

Swalcliffe: a New College Barn in the Fifteenth Century

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SUMMARY

The rectorial barn at Swalcliffe, a Scheduled Ancient Monument and formerly a property of New College, has recently been repaired and refurbished as a museum store and exhibition. During the course of the works, the building was subject to a series of investigations above and below ground by the Oxfordshire Museum Service and the Oxford Archaeological Unit, together with an examination of the original building accounts of 1401-7 at New College. This study considers the processes and materials of the original building operation, and the complementary information provided by the standing and buried physical remains and the building accounts. The demolished lesser barn is described, and the use and later history of the great barn is outlined.

I. INTRODUCTION

Swalcliffe barn has been a noteworthy feature of the Oxfordshire landscape since the beginning of the 15th century. It has recently been restored, refurbished and given a new lease of life as a storage and display area for the Department of Leisure and Arts of the Oxfordshire County Council. There have been three campaigns of recording and historical study of this great building during the last 100 years. Sir Henry Dryden drew it to the attention of the members of the Oxfordshire Archaeological Society in a paper following a visit by the members in 1887.¹ A coloured drawing of the barn by Sir Henry is found in the Northampton Central Library collections. The barn achieved more widespread architectural recognition in 1963 when a plan and cross section, together with a more detailed description, was published by R.B. Wood-Jones.² This account also pointed out that there was a second major medieval secular building within a stone's throw, namely the rectorial manor house.³

¹ Sir Henry E.L. Dryden, 'Notes on Swalcliffe Parish Church etc', *Oxfordshire Archaeological Society Report*, xxiii (1887), 7-8.

² R.B. Wood-Jones, *Traditional Domestic Architecture of the Banbury Region* (1963), 20.

³ *Ibid.* Fig 4.

During the 1980s the future of the barn and the surrounding farm buildings seemed very uncertain, and the condition of the lesser barn was deteriorating: it was recorded as a rescue operation by the Oxfordshire County Council Department of Museum Services.⁴ Encouraged by a grant from English Heritage the museum made measured drawings of the cruck trusses in the barn. In the mid 1980s the Oxfordshire Buildings Trust bought the barn and its adjoining farmyard and proceeded to restore it with Michael Clews Architects, helped by a generous grant of £130,000 from English Heritage. Since planning permission (for limited residential development) was secured for the adjoining yard it was possible to sell this portion to a developer and, with the purchase price, bridge the gap between the grant aid and the actual restoration costs of the great barn.

Before the works were started, below-ground archaeological investigation was commissioned by the Trust, and the Oxford Archaeological Unit carried this out, as reported below. Concurrently the Museum Service had commissioned research in the New College archives to track down the accounts of the building of the barn and the running of the rectorial grange. Towards the end of the restoration work OAU was also commissioned by English Heritage to investigate the roof structure in advance of re-slating.

The result of these studies is the present report which combines the three approaches of documentary research, below-ground archaeological investigation, and examination of the standing buildings. Following a review of the restoration of the building (section II), there is an account of the documentary sources (III); the archaeological context is then described (IV), followed by a description of greater and lesser barns (V), and a final discussion (VI).

Acknowledgements: This study owes much to the past and present owners of the site, especially Mr Douglas Jack of Swalcliffe Lea who first showed one of us (JMS) round the barn in 1976; Mr Duncan Jack of Breaklands Farm who has allowed access over the years; and the present owners of the site, the Oxfordshire Buildings Trust, who have encouraged our work. We acknowledge the co-operation and interest shown by the Warden and Fellows of New College, who owned Swalcliffe Barn from its construction in 1400 to 1972, and the assistance of the College archivist, Mrs Catherine Dalton. Basil Deed enthusiastically supported the project at an earlier stage, and James Bateman allowed the resources of the Oxfordshire Museum Service to be channelled into recording the buildings over the years. We thank Philip Powell of the University of Oxford Museum for help with identifying the building stones, and Bronac Holden for transcribing and translating documents from the New College archives. Brian Gilmour, Rob Kinchin Smith, Ric Tyler and Jeff C. Demmar of Swalcliffe Lea helped with recording the building and the members of the Swalcliffe Society showed unfailing enthusiasm for the project. The Oxford Archaeological Unit is indebted to the owner, Mr P. Kelly, and the developer of the lesser medieval barn, for recovering the medieval timbers and floor slabs for the Oxford Buildings Trust and for cleaning the interior of the lesser barn before redevelopment. Michael Clews Architects have kindly made available their records of work on the building. The work was in part funded by English Heritage, who have made a grant towards the publication of the paper.

⁴ M. Taylor, 'Swalcliffe Lesser Barn', *South Midlands Archaeology*, CBA Group 9 Newsletter 20 (1990), 64-5.

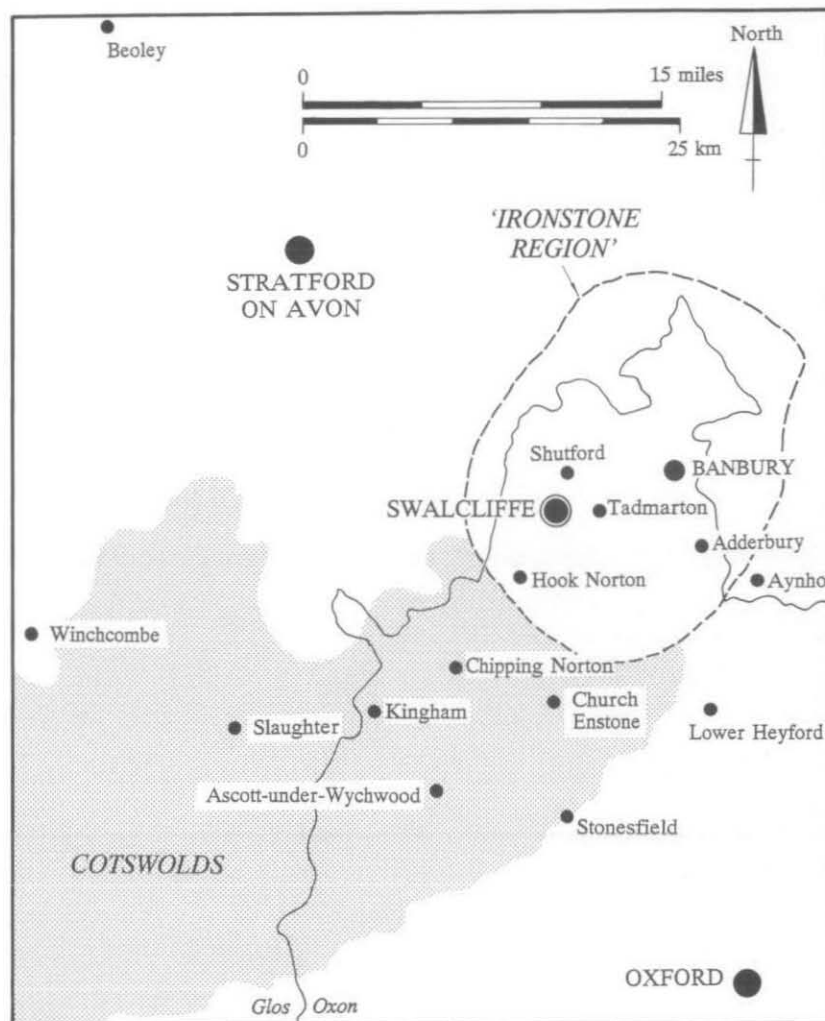


Fig. 1. Location of Swalcliffe and sources of materials.

II: CONSERVATION OF THE GREAT BARN, by ANTHONY FLEMING

As a monument of national importance, Swalcliffe Barn is protected under Section 1 of the Ancient Monuments and Archaeological Areas Act 1979. Following its acquisition by the Oxfordshire Buildings Trust, a programme of repair works submitted by Clews Architects on behalf of the Trust was granted scheduled monument consent (SMC) by the Secretary of State and grant aid was offered by English Heritage towards the cost of repairs. English Heritage's duties include the preservation of ancient monuments and historic buildings as far as is practicable for the education and enjoyment of the public. From these prime purposes may be seen to flow the objectives to preserve Swalcliffe Barn and to enable it to be presented to the public.

