

Rodney Melville and Partners

The Bell Tower, New College, Oxford

Archaeological Evaluation Part 2: Building Recording

Oxford Archaeological Unit
November 1995

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List of Contents

Summary

1	Introduction	1
2	Historical Background	1
3	Recording Strategy	1
4	Description of the Tower	2
5	Discussion	3
Appendix A : Tower Building Accounts		

List of Figures

- Figure 1: Location Plan
- Figure 2: Internal Elevations, soffit ceiling plan and corbel/support post details

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Summary

1 Introduction

- 1.1 The Oxford Archaeological Unit (OAU) was commissioned by Rodney Melville and Partners (architects) to undertake a programme of building recording within the lower stage of the bell tower at New College, Oxford in advance of the conversion of the space for use as a rare book store by the college library.
- 1.2 The survey work was undertaken between 19th and 21st October 1995 and was carried out in accordance with a brief set by the Oxford Archaeological Advisory Service (OASS) para. 2.3(b).
- 1.3 Small scale excavation work within the bell tower commissioned as a part of the current works has been reported separately (OAU, July 1995: *New College Bell Tower, Oxford: Archaeological Evaluation Summary Report*)

2 Historical Background

- 2.1 The bell tower at New College is located to the north side of the cloister (see figure 1) and dates from the late 14th-century. It is of four stages with an embattled parapet and projecting south-west stair turret. The ground floor stage is accessed by a doorway in the south wall which leads off the north walk of the cloister. The east, north and west walls each have a single light trefoil-headed opening, that to the east has been converted to a doorway and subsequently blocked, possibly in two distinct phases (see §4.3.1).
- 2.2 A transcript of the building account for new college bell tower is included as appendix A.

3 Recording Strategy

- 3.1 Each internal elevation of the bell tower was drawn at a scale of 1:20 on polyester drafting film, recording the location of ashlar work, putlog holes and any distinct 'lifts' in the masonry.
- 3.2 The structure of the ceiling was recorded at a scale of 1:50 as a soffit plan of principal timbers, while details of corbel and support posts were recorded at a scale of 1:20.
- 3.3 A full colour slide and black and white negative photographic record of the exposed masonry was made.

4 Description of the Tower (see figure 2)

4.1 General Observations

4.1.1 The lower stage of the bell tower had overall internal dimensions of 5.45m (N/S) x 6.10m (E/W). At the SW corner was an angled wall (1.30m long) in which was set a doorway giving access to the stair turret. The overall height of the lower stage (to the underside of the first stage floor) was 9.35m. The tower is in roughly coursed Headington stone with Taynton stone dressings (see Appendix A).

4.2 The North Wall

4.2.1 A single light window (1.64m tall x 0.44m wide) with trefoiled head within a two-centred arch and internal splays (maximum width = 0.98m) was located at a height (to sill level) of 0.90m above existing floor level (= 64.74m OD). Internally the opening was enclosed by a pointed segmental rear-arch with a rough two-centred relieving arch in stone over. This opening was similar to that in the west wall and that inferred in the east wall.

4.2.2 A number of possible putlog holes were identified and recorded though, as was the case with the other walls, only the upper levels displayed putlogs which would appear to form any form of coherent pattern. A closely definable stage was located at a height of 8.30m above current floor level (= 72.18m OD - compare with 4.3.2, 4.4.2 & 4.5.2). A second coherent level of putlogs was defined at a height of c.7.00m above floor level (= 70.82m OD). Below this height, no coherent levels were identified.

4.3 The East Wall

4.3.1 The window opening of the east wall, originally similar to that in the north wall described above, had been blocked. Externally this opening appears as a blocked doorway and this is reflected in the nature of the stonework internally. The sill stone of the window opening as seen in north and west elevations is absent, and straight joints coincident with the splayed reveals of the window extend as far as the present floor level. That the opening was originally a window is attested to by the absence of dressed stone reveals below a level 1.00m above ground level (=64.84m OD). The nature of the blocking material would appear to indicate that the doorway was blocked in distinct phases(see figure 2) and the possibility exists that the opening was reinstated as a window before being blocked completely.

4.3.2 The evidence of putlog holes on the east wall was sparse, however a clear arrangement of three level holes was noted at a height of 8.24m above current floor level (72.13m OD - compare with 4.2.2, 4.4.2 & 4.5.2). Below this height, no coherent levels were identified.

4.4 The South Wall

4.4.1 Centrally located within the width of the tower (though slightly off centre within the wall face due to the SW angle wall) was a large doorway 1.80m wide x 3.10m tall with two-centred head and segmental pointed rear-arch (2.00m wide x max.3.70m tall). Jambs were of dressed Taynton stone. A distinctive mason's mark was observed on the dressed stone of the door arch (see figure 3), similar to that noted on the stair turret doorway and in the cloister.

