), it is possible to say that the tree was almost certainly felled at some point between 1615 at the earliest and 1640 at the latest.

The later individually dated timber, the rear or west purlin of the south outbuilding, and represented by sample BNG-H04, has 59 rings, these rings dated as spanning the years 1666–1724. Again this sample is without complete sapwood and it is not possible to say exactly when it was felled. This sample does, though, also retain the heartwood/sapwood boundary ('h/s' in Table 1), this being dated to 1722. Again, allowing for the same sapwood estimates as above, (15–40 rings), it is possible to say that the tree was almost certainly felled at some point between 1737 at the earliest and 1762 at the latest.

## CONCLUSION

It would appear, therefore, and perhaps not unexpectedly, given the varied nature of the timbers found within these outbuildings, that timbers with different felling dates are to be found here. Although neither of the dated timbers may define the actual construction of this building (it's form, materials, and nature suggest a late-nineteenth century date similar to that of the house to which they are attached), it is of interest to note that at that time it was still not unusual to reuse older oak timbers, one originally felled in the later eighteenth century, the other felled in the earlier-seventeenth century.

### *Undated samples*

Two samples, BNG-H01 and H02, both from the north outbuilding, remain ungrouped with each other and undated. Neither of these undated samples shows any peculiarities, such as compression or distortion, which might make cross-matching difficult and the reason for the lack of dating is unknown. It may be noticed from Table 1 that both samples have quite sufficient rings for reliable analysis.

It is possible that the undated beams represent trees felled at different times to each other and while such samples can sometimes be dated individually, as two have here, it is usually more difficult. A further possibility is that the source trees were grown during a time period (the later-eighteenth, or possibly the early-nineteenth century) for which, at the moment, there is little reference data available in this region. It is only with the accumulation of data, such as that obtained as part of the Bingham Buildings project, that this gap may be filled and the presently undated samples may in due course be dated.