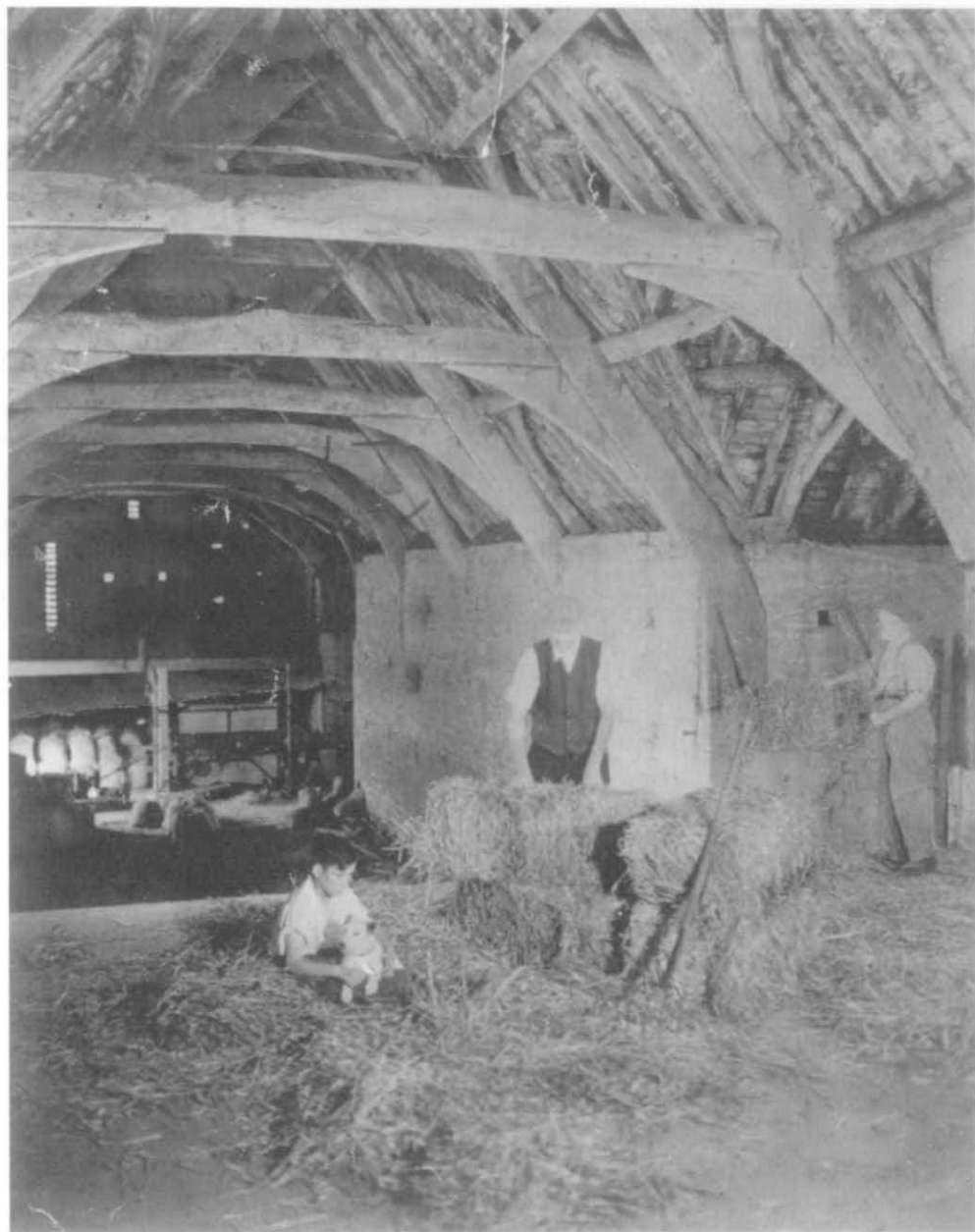


Fig. 2. Interior of Swalcliffe barn in c. 1940.

The main stone and timber structure of the barn has survived almost completely as a single build, well documented in the archives of New College which provide chronology and detail of the construction process. Changes and interventions since construction have been, with the exception of the creation of a cart entrance opposite the north doorway in the later 19th century, relatively minor, or such as to leave little mark on the original building. The remarkable survival may be attributed to its continuing function and proper repair on the estate of its medieval builders.

The conservation process embraces the identification of need, the recording and analysis, assessment of priorities, the approach to repair and sustaining long term management. The general objectives of the conservation process for a monument such as Swalcliffe Barn may be summarized in the following way: to retain and so preserve as far as practicable, using proven techniques, all of the surviving medieval fabric by restraining the process of decay; to retain the character of earlier repairs being part of the history of the building; to provide where necessary strengthening of the structure with minimum disturbance to or loss of fabric and as discreetly as possible; to reinstate lost elements, in a way which would be reversible, where reinstatement could be reliably justified and which is valid to the integrity and understanding of the building; to remove recent interventions which, though arguably part of the continuing history of the barn's use, did not merit preservation in their own right and which conflicted with that part of the conservation purpose to enable the barn to be presented to the public; to provide, by tactful design and reversible methods, for the security and safe use of the building for public purposes; to publish an account of the barn, its history, archaeology and conservation (this paper).

The conservation process will be briefly reviewed under four headings: the repair of the walls and of the roof, reinstatements of fabric, provision of services, the overall outcome.

REPAIR OF THE WALLS AND ROOF

In general the condition of the fabric of the majority of the walls and the roof structure was robust, but at risk from a period of low maintenance especially to the roof cladding which showed signs of extensive actual or imminent failure. The main structural matters to be addressed included the effects of the bowing of the west wall and some subsidence around the northern porch. The bowing was thought to have been exacerbated, if not actually caused, by the removal of the bay opposite the main north doorway, while the subsidence which required attention may be attributed to the history of quarrying in the vicinity which is reported elsewhere in this paper.

Although the exterior stonework showed evidence of erosion by the elements, assessment showed that the replacement of stone could be limited by strict selection. Structural needs and the needs of weather proofing were rigorously weighed with the need to ensure maximum retention of fabric. The main justifiable replacements of decayed stonework were to the dressings of buttresses, especially in the western wall which faces the most weather, and to the gables and hood mouldings of the porches. The method of these repairs was such as to match the pre-existing and to blend with the historic fabric, though the treatment of the surface dressing varies from the original ashlar and enables these repairs to be identified.

The majority of the external wall surfaces were generally sound, the walling blocks are sharply cut, closely fitted and run deep into the wall. The original thin whitish mortar bonding survives and wholesale repointing was regarded as being unnecessary and potentially destructive to the fabric, as well as creating considerable change to the appearance and the character of the building. Repointing and making good to resist water ingress was therefore undertaken selectively.

The presumption against drawing on secondhand materials for the replacement of stone roofing slates posed a significant problem owing to the lack of production of frost-split limestone slates and the unsuitability for weaving-in of the much thicker non-frost-split versions which are currently produced. There was no practical solution other than using secondhand slates and this problem can only be resolved if the traditional production method is revived. There was some difficulty too in procurement of very large slabs to replace losses and damage in the flagged surfaces crossing the interior of the barn opposite each of the porches. The repairs were achieved using the largest local Hornton slabs which could be obtained.

The special importance of the monument lies in the almost complete survival of the authentic primary fabric. Only the authentic fabric can communicate an authentic experience of history. Therefore the presumption guiding the repair of the roof was that anyone entering the barn after repair should be able to see and experience the whole of the early 15th-century carpentry, fabric and framework which survived before the start of conservation. The technical implications of this approach, which sought the preservation of the fabric of the whole framework, is that new strength has to be introduced where the condition of timbers is insufficient to serve fully their original function.

Initially the specification for repair envisaged the dismantling of the timberwork for bench repair, a procedure which was likely to cause considerable disruption to the fabric of the walls. Further assessment of the condition of the main framework of timber showed that it was of quite sufficient strength and structural integrity to continue to perform the functions of the previous 600 years. Methods were available and could be designed for repair *in situ* and to enhance structural strength all which argued against the seemingly drastic strategy of dismantling.

Repair of all the cruck trusses was achieved *in situ* including the third truss from the north which had splayed most. This was the only cruck truss which required significant repair, to the cruck foot, on the west side. The cruck truss required easing back together and supplementing its strength by the insertion of a thin steel tie. Similar thin steel ties were installed elsewhere including above the main tie beam level of the fifth and sixth cruck trusses from the north. Such ties, when dull painted, are scarcely noticeable, involve minimum intervention and are the successors of a traditional method of repair.

While the timber of the cruck trusses was sound, a number of the purlins were no longer of sufficient strength to continue in their function. Strength was added to these members by stainless steel strapping to the hidden faces and where weakness was more serious by inserting a supplementary timber alongside. This traditional method enables repair *in situ* which minimizes disruption and maximizes the preservation of the authentic historic fabric. Authentic historic timber is thus preserved until the next cycle of conservation when we can be confident that improved methods will exist. Only one purlin was entirely replaced and this was the upper purlin supporting the gable of the south doorway which has a substantial extra load to carry. In order to maintain structural integrity, the end of the lower south-east purlin was replaced and scarfed to enable it to be re-housed in the original purlin housing in the fabric of the gable wall. Wherever remains survived of earlier repairs to the trusses or purlins, whether of wood or such as iron cramps, they were left in position as part of the history of the barn's care and repair.

Generations of repairs and renewals to the rafterwork and roof cladding produced a somewhat irregular pattern of rafters. This historic pattern was retained, refixing rafters in that pattern and continuing with the presumption of the past towards supplementing rather than always replacing, unless the timber was wholly rotten. The laths however were entirely replaced with traditional riven oak as documented in the building account described in Part III.

REINSTATEMENT OF FABRIC

The most significant change to the character of the roof had been the loss of the windbraces for which good evidence survived and which were apparently in place when Sir Henry Dryden wrote an account of Swalcliffe in 1887, which is discussed below in Part III. Following consultations, the decision was taken to replace the windbraces and was justified for these main reasons: there was adequate reliable evidence for the presence and former character of the windbracing; their reinstatement would improve the structural integrity of the roof frame by reinstating their function in helping to provide additional longitudinal stability to the roof (identified as a problem by English Heritage's engineer, Peter Badcock); the reinstatement would involve no loss of historic fabric; the reinstatement of the windbraces would enable the visitor to understand and appreciate the built design.