4.4.2 A number of possible putlog holes were identified and recorded though, as was the case with the other walls, only the upper levels displayed putlogs which would appear to form any form of coherent pattern. A closely definable stage was located at a height of 8.34m above current ground level (= 72.18m OD - compare with 4.2.2, 4.3.2 & 4.5.2). A second coherent level of putlogs was defined at a height of c.6.86m above floor level (= 70.64m OD). Below this height, no coherent levels were identified.

4.5 *The West wall*

4.5.1 A single light window (1.64m tall x 0.44m wide) with trefoiled head within a two-centred arch and internal splays (maximum width = 0.98m) was located at a height (to sill level) of 0.90m above existing floor level (= 64.74m OD). Internally the opening was enclosed by a pointed segmental rear-arch with a rough two-centred relieving arch in stone over. This opening was similar to that in the north wall and that inferred in the west wall. The reveals were of Taynton stone, several dressed stones displaying a distinctive mason's mark (see figure 3) which was observed elsewhere, notably confined to window reveals.

4.5.2 A number of possible putlog holes were identified and recorded though, as was the case with the other walls, only the upper levels displayed putlogs which would appear to form any form of coherent pattern. A closely definable stage was located at a height of 8.32m above current ground level (= 72.18m OD - compare with 4.2.2, 4.3.2 & 4.4.2).

4.6 *The South-West Angle wall*

4.6.1 A narrow doorway (0.84m wide x 2.16m tall) with two-centred head gave access to the stair turret, occupying the full width of the angle wall. A distinctive mason's mark was observed on the dressed stone of the door arch (see figure 3), similar to that noted on the south wall doorway and in the cloister. No further features of interest were noted on this wall.

4.7 *The First Stage Floor*

4.7.1 The first stage floor comprised boards laid west-east supported by secondary joists (scantling: H = c.0.18m x W = c.0.34m) which were in turn supported, to east and west, by trimmer joists (scantling: H = 0.07m x W = 0.24m) resting on moulded stone corbels. Intermediate support was supplied by substantial principal joists (scantling: H = 0.32m x W = 0.36m) which ran north-south and were embedded in the wall masonry at each end, with additional support from c.0.90m long posts (scantling: 0.36m x 0.20m) resting upon moulded stone corbels similar to those on the east and west walls. Curved braces were tenoned into the outer face of the posts and rose to the underside of the principal joists (this configuration is illustrated in the isometric inset of figure 2).

4.7.2 The central area of the floor was renewed in timbers of slighter scantling. This area is stippled on the soffit plan (figure 2) and presumably represents the void for the raising of bells.

5 Discussion

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November 1995

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Appendix A
Building Account for New College Tower

Translation of the account roll in New College Muniments printed in Oxford City Documents ed. J.E. Thorold Rogers, Oxf. Hist. Soc. 18 (1891), 306-14.

[*Old endorsement:-*] Oxford College. Account of works 21 Richard II [1397-8]

[*Late endorsement:-*]

Account of expenses of Master John Hulyn and Master John Bouke in building the Tower and Campanile and other walls of the College from 20-21 Ric. II, AD 1396

Tower and Campanile built in the 31st year of consecration of the good founder [Wykeham was consecrated in 1367]

Quarry of Headington, Teynton and Barynton

[Note: The regnal years of Richard II run from 22 June to 21 June following]

Account of John Hulyn and John Bouke clerks of works of the Tower and other walls of the college called St Mary College of Winchester in Oxford, newly founded by the Venerable Father and Lord, Lord William of Wykeham, by Divine Permission Bishop of Winchester, of all receipts, [payments?] and expenses made by John and John, and by a paper parcel [*i.e. detailed account*] of Master Richard Malforde Warden of the College and Comptroller of the Bishop, examined and proved, from the 12 March in the 20th year of King Richard [1397] to 20 December following 21 Richard II [1397] and the 31st year of Consecration of the Lord [Bishop].

John and John account for 10s 6d of arrears of the last account of John Hulyn in the previous year.

£66 13s 4d received from Sir Simon Membury treasurer of Wolvesey by indenture dated at Wolvesey 26 April 20 Richard II [1397].

£40 received from Sir Simon Membury treasurer of Wolvesey by indenture dated at Wolvesey 16 July 21 Richard II [1397] by the hand of Master Richard Malforde in which £40 he is bound to the Treasurer by a bond kept by Simon.

£20 received from Sir Simon Membury treasurer of Wolvesey by indenture dated at Wolvesey 17 August 21 Richard II [1397].

