Radiocarbon dating of roof timbers from Cryfield Grange

As previously reported, tree-ring dating of the reused timbers from the roof of the north wing of Cryfield Grange was unsuccessful, because the timbers had too few rings or failed to match . Dating by radiocarbon was therefore commissioned and the results have finally been received.

Two samples were submitted to the University of Oxford Radiocarbon Accelerator Unit (ORAU) on 31 July 2017, comprising the final and first 5 years from the tree-ring core Cryg08. The individual results obtained are shown in Figs. 1 and 2. In both, the raw 'BP' date with its Gaussian probability distribution is shown in red, and the conversion to calendar years AD is in black.

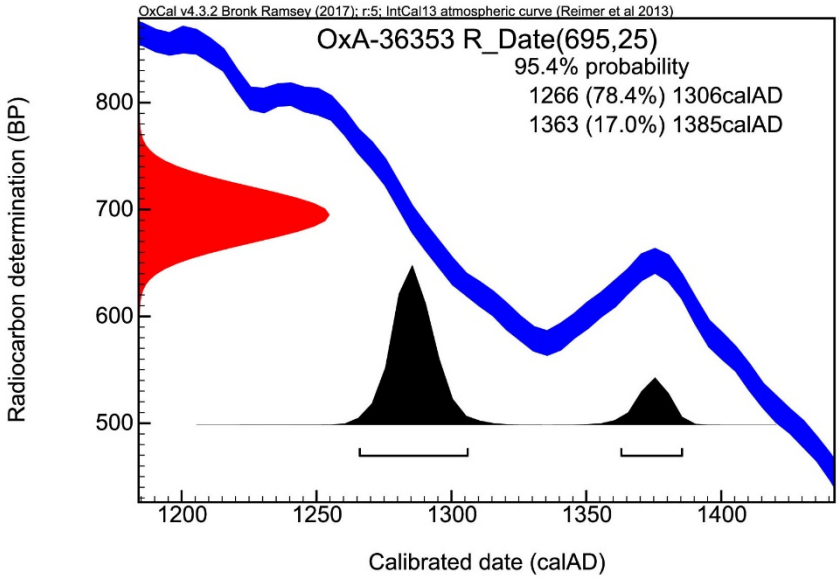

Fig. 1. Calibration for sample 1 (first 5 rings): date ranges 1266-1306 (78.4%) or 1363-85 (17.0%).

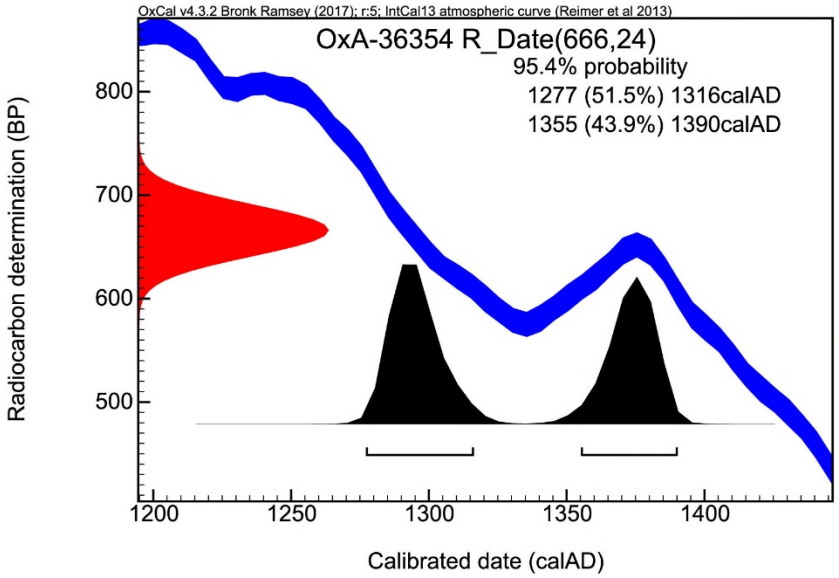

Fig. 2. Calibration for sample 2 (final 5 rings): date ranges 1277-1316 (51.5%) or 1355-90 (43.9%).

For both samples, the retrograde form of the calibration curve leads to two possible date ranges for the sample rings. However, they can be combined, knowing the gap between the two samples. The result is shown in fig. 3, with a single date range of *Cal AD 1299-1330* (95% probability).