The future use of the barn for museum storage and public events required that the roof be sealed in the traditional way by torching, that is to say the underside of the roof is sealed with lime mortar to fix the slates more firmly and to render the roof weather proof. A medieval roof such as Swalcliffe would be expected to be torched. However, none survived from or had been applied at the last roof renewal and so the presumption might be to repeat as found. Evidence of staining on primary rafters pointed to the former presence of torching while the building accounts for the roof, discussed here below by John Steane, include substantial supplies of lime and sand suggesting that these materials were to be

applied to the roof in which case torching was the most probable purpose. On the basis of the evidence from the barn, from its building accounts and from comparable traditional practice within the Cotswolds, the torching was reinstated.

The splaying of the third cruck truss from the north has been mentioned and the fact that the west wall had bowed outwards towards the cart opening cut into the west wall in the 19th century. This structural weakness was addressed by the intervention of providing two concrete piers set deep into the bedrock which were bonded into the exposed ends of the west wall. Strong structural continuity across the gap in the wall was created by the reinstatement of the lost walling at this point and of the small north door. The evidence for the small north door derives from the records in the building accounts for two minor doorways, as discussed below by John Steane. In view of the symmetry in the design of the barn and of the great porches, the design of the minor south-western doorway was taken as a valid model for the reinstatement of the north-western doorway and was built to match.

PROVISION OF SERVICES

The future use of the building for public purposes of display in its own right and as a home for the display of exhibitions, museum collections and other events required the provision of services and staff facilities which were introduced as tactfully as possible and with minimum disturbance. A small facility for museum staff and equipment for the management of the building was designed in natural materials to be independent of the fabric and to be as narrow and low as possible to reduce visual impact upon the interior of the south gable and to be readily removable.

The security of the building was addressed by the provision of strong full height panelled doors to the porches. At the time there was considered insufficient evidence to attempt a valid reconstruction from the building accounts available.

THE OVERALL OUTCOME

This brief review of the conservation process at Swalcliffe Barn illustrates the addressing of priorities for preservation, the justifications for reinstatement and the facilitation of sustainable long-term management. The conservation process by the Oxford Buildings Trust has preserved to a very high degree indeed the integrity of the structure, the authenticity of the fabric and the intelligibility of this outstanding medieval monument for lasting public benefit and enjoyment.

III. HISTORICAL BACKGROUND, by JOHN STEANE⁵

SWALCLIFFE RECTORY MANOR

William of Wykeham, bishop of Winchester for thirty-seven years (1367–1404), was the richest prelate in England, with an income only exceeded by that of John of Gaunt, Duke of Lancaster, and King Richard II himself. Before the end of his life he had founded New College, Oxford, and endowed it in a princely fashion with estates of varying extent in nine counties. The revenues of the college came largely from the exploitation of agricultural land, either as rents from the customary tenants of its manors, or as 'farms' (fixed payments) for the leases of his larger properties including the rectories.⁶ By

⁵ The source material for this section was largely collected and transcribed by Bronac Holden in New College archives.

⁶ R.L. Storey, 'The Foundation and the Medieval College 1379–1530', in J. Buxton and P. Williams, *New College Oxford 1379–1979* (1979) 3, 10; T.A.R. Evans and R.J. Faith, 'College Estates and University Finances 1350–1500', in J.I. Catto (ed.), *The History of the University of Oxford*, ii (1992), 635 ff.

this time monastic and collegiate foundations all over the country were profiting from the spiritual revenues of appropriated rectories.⁷ The rectory of Swalcliffe was one of the foundation endowments acquired by William of Wykeham for his college. The advowson was granted to the college in 1381, which made the first presentation in 1395 and has done so ever since. Wykeham intended that the rectory would provide stipends for fellows, and the appropriation dates from 1389.⁸ The first lease of the rectory dates from after 1397 and thereafter there is a continuous succession of leases and financial records in the college archives.⁹ The college recognized its rectorial responsibility to maintain the chancel of the parish church. The tower had been built in the 13th century, and the college gave 6s. 8d. *ad edificandum campanile* in 1405–6, but it is not known when the work was carried out.¹⁰ Certainly the upper part of the tower has traceried double-light belfry windows similar in style to those in the hall at New College and probably of early 15th-century date.

THE BUILDINGS OF THE RECTORY FARM [RAC]

The medieval rectory farm of Swalcliffe, with its two medieval barns and the nearby parish church, occupies the highest point in the village. Although this building group now lies north of the Shipston-Banbury road at the west end of the present linear village, until 1772 it lay to the north of the village, remnants of which then extended downhill some 200 yards south of the church in a rectangular plan.¹¹ At that date the lord of the manor stopped up the main road through the village and absorbed part of the former village into Swalcliffe Park.¹² Typical of villages in the north Oxfordshire uplands, the farm buildings are built in the local soft ferruginous limestone, often referred to as ironstone, for it is quarried in places as an ore. More durable freestones and roofing slates have to be brought into the area from the Cotswolds. The ironstone is obtained from the Marlstone Rock Bed and until the present century most building stone was quarried locally. The Marlstone Rock Bed is variable and also contains veins of harder, silty blue stone. The characteristic use of the ironstone in vernacular building defines a localized province (see Fig. 1), distinct from both the Cotswolds and the Northamptonshire uplands.

In addition to the main barn, the accounts refer to a sheep-house and cow-house, as well as stable, bakehouse and gatehouse. These are discussed together with the archaeological evidence for lost buildings, below in section IV. More might be said of the rectory house itself, which preserves substantial medieval remains, but has not been the subject of any detailed examination for this paper. The documentary and architectural sections that follow are largely concerned with the great barn, in its early years.

BUILDING THE BARN [JMS]

In the first years of the new century the Warden and Fellows of New College decided to spend a heavy capital investment on improving the accommodation and agricultural facilities of their new possession at Swalcliffe. The series of college accounts which have survived for the first half of the 15th century allow us to follow the construction of the new great barn in detail and to trace the maintenance of the rectorial farm thereafter. There are two kinds of accounts from which the following material is drawn. Firstly there are the annual 'farmer's' or lessee's accounts to the college bursar, indicating how much

⁷ A. Hamilton Thompson, *The English Clergy and their Organisation in the Later Middle Ages* (1947), 105–7.

⁸ *VCH Oxon.* x, 249.

⁹ *Ibid.* 237.

¹⁰ *VCH Oxon.* x, 251.

¹¹ R. Godson, 'A sketch of the town of Swalcliffe in the County of Oxon. taken in December 1772', in New College Archives, Ref. 2402.

¹² *VCH Oxon.* x, 243 for inclosure of 1772.

of the rent should be offset from building expenditure made on the college's behalf. Secondly, there are for a short period building accounts by a Clerk of Works, recording expenditure on the barn, which are themselves summaries of more detailed particulars that do not survive.

Gathering materials

The decision appears to have been taken by the college some time between September 1400 and August 1401. From the accounts submitted by the lessee or 'farmer', John As, we learn that on 4 August 1401 five people, fellows or associates of New College, set out to select trees for felling, doubtless for the principal beams of the cruck construction which had been decided on. They rode to Stratford-on-Avon and spent the night there before continuing their journey next morning to *Bewlepark* near *Bordesle*. Their expenses came to 4s. 10½d. and a gift of 13s. 4d. was given to Thomas Wykeham, lord of the manor of Swalcliffe, for his good will towards the project. Beoley is a parish by Bordesley in Worcestershire, on the Warwickshire border (see Fig. 1 for sources of materials). Robert son of Ralph fitz Nicholas obtained a grant of free warren in his demesne lands of Beoley shortly after he inclosed a park there, 1248-9. In 1316 the old and new parks are mentioned, the latter containing a fishery and coney warren. The road from Bromsgrove to Henley-on-Arden runs west to east across the south of the parish, meeting the road from Birmingham to Alcester, while the Icknield Street runs from north to south through Beoley and forms the western boundary of Beoley Park.¹³ Consequently it would have been easy enough to shift the timber in the direction of Swalcliffe. What is surprising is that the College did not have a nearer source of timber, but economic considerations were frequently overridden by other factors, such as tenurial ties. Henry III for instance brought in timbers for his building works at Westminster from Northumberland. Ease of transport by rivers also explains the considerable distances over which timber was carried in the Middle Ages.¹⁴ In addition to the cost of viewing the timber, an unnamed carpenter was paid £10 'for timber bought for the new grange newly built on part of the manor'.¹⁵

Commencement of building

There are no accounts for the following two years, but in 1403-4 the account roll submitted by joint lessees or farmers of the rectory, John Wylkyns and William Mason, records that the Warden and some members of the College visited Swalcliffe no less than four times to oversee the building of the new grange. The expenses of 22s. 1½d. included dining with the masons and labourers and giving them cash, possibly at a foundation ceremony. The person appointed to oversee the building and manage the finances at this stage was the vicar of Swalcliffe, Thomas Bonde (*alias* Bounde).¹⁶ In 1403-4 Bonde received £52 17s. 10½d. 'in part' for building works on the grange (including the sum of 106s. 8d. separately received, perhaps his stipend). The profits of the rectory were £53, and it was nearly all spent on the new building (*et totum in nov' edificacione*).¹⁷ It is remarkable that the college was prepared to allow the whole sum to be swallowed up in this way, for it would take many years before such an investment would begin to show a dividend.