£20 received from Walter Hardene clerk of the Lord [Bishop] at Southwark 15 February 20 Richard II [1397] by the hands of Master Richard Malforde Warden of the Lord [Bishop's] College in Oxford.

£20 received from Sir William Nortone Wardrober of the King's Household by indenture dated at

Alton Clere 22 December 21 Richard II [1397]

Broughton: £10 received from William Hurne the bailiff there by a tally.

Standlake: £20 received from John Taylor the farmer there by a tally.

Total receipts £227 3s 10d	{J Hulyn	£133 10s 1d
	{J Bouke	£93 13s 9d

From which they account for various iron tools weighing 127 lb bought for digging stone in Headington Quarry for building the Tower and other walls in the College as appears in the paper [account] of Master Richard Malforde Warden of the College and Comptroller of the Works, price 2s per lb.

21s 2d whence by J Bouke 9s

Paid for various iron tools made of the Lord [Bishop's] iron for the same work weighing 100 lb as appears in the said paper, price 1d per lb.

8s 4d whence by J Bouke 11d

Eight *Wellynges* of hammers, 2d each as in the paper 16d

Sharpening the tools at various times as in the paper [hereinafter omitted] with nails? [*clavis*] bought for them 2s

Ten shovels with their irons bought for the works, and repair of the shovels and cartwheels in the quarry 3s 7½d

Timber bought at various times for handles for tools 8d whence by J Bouke 2d

Six round sieves for the works price 16d each plus 2d *in toto* 8s 2d

Alexander Heryot for digging stone on his land in Headington Quarry on the last day of October 5s pd by J Bouke

William Austyn and Hugh Glover for clearing land and rubble for stone 3 perches in length by 2 perches wide in Headington Quarry by task [contract] 40s

Wages of various labourers by day in Headington Quarry for digging stone there for building the Tower and other walls in the College £15 5s 11½d whence by J Bouke £3 12½¼d

Paid various carters for carting 1386 carts of stone from Headington to the College, 124 carts in Autumn at 5d and 1262 carts at 4d £23 12s 4d whence by J Bouke £4 11s 4d

Wages of various labourers by day for digging sand for the works and hauling up timber onto the Tower 65s whence by J Bouke 24s 6d

229 quart. 6 bus. lime bought at Witney and elsewhere for the works with carriage of same	£19 19s 7d whence by J Bouke 79s 2d
2682 feet of freestone bought for the works from John Cooke in [<i>partibus</i> ? error for parish] of Taynton; 1358 ft at 2d a foot and 1324 ft at 1½d a foot, and 267 <i>talstones</i> bought there 1d each (less 2s 11½d in all)	£20 whence by J Bouke £10
Paid various carters for carrying the freestone from Taynton and Barrington to the College at different times	£29 14s 11d whence by J Bouke £13 8s 6d
William Willebury for mending the great wheel on the Tower with withies bought for it	14d
Two small wheels (<i>rotulis</i>) for the cart for carrying stone and timber with an axle bought for the wheels	3s 6d
A great cord called cable weighing 104 lbs for lifting up stone and timber onto the Tower, 2d per lb	17s 4d
Mending the same cord twice when broken	3s 4d
John Ropere for another cord bought by the Warden 24 August	10s by J Bouke
48 hurdles (<i>claijs</i>) at 2½d each for making scaffold round the Tower	10s
William Irmongere for hurdles for the scaffold, wax and resin for making cement on the Tower at various times	3s 8d
For a bucket bought for the works	8d whence by J Bouke 4d
Paid a man for mending a wooden vessel (<i>vase</i>) with wooden hoops bought for it for keeping water in	14d
William Irmongere for rigolbord bought from him for making templates (<i>formis</i>) for the Tower windows	14d
Nine lbs lead bought from Richard Nortone for the Tower door	6d
Paper bought for writing the details of the works (<i>pro parcella dicte operis scribendo</i>)	8d
John Webbe for cleaning the well in the empty place outside the west gate of the College	6d
Straw bought for covering the Tower and other walls	3s 3d whence by J Bouke 3s 4d
William Broun for making the Tower this year to a height of 33 ft, at 20s a foot	£33 whence by J Bouke £13
William Broun for nine perches and three parts of one perch of walls outside the great gate of the College made this year; given 13s 3d a perch, whence in foundations five perches seven feet	£6 10s

William Wys carpenter for making all the carpentry of the College Tower in full payment of the £10
in his agreement 100s [i.e. £5]

300 foot of oak planks called *quarterborde* for making the door and windows in the campanile 3s 4d
a hundred 10s paid by J Bouke