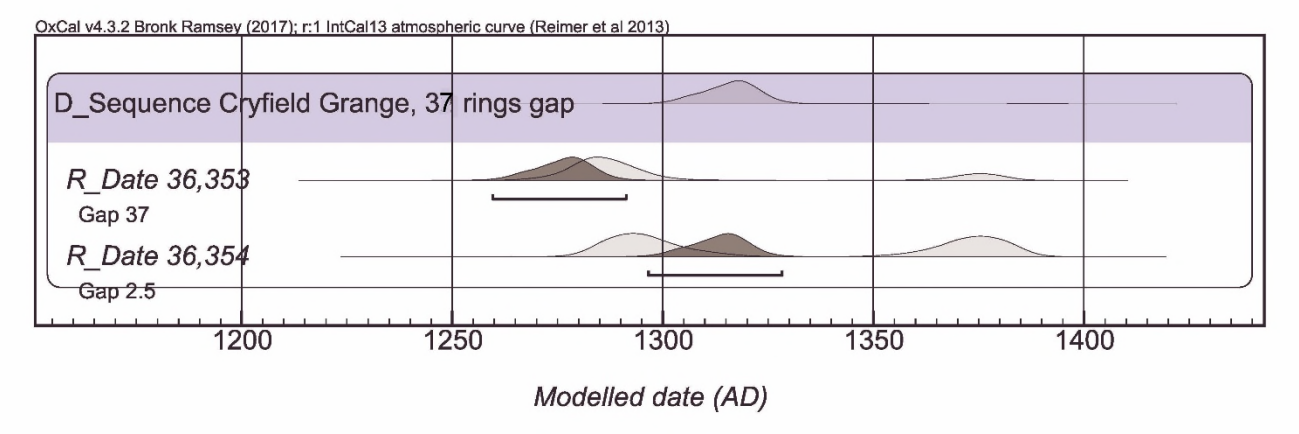

Fig. 3. Combined dating of two Cryfield samples: Date range *Cal AD 1299-1330* (95% probability)

This date is considerably earlier than I had expected – generally, I'd thought that a 15th-century date was likely, though there's nothing specific in what I saw to indicate the 15th rather than the 14th century.

The early features in this range have only been examined very cursorily, and no survey has been undertaken. In summary, the surviving features in the roof are the smoke-blackened rafters, some with halved joints (Figs. 4 and 5).

Within the brick walls of the north range, wallposts and arch braces survive on the west side, presumably with tiebeams still *in situ* (to which the arch braces must be attached) (Fig. 6). Surprisingly, it seems that wallposts on the east side were not retained, although the structure has not been examined closely, to see if they could be hidden within later walls. We can presume that these posts also date to the first half of the 14th century – it is implausible that a 14th-century roof, which can only have been replaced at the end of the 18th century, would have been retained above a timber-frame of later date.

Fig. 4. The roof over North Range, showing some reused smoke-blackened rafters and the 18th-century king-post roof truss. [Photo: Alex Russell]

Fig. 5. (a) [left] halving in reused rafter; (b) [right] heavily smoke-blackened rafter. [Photos: Alex Russell]

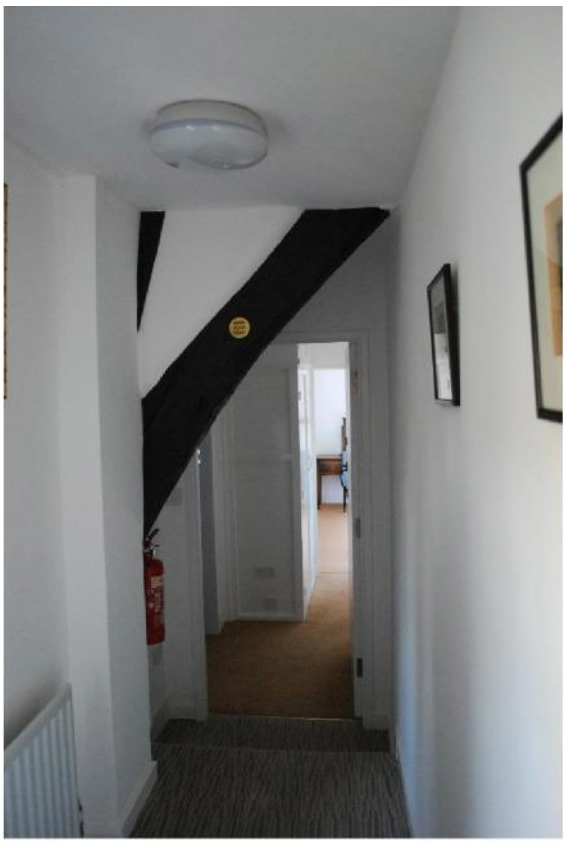

Fig. 6. Arch-brace and post head of remaining timber-framing on the west side of the north range [Photo: James Edgar]