The story is carried on in two series of overlapping accounts. Those of John Wylkyns and William Mason, the farmers or lessees of the rectory, cover a twelve-month period from the Annunciation (25 March), which is different from the main college accounting year running from Michaelmas. The

¹³ *VCH Worcs.* iv, 12-13.

¹⁴ J.M. Steane, 'The Medieval Forests, Woods and Parks of Berkshire', *Arboricultural Journal*, August 1981.

¹⁵ New College Archives, Swalcliffe Account 7001/2 (1400-01).

¹⁶ Possibly the Thomas Bonde mentioned by A.B. Emden, *A Biographical Register of the University of Oxford, A-E* (1957), 217.

¹⁷ New College Archives, 7001/3 (1403-4). Note that roll 7001 contains 11 unnumbered accounts stitched together at the head, of which items 3-11 referring to the barn are here numbered 1-9.

account from 25 March 1404 to 25 March 1405 is very brief and simply notes three visits of the Warden and his associates, again eating with the masons and labourers and paying gifts, in all 10s. 8d. It also recorded a payment of £53 9s. 4d. to the new vicar of Swalcliffe, William Ingram, who succeeded Thomas Bonde. Again this was 'in part' for building, and included the separate sum of 106s. 8d.¹⁸

The second set of accounts are more detailed rolls of particulars of expenditure on the building works that exist for only three years (1404-6) and were themselves based on 'paper' accounts that are frequently referred to but do not survive, and were probably in the form of weekly paybooks.

The first of these runs from 4 February to Michaelmas 1404, apparently representing the full working year. It supplies much of the information that was baldly summarized on the main account, and was drawn up by Thomas Bonde as far as the feast of the Assumption, and by Mag. John Sarger (a fellow of New College) thereafter. The account shows that the construction work had started in earnest. It records the purchase of a number of iron items including scappling tools for working blocks of stone on site. Also pails, shovels, pickaxes and wedges were bought. Evidently quarrying was taking place on or near the building site. The wedges needed to have steel edges added and they were weighted by having lead poured into their hollow centres. Labourers were engaged by Thomas Bonde to quarry stone and serve the masons for over seven months. He paid them £11 17s. 5d. for the first 24 weeks, and then John Sarger paid out £2 9s. 1½d. for a further seven weeks. Scaffolding appears in the accounts as the walls began to rise. A carpenter is mentioned with '20 hurdles bought for scaffolds and the carriage at 6s. 2d. and 3s. for carriage of scaffold timber from *Keynham* (Kingham?)¹⁹ and the trimming thereof.' Scaffolding was of course made of wooden poles; these were inserted in square holes specially made for them in the walls, known as putlogs, and which could easily be filled when building was completed. Instead of planks for temporary flooring as nowadays, hurdles were used, a springy and, one would have thought, a dangerous equivalent. Two grades of workers are paid, stone cutters (*latom*) and labourers (*labor*). While the labourers were digging stone the masons were working on the walls of the barn (£40 9s. 1d. under Bonde and £6 14s. 5d. under Sarger).

But the account mixes this and other items of expenditure on the barn at Swalcliffe with at least one other building, the presbytery at Shutford which the college was reconstructing at the same time. Consequently when he itemizes '200 laths and 1,000 lath nails bought, along with carriage of sand/gravel (*sabul*) for the said house, and the stipend of a roofer for thatching the house along with carriage of timber for scaffolds from Swalcliffe', it seems that the two building works are being carried out concurrently with an exchange of equipment between the two sites. The next item in Bonde's account mentions 'the carriage of 43,000 slates from *Sclatt* and *Norton* . . . with 64s. 4d. for slates bought from John Slatter at 6s. a thousand including their setting, £7 10s. 10d. (£4 2s. 6d. paid by Thomas Bonde and 68s. 4d. by John Sarger). This roofing cannot refer to the barn since its walls were not yet sufficiently high, but the references are of interest since they indicate the distances over which roofing materials were carried. A subsequent reference to slates has them being carried from *Scloutere* to Swalcliffe,²⁰ and that is presumably what is intended by *Sclatt*, if it is indeed a place rather than a personal name. Assuming that 'Sloughter' refers to Lower/Upper Slaughter in Gloucestershire,²¹ the slates were carried twenty-one miles to Shutford. Norton poses greater problems for identification because it is such a common name. Hook, Chipping and Over Norton were usually called by their full names; Wood Norton and Greens Norton in Northamptonshire are not located on fissile limestone; Brize Norton, Oxfordshire, is a possibility.²² The final payment on the account is of 20s. to the vicar Thomas Bonde as 'reward' for his overseeing the works.²³

¹⁸ New College Archives, 7001/4 (1404-5).

¹⁹ M. Gelling, *The Place-Names of Oxfordshire* (EPNS, 1954), 360.

²⁰ New College Archives, 7001/8 (1405-6).

²¹ A.H. Smith, *The Place-Names of Gloucestershire* (EPNS, 1964), 206 cites *Slouhtre*, *Slonghtre*, *Sloughter* as possible early variants of this place-name.

²² Gelling, *op. cit.* note 19, 306-7.

²³ New College Archives, 7001/5.

Feeding the workforce

At this point Sir William Ingram (variously spelt *Ingraham*, *Ingeram*, *Ingram* and here *Ingeram*) takes over the accounts as 'overseer of the works on the Swalcliffe barn'. He had been chaplain of New College in October 1402 and was presented as vicar of Swalcliffe on 21 January 1405. He had vacated the office by May 1413.²⁴ The new vicar's account runs from 22 February to 29 September 1405 and is again a roll of particulars,²⁵ overlapping with the 'farmers' accounts for the rectory of March 1405-6.²⁶ Numerous advances were made to Ingram to provide the necessary cash in hand, and at various times he received a total of £48 2s. 8d. from John Wylkins the 'farmer' of the rectory. In March the Warden sent him 7s.; on 4 May the Bursar sent him £10; on 24 May, £3 from the Warden with another £2 on 11 June. Provisions for feeding the work-force were also accounted for. The Warden lent him 5s. 4d. for 300 red and white herring (*in precio ccc all' rub' et alb' ex mutuo*), and 4s. 6d. was given by the Bursar to buy stockfish for the workers (*et in precio stok' ab eisdem empt'*). White herring were fish either dried in the sun or wind, or barrelled in salt or brine. In the late 13th century smoking the fish over slow wood fires produced red herrings which had excellent keeping properties. Stockfish was dried cod, the standard poor man's meal of the Middle Ages. Dehydrated it would keep almost indefinitely, but it had to be heated and soaked to make it edible and could be cooked by stewing.²⁷

Building materials

Ingram's accounts also show heavy expenditure on building materials for the new barn: 41 quarters of both quick and slaked lime (*calc' tam vivi quam extinct' empt' ad op' grang'*) were bought in *Ascote* and *Aynho* for 52s. 10d. with another 11s. 6d. for carriage. *Aynho* is the southernmost parish in Northamptonshire.²⁸ While there is an *Ascote* near Watling Street, three miles north of Towcester, it is more likely that *Ascote-under-Wychwood* in Oxfordshire is meant.²⁹ Sand, water and earth were carted by John Wylkins at a cost of £1 3s. 11d. The earth was used as a bonding material in the walls, and was used in place of lime mortar (see description below). At Clarendon Palace in 1363 there is mention of 'digging and carriage of 2 cartloads of white earth for making mortar', and at Oxford in 1453 'a cartload of red earth for making mortar'.³⁰ In the Swalcliffe accounts there is a further reference to 'red earth' in making the wall of the cowhouse there 'at the same time knocking down an old wall and removing the rubble and the carriage of red earth there' (*rudend' et removend' cum car' rub' terre*). A further reference to water-carrying occurs on the rectory accounts for 1405-6, which reveals that the payments to John Wylkins were part of a total of 36s. 8d. for carrying water to the building works.

The building must now have been well on the way to completion because the accounts are full of references to the upper parts of the structure. Some 378 feet of freestone was bought for the tablestones and the coping stones for 78s. 7d. (*pro ccc lxxviii ped' liberarum petr' emp' ad dict' op' dand' pro ped' ijd ob. tam pro tabulston sondes et crestys inde habend'*). Tablestones (known also as tables, tabilstons, tablements) were flat stones in walls projecting to form string courses; crests were coping stones.³¹ Several men were paid 35s. 10d. for carting the said stone from *Wynchcombe* to Swalcliffe in eighteen

²⁴ Emden, *op.cit.* note 16, ii (1958), 1490.

²⁵ New College Archives, 7001/6.

²⁶ New College Archives, 7001/4 (1404-5) mentioned above, and 7001/7 (1405-6).