22 Waynscot bought for making the door of the campanile next the cloister, 3½d a piece
6s 5d paid by J Bouke

William Irmongere for 160 spyknayle (11d a hundred), 1200 bordnayle (6d a hundred), 260 clutnayle
(3d a hundred) bought from him for floors in the Tower, making shutters, doors and windows and
for roofing the Tower with lead 11s 8d paid by J Bouke

John Wadyn smith for 300 white nails bought from him for the great outer door of the campanile,
2s a hundred 6s paid by J Bouke

William Wys carpenter for making five doors and eleven windows in the campanile, taking 6s 8d for
the great door of the campanile and 12d each for the four doors and eleven windows 21s 8d paid by J Bouke

John Wadyn smith for 34 hinges (*vertivellis*) and 12 hinges (*gemeis*) bought from him for the five
door and eleven windows in the campanile, weighing 128 lbs at 2d per lb 21s 4d paid by J Bouke

The same John Wadyn for eleven iron bolts bought from him for the eleven windows weighing 12½
lbs at 2d per lb 2s 1d paid by J Bouke

The same John smith for one great iron bar bought from him for the great door weighing 15 lbs at
2d per lb 2s 6d paid by J Bouke

Glue bought for the same door 22d paid by J Bouke

Bernard *lokyere* for five locks with keys and four iron staples bought from him of which one for the
great door of the campanile at 20d and four for other doors 12d each 5s 8d paid by J Bouke

To seven carters for carrying seven fothers of lead from Winchester to the College in Oxford at
various prices £7 3s 4d paid by J Bouke

To a plumber for covering the roof of the campanile with the same lead [*ad thesaurarium?*]
20s paid by J Bouke

For oak timber bought by William Wyse carpenter at various places in the Forest of Windsor for
hanging the bells and finishing the carpentry of the roof 77s 4d paid by J Bouke

Felling and hewing the oak timber 6s paid by J Bouke

Carrying the same timber in 14 carts from the *patria* Forest of Windsor [?Home Park] to the College
at various prices £4 12s 4d paid by J Bouke

Timber bought in the same forest after John Maydeston came for hanging the bells
38s paid by J Bouke

Carrying the same timber in five carts from the *patria* Forest of Windsor [?Home Park] to the
College at 6s 8d a cart 33s 4d paid by J Bouke

John Wadyn smith for iron made in London bought for hanging the bells
3s 4d paid by J Bouke

John Wadyn smith for 80 lbs iron made in various hoops and other necessary things for hanging the
bells beyond the iron came from London, 2d per lb
13s 4d paid by J Bouke

John Ropere for one great cord called cable bought from him weighing 144 lbs, at 2d per lb, for
raising up timber and bells in the campanile
24s paid by J Bouke

John Maydestone by an agreement made with him for hanging the bells in the campanile
£6 13s 4d paid by J Bouke

Five cords with 4 *lyches* [OED litch: bundle of cords] weighing in all 72 lbs, price 2d per lb, bought
for ringing the bells 12s by J Bouke

For expenses both for labour in the quarry and for carters, masons and plumbers at various times
eating and drinking with the overseer of works
10s 7d whence by J Bouke 11d

For a house hired from *Henry Lymmenere* for William Wys and his mates staying in Oxford on
the Lord [Bishop's] works for seven weeks by his command
4s 6d paid by J Bouke

** Henry Lyminour owned a house in Catte Street, opposite the Codrington Library, which
he inherited in 1390 and seems to have rented out: Salter *Survey of Oxford* (1960), NE (114).

To the porter's expenses riding to the Lord [Bishop] to arrest masons for the King's works, and a
horse for taking him 4s

To the expenses of Master John Hulyn riding with two horses from Stepelmordone to London and
staying there two days in July to talk with the Lord [Bishop] about the works of his College at
Oxford 4s

To the clerk John Bernard Master of the King's Works at Westminster for the masons, carpenters and
other labourers arrested by him on College Works for the King's Works 3s 4d

Total of all purchases and payments £200 9s 11³/₄

Whence { J Hulyn £108 19s 10d
 { J Bouke £91 10s 1³/₄d

Owing £26 13s 10¹/₄d

Whence 66s received which John Hulyn paid William Broun by the Lord [Bishop's] command for 33 ft of Tower in height made by William in the previous year viz for 20s a foot for which there was no allocation in last year's account except for 18s a foot as is seen in the account for last year whether it be so or not

Total receipts 66s

Owing beyond receipts £23 7s 10d

Of which { John Hulyn 10s 1¹/₂d whence in Broun's hand 4s, and Wyse 3s 1¹/₂.
 { John Bouke 43s 7¹/₄d. And remaining in the Warden's hands £20 14s 1¹/₂d.

jtm Oct 1995