²⁷ J. Bond, 'Monastic Fisheries', in M. Aston (ed.), *Medieval Fish, Fisheries and Fishponds in England*, BAR Brit. Ser., 182(i) (1988), 73.

²⁸ J.E.B. Gover, A. Mawer, and F.M. Stenton, *The Place-Names of Northamptonshire* (EPNS, 1933), 48.

²⁹ Gelling, *op. cit.* note 19, 335-6.

³⁰ L.F. Salzman, *Building in England down to 1540* (1952), 152.

³¹ *Idem.* 106-7 spends two pages discussing various kinds of table stones, but it is not at all clear to which kind the Swalcliffe account refers.

loads. There is good freestone available at Winchcombe, Gloucestershire, some thirty miles to the west of Swalcliffe. As we shall see, there is only a very small proportion of oolitic limestone in the fabric of the barn today, certainly not as much as 378 feet. But by far the largest amount of stone would seem to have been quarried and worked locally, and archaeological evidence suggests that this took place on site actually adjacent to the barn. The wages of various stone cutters engaged to work on the barn on a daily basis came to £28 18s. 4d. in this year, and 'the wages of various labourers digging stone in the quarry and assisting the said stone cutters' were an additional £12 19s. 13½d. Their tools required buying, hardening and sharpening.³²

Raising the roof

Immediately following these labouring accounts is a reference to the raising of the roof. Timber had earlier been brought from Stratford to Swalcliffe at a cost of 26s. 8d., and this may have included the principal trusses. The building of the walls would now appear to have been sufficiently advanced for the raising of the cruck roof trusses. This major event in the building of the barn is briefly referred to in the statement 'cash given to the stone cutters and labourers above mentioned, with various victuals at the raising of the roof beams of the said barn (*oper' levat' meremium dict' grang'*) such as bread, ale, wheat, malt, herrings and fish (*pane servis' Fru' bras' all' et pisc' empt'*), 47s. 3½d. Evidently the expenditure of so much energy and sweat was requited with a feast. It was customary to celebrate summation of various stages of a building project in this way. A stockfish, for instance, was bought for the carpenter at the sealing of the indentures of the new buildings of the Guildhall, Stratford-on-Avon. It cost 4d. and was washed down with 3d. worth of wine.³³

There is one more roll of accounts from Ingram as 'surveyor of works', running from September 1405 to 1406,³⁴ and thus overlapping with the rectory farm accounts of Wilkins and Mason for March 1405-6 and 1406-7.³⁵ To add to the confusion Ingram also refers to work done in the previous year: 'For one man engaged last year to cover the wall of the barn . . . 4d.' (*in j hom' conduct' pro mur' grang' ibidem in anno preterito cooperiend'*). The wall tops would have needed protection from the frost, and it is likely that the walls continued to be built after the crucks had been raised (assuming that the crucks had been set in place when the walls had reached the level course for the cruck feet). This can be observed in cruck barns of less sophisticated construction, where there is an offset in the walls at this point.

Roofing

The roofing of the barn occupies a prominent position in the accounts of 1405 to 1406. Ingram recorded that he had made final payment to John Sclatter for 61,000 slates bought from him for the work on the barn there, paying 6s. per thousand for their positioning and 12d. more, a total of £6 6s. As noted above, the slates were brought from 'Scloutere', a distance of about nineteen miles to Swalcliffe, and for once the account supplies a date. The carts were coming between 4 May and the last day of June, and victuals bought for the carters and their wages came to 43s. 2½d. More lime and sand was brought in: 'for 12 quarters of lime bought for the said work at Asscote, price per quarter 16d. . . 16s.' Also 'for one carter engaged to carry ten cartloads of sand (*arena*) for the said work 10d.'

The work of the smiths, carpenters and roofers assumed greater importance as the closing stages of the building approached. In Ingram's previous account (Feb.-Sept. 1405) John Irmonger had been

³² All this from New College Archives, 7001/6.

³³ L. Fox, 'Some New Sidelights on Stratford-on-Avon, The Medieval Guild Buildings', *Trans. Birmingham Archaeol. Soc.*, 70 (1952), 48-59.

³⁴ New College Archives, 7001/8.

³⁵ New College Archives, 7001/7 & 9.

paid 24s. for oak laths, with 3s. 10d. for carting them from Stratford; probably at the same time 14,000 lathnails were bought, with 300 bord nails, spyknails and cloutnails, all for 20s. In 1405-6 some 5,350 laths were brought in one cart from Stratford at 8s. a thousand and the cart 14d. A total of 9,000 lathnails were bought, 7,000 at 16d. per thousand, and 2,000 at 17d. per thousand, together with 100 spyknails at 4d., making a total of 12s. 6d. As was appropriate for a slate roof, the laths were of riven oak, a mode of preparing these narrow strips of wood involving splitting them from a balk by vertical axe or wedge stokes. The strength comes from the fact that the grain is not cut, and the result is an irregular lengthwise profile. Spikenails were certainly 'among the largest nails produced by smiths' but such a term, as Salzman comments, was vaguely generic and implied no standardization.³⁶ The large nails were probably used for nailing the feet of the rafters to the wall plates. Bordnails, as their name implies, were ordinary plank nails; clout nails were normally used for nailing on patches of iron, for repairing ploughs, etc., but were also used for building purposes including fastening laths. Of the various nails connected with roofing, lath nails were the commonest.

The mention of Stratford as a centre of the timber trade and the residence of smiths is interesting. Stratford-on-Avon is seventeen miles from Swalcliffe, and while other market centres such as Banbury (six miles) and Chipping Norton (thirteen miles) were nearer, they were presumably unable to offer the same services. In any case, as we have noticed, New College had purchased their timber supplies from Worcestershire, and this meant travelling through Stratford. The first grant of a market to Stratford was made in 1196: this had been followed by grants of fairs in 1214, 1239, 1269, 1270 and 1309. The ironmongers and nailers in the 16th century were found opposite the 'chewer' in Bridge Street. However the first reference to a Smiths' company came in 1570. The gild registers mention thirteen smiths as compared with twelve weavers, so by the early modern period the town had clearly been confirmed as the centre for the supply of iron goods for the region.³⁷

Thomas Rede the mason (who does not occur in Harvey's *Biographical Dictionary*), was employed in setting the coping stones on the barn (*dat' Thom' Rede pro grang' predict' ad thascam crestand' . . . xvjd*). Whether these referred to the large limestones with their interlocking joints at the gable ends or the specially shaped crests covering the main ridge is not apparent. Work such as this would have needed the services of a mason with greater skills than a mere waller, and was the subject of a separate contract, or 'task'.

The doors

Once the building was finished it needed to be secured, and among the last jobs to be done was making and hanging the doors, recorded on the farmers' accounts for 1406-7.³⁸ There are two wagon porches each with two doors, and two opposed doorways in the west wall each with a single door. A local Thomas Smyth of Swalcliffe was put to work to produce the door furnishings for the greater doors of the barn which faced on to the farmyard: 'Payment of Thomas Smyth for 8 hinges and bolts bought for the two doors (each double) of the barn weighing 86lbs, price 2½d. per pound, 18s. (*In solut' Thom' Smyth de Swalclyve pro viij vertivell' et iij gomph' empt' pro ij host' gran' iij^{xx}ij lb precii libere ijd. ob.*)'. Vertivells are the eye parts of the hinge, fastened onto the back of the door and projecting at the end to fit onto hooks which are driven into the wall thickness; these are the gumfi (in our case gomphi). The door would probably have been made out of two layers of planks; the outer one with vertical planks and the inner with horizontal planks. Large nails would be driven through both thicknesses and burred over. The purchase of such large nails is recorded immediately below the reference to Thomas Smyth's work on the hinges: 'For 200 large nails (*gross' claw'*) bought at Stratford, price 20d. per hundred, 8s. 4d. [500 must be meant]. For 200 other nails bought for the said work 2s., price 12d. per hundred.'

³⁶ Salzman, *op. cit.* note 30, 304-5, 311.

³⁷ *VCH Warwicks.* iii, 237, 240.

³⁸ New College Archives, 7001/9.

The two minor doorways in the west wall were also fitted with doors, though this was not accounted for until 1412–13. For these ten oak planks were bought, eight at 5*d.* per plank and two at 4*d.* per plank. Four hinges weighing 33lbs at 2*d.* per pound were bought and 150 nails at 12*d.* per hundred. The carpenter John Gylkes was 'engaged to make the said doors, task work 2*s.* 6*d.*'

Who designed the barn?

The names of the masons are rarely given. This makes all the more interesting the appearance in Ingram's 1405–6 account of 'payment to Richard Wynchcombe for shaping the stone in the past year . . . 2*s.*' In the year 1398–9 a mason called Richard Wynchcombe had worked at Portchester Castle. Harvey considers that the fact that he was paid 2*s.* for 'forming' stones at Swalcliffe makes it 'likely that he designed that great tithe barn'.³⁹ This may be so, but all the account says is that he was paid piece work for shaping stones, though the use of Winchcombe stone at Swalcliffe is suggestive in this context. The main areas requiring the services of a skilled mason are the voussoirs of the gable end indoors and the waggon porch doorways, and it seems likely that Winchcombe was involved in this, but the sum of 2*s.* seems little, unless he only made the templates. He was the chief mason employed at the chancel of Adderbury church, another New College venture, between 1408 and 1418. For this work he was paid at the high rate of between 4*s.* 10*d.* and 6*s.* 1*d.* a week, about twice the amount paid to other masons there.⁴⁰ He went on to be master mason for the Earl of Warwick and had an extensive private practice in Oxfordshire, and the culmination of his career was the direction of building the Divinity School for the University of Oxford in 1430–9.⁴¹ It seems that his work at Swalcliffe was a small step at an early stage of his career, but his association with a building of this scale is significant.

A building in which the roof forms such a prominent part of the design must have been designed at least in consultation with a carpenter, and one of the few named carpenters in the accounts is John Gylkes. Gylkes (variously spelt *Gylcous*, *Jylkes*) worked between 1397 and 1433, and was employed by New College to carry out work at the rectory house at Swalcliffe, including the hall and stables in 1397–8, the farm buildings in 1408–9 and 1412–13, and the chambers and chapel in 1432–3. On the first of these occasions he went with John Norton to select and fell timber. He also worked at Adderbury (under Master John Carpenter), Drayton and Heyford as well as at the college itself.⁴² As Master John and Gylkes were the principal carpenters employed by New College at this date, one of them is likely to have been the leading force behind the design of the roof.

IV. THE ARCHAEOLOGICAL CONTEXT, by R.A. CHAMBERS

SUMMARY

Within the larger medieval barn begun in 1402 the flagstone threshing floors appeared to be remnants of the original floor surface. Quarrying preceded the construction of this barn and the north porch was shown to have been built partly over an infilled quarry pit. A second, larger medieval stone quarry occupied the centre of the farmyard. This quarry was infilled with layers of domestic rubbish from the rectory house during the 16th–17th centuries and then built over in 1719.

The date and function of a smaller medieval barn, later much altered and extended, was not determined. Likewise, an associated farmyard partition wall remained undated.

³⁹ B. Cunliffe and J. T. Munby, *Excavations at Portchester Castle*, iv (Soc. Antiqs. Res. Rep. xliii, 1985), 159, 202–3; J. H. Harvey, *English Mediaeval Architects. A Biographical Dictionary down to 1550* (2nd edn., 1984), 336–7.

⁴⁰ T. F. Hobson, *Adderbury 'Rectoria'* (Oxon. Rec. Soc. viii, 1926), 26–41.

⁴¹ S. Gillam, *The Divinity School and Duke Humfrey's Library at Oxford* (1988), 5–7.

⁴² Harvey op. cit. note 39, 165; E. A. Gee, 'Oxford Carpenters, 1370–1530', *Oxonienia*, xvii/xviii (1954), 112–84, esp. 165.

INTRODUCTION

The Oxford Buildings Trust purchased the abandoned farmyard in order to preserve and restore the great barn, and the restoration was funded partly through the resale of the remaining farmyard buildings including the lesser medieval barn. In advance of the farmyard redevelopment English Heritage funded the Oxford Archaeological Unit to assess any surviving archaeology both within the medieval barns and in the yard. As it was considered likely that there would not be any further opportunity to excavate archaeological levels the assessment was extended to recover as much information as possible, the whole backed up by a watching brief during restoration and conservation work.

THE EXCAVATION (Fig. 3)

Fourteen trenches were excavated including three within the great and lesser barns. Trenches 8, 11 and 12 were cut by hand and the remainder by machine. The eleven exterior trenches were 2.0 m. wide. Only turf, topsoil and modern materials were removed by machine. Each trench was subsequently cleared and excavated by hand.

Trenches west of the great barn (Fig. 3, Trenches 1, 2 and 3)

West of the great barn the ground was almost level, sloping only gently towards the farm track (Fig. 3) although beyond the track the ground falls away steeply. Three trenches (1, 2 and 3) revealed the brown ferruginous sandy limestone bedrock immediately beneath a thin turf. The bedrock had been levelled up in places with modern rubble and also cut by service trenches. There was no evidence for previous activities or pre-20th-century buildings. Modern farming activities including the repair, storage and dumping of agricultural machinery, and rubbish disposal contributed to the destruction of any archaeological levels there may have been and had affected the surface of the bedrock in places.

The farmyard east of the great barn and south of the lesser medieval barn (Fig. 3, Trenches 4, 5, 6, 7, 8, 9 and 14)

The farmyard which was separated from the rectory house by the modern east barn dipped gently towards the centre approximately at the junction of trenches 4 and 5. Around the edges of the present farmyard the bedrock generally lay beneath only a few centimetres of turf but an irregular surface of compacted small stone rubble spread across the centre of the yard.

The external face of the foundation for the east wall of the great barn was of soil bonded ironstone rubble laid on bedrock to a depth of 0.3 m. (Section 12, Fig. 7) and similarly beneath the buttress (Section 3, Fig. 5).

Twelve metres east of the great barn an irregular, ironstone rubble-filled feature extended outwards and downwards south of trench 4. Undated and capped with concrete, this is perhaps the lip of a quarry or infilled wall (Fig. 3 and Fig. 5, Section 4).

Although two service trenches crossing trench 5 were clearly modern (Fig. 5) an unmortared, 0.7 m. wide, ironstone rubble foundation course from an E-W farmyard partition wall 8 m. south of the lesser barn remained undated. Between the wall and the lesser barn there was virtually no covering over the smooth bedrock surface also found in trench 6 and the northern end of trench 7. South of the partition wall lay the compacted rubble surface of the centre of the farmyard.

Two modern service trenches also cut trench 7. The bare bedrock yard surface of the northern half of trench 7 continued southwards as compacted rubble metalling over medieval quarry infilling which appeared to extend into trenches 8 and 9. The top 2.0 m. of quarry filling was sectioned (Fig. 6, Section 6) to reveal quarrying waste continuing downwards and southwards beyond the trench (layer 16). This quarry remained as a hollow gradually accumulating 15th- to 17th-century kitchen waste (layers 14, 12 and 10) until it was built over in 1719. Quantities of lime wall plaster, lime mortar, daub and fragmentary stone roofing slates were present in the bulk of the infilling (layers 10, 18, 11 and 7). Neither in trenches 8 or 9 was the quarry fill emptied beyond 0.7 m. in depth.

A stone-lined drain which cut NW-SE across the eastern half of trench 9 had lost its cover stones and upon total dismantling produced only 19th-century material.

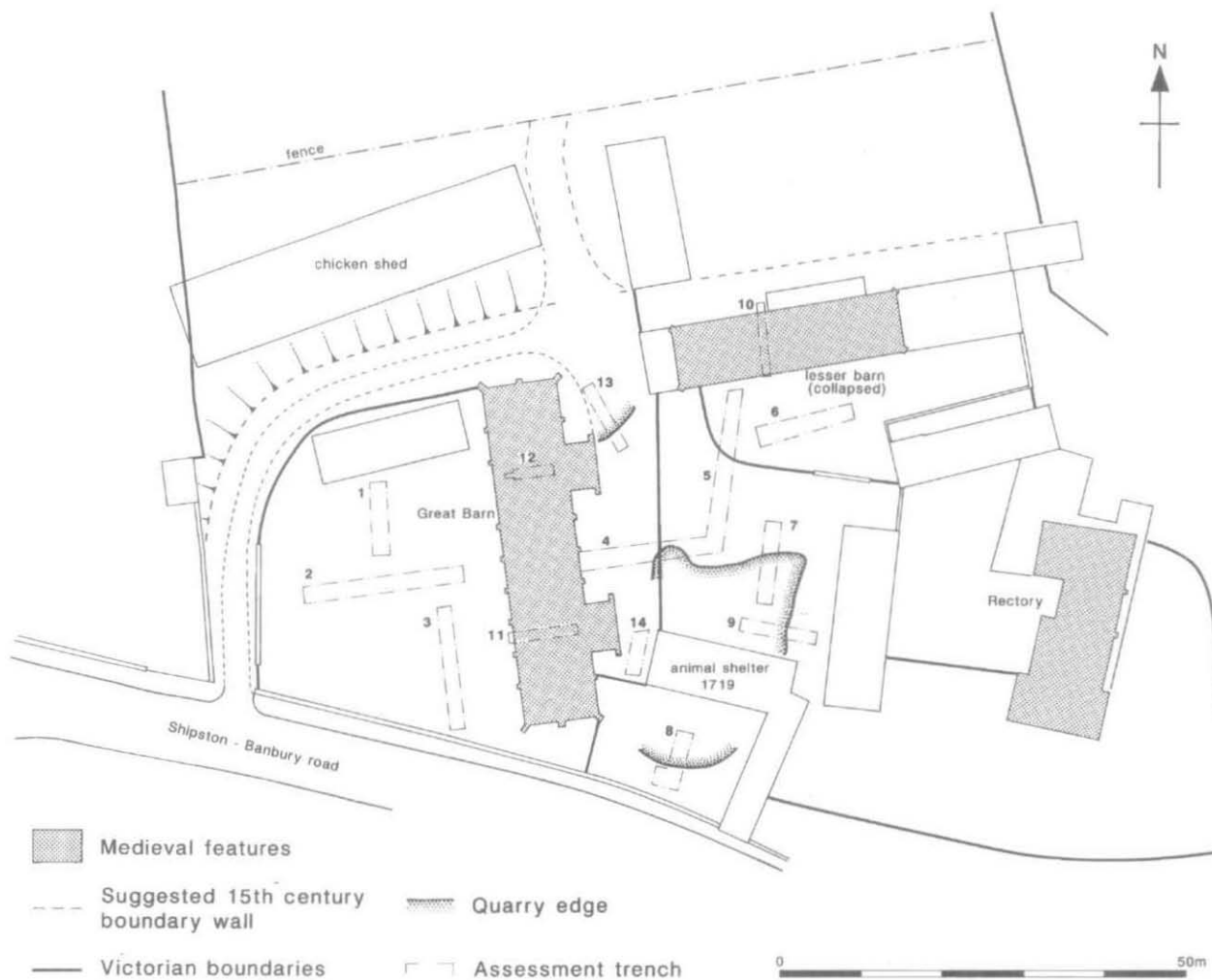


Fig. 3. Swalcliffe Rectory: location of buildings and archaeological trenches.

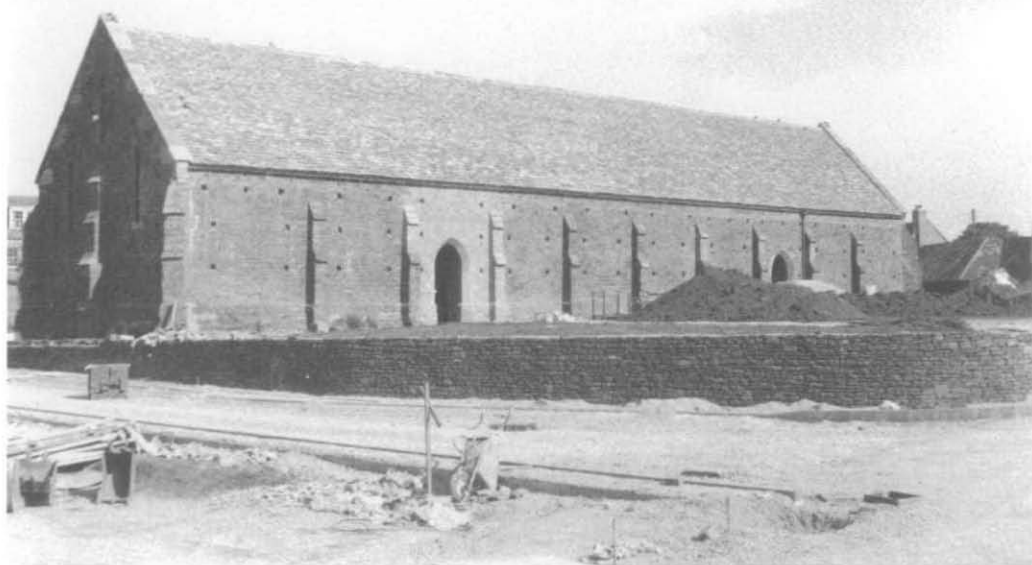


Fig. 4. Exterior of great barn during restoration. *Top*: from north-west; *bottom*: from north-east.

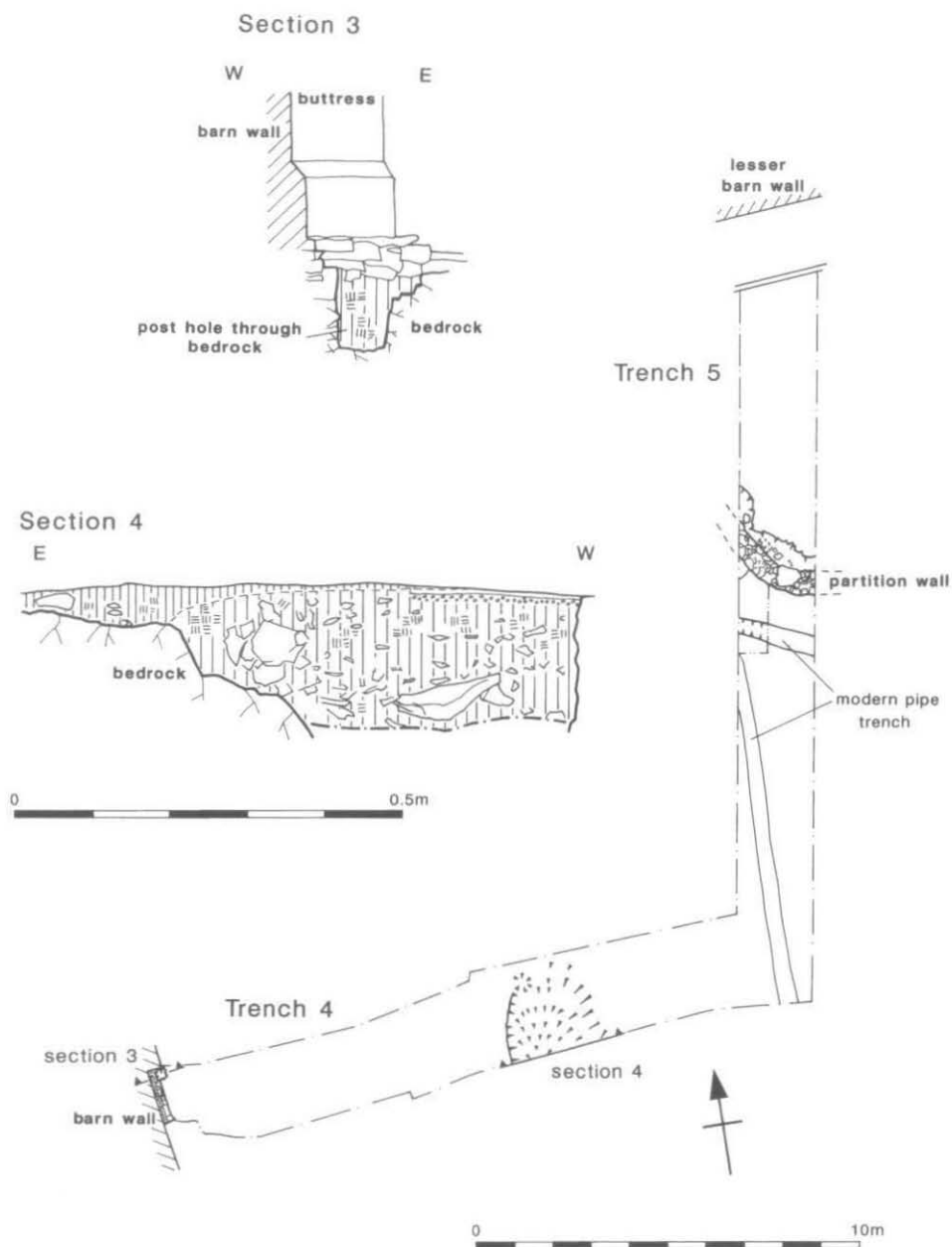


Fig. 5. Excavation: plan of Trench 4-5 and Sections 3 and 4.

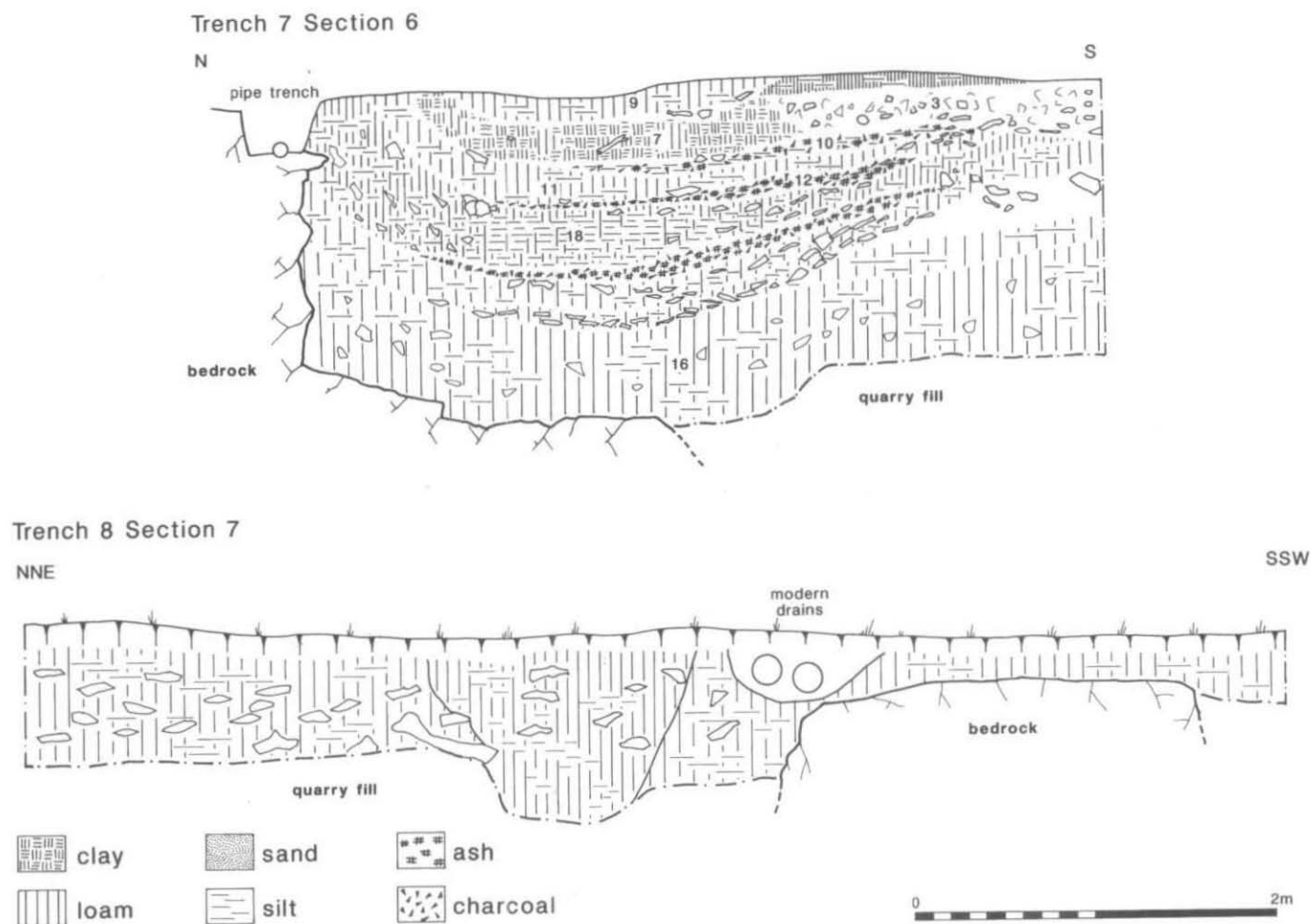


Fig. 6. Excavation: Sections 6 and 7.

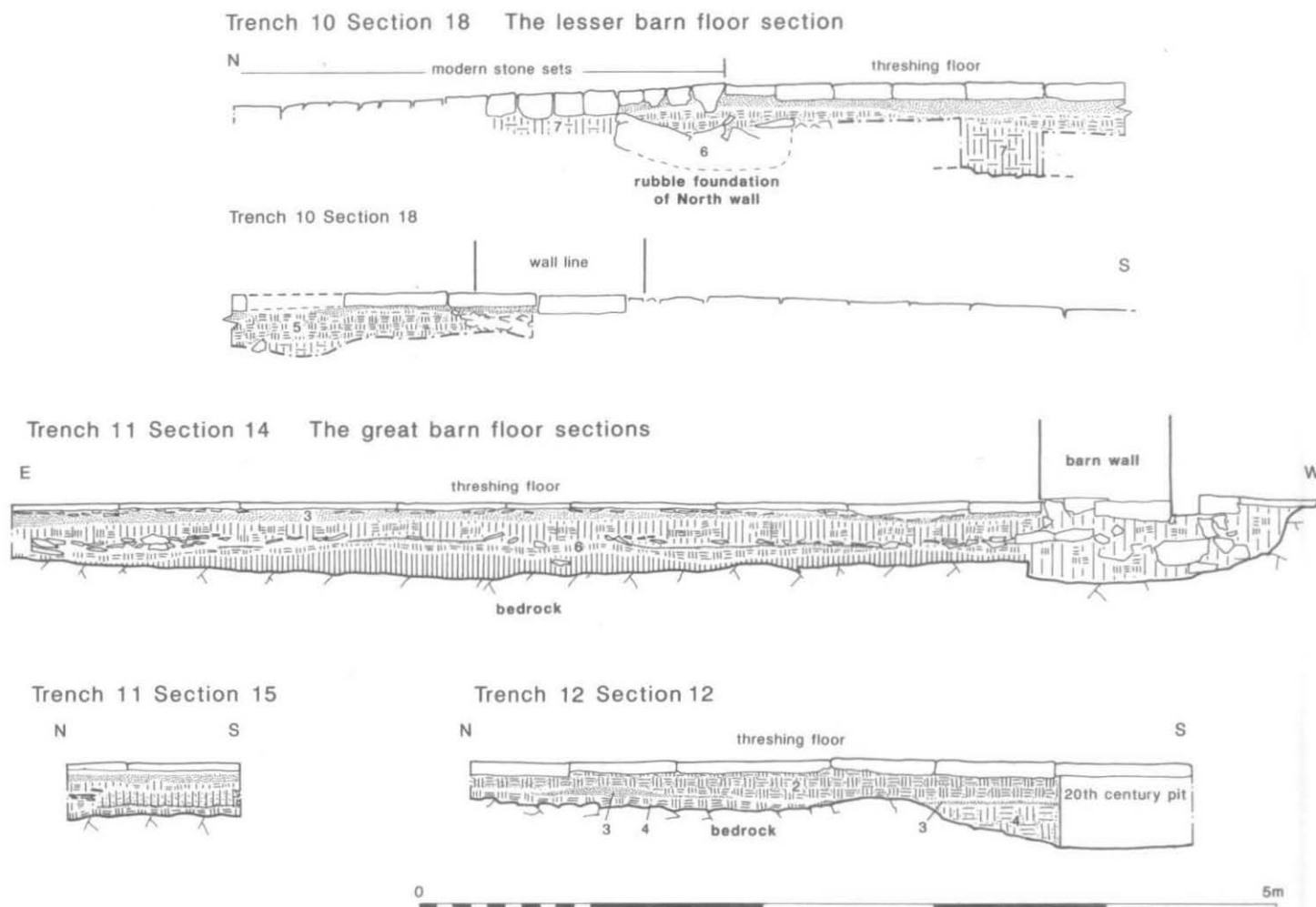


Fig. 7. Excavation: Sections 12, 14, 15 and 18.

The great barn floor (Fig. 3, Trenches 11 and 12)

In the recent past the floor of the great barn had been sectioned across its width in two places by trenches for modern grain augers. Removal of their concrete linings revealed sections through the existing flagstone floors along the centre line of each pair of opposing doors. As with the flagstones in the lesser barn, the flagstones beside trench 11 were laid on a bed of yellow sand (Fig. 7, Section 14, layer 3). The sand sealed several spreads of soil and clay containing chips of building stone and roofing slate. Each layer was uneven and patchy. A compacted level of dark, rich reddish-brown ferruginous soil, layer 6, overlain by thin spreads of lime mortar, layer 5, demonstrated the existence of a former occupation surface – although some 0.2 m. below the lowest course of dressed masonry of the inside wall. The flagstones in the northern end of the great barn differed as they were bedded onto a thick layer of compact orange-brown silty sand, layer 2, over the vestige of an earlier clay surface (Fig. 7, Section 12, layer 4). Thin lenses of lighter yellow sand, layer 3, sealed this surface.

No dating evidence was recovered from either trench; the floor is further described and illustrated below.

The lesser barn floor

The ruinous lesser barn had undergone major alterations and extensions since the Middle Ages and it is likely that the opposing central doors and flagstone threshing floor are a post-medieval addition as the north wall continued beneath the north entrance, (Fig. 7, trench 10, Section 18, layer 6). The threshing floor of thick ironstone flags was cleared of rubble, thatch and roof timbers and a line of flagstones lifted to provide a N-S section across the barn between the doors (Fig. 7, Section 18). The local ironstone flagstones were bedded on light yellow sand (2) which may have sealed the remnants of a previous clay floor (5). The almost stone-free red-brown sandy silty clay was homogeneous, clean and gave no clue to the previous use of the barn. There was no staining from urine or trace of any former central drain. The impression was that this layer had been protected, probably by flagstones, during the duration of the life of this barn. Layer 5 sealed natural decayed limestone subsoil (7) over bedrock.

WATCHING BRIEF

A private agreement with the developer of the lesser medieval barn ensured this was cleared, cleaned and inspected for any further architectural features of which there were none. The floor had been replaced with concrete either side of the flagstone threshing floor, similar to the great barn.

The underpinning of the north porch of the great barn replaced 1 m. of loose ground with concrete. Descriptions provided by the workmen suggested that it was probably infill of the quarry whose edge appears in trench 13.

DISCUSSION AND CONCLUSIONS

As is typical in continuously occupied sites founded on shallow bedrock, the thin external medieval farmyard surfaces had been lost. No artefacts were recovered to date the floor levels in either barn. The precise positioning of the threshing floors flush with the bottom of the dressed masonry internal wall facing suggests that these threshing floors were included as an integral part of the original structure and the earlier uneven surfaces 0.2 m. below the present floor level represented the construction level for the barn. This is consistent with chips of building stone, limestone roofing slate and mortar spreads both at the construction level (Fig. 7, Sections 12 and 14, layers 3 and 6) and within the subsequent floor make-up. That the floor either side of the threshing floors was later concreted indicates that the remainder of the barn was originally floored with beaten earth.

Although there is little doubt that the great barn is the building begun in 1402 and that it was designed for whole crop storage, the lesser medieval barn has not been clearly identified in any of the New College records and its original function remains unknown. The second largest building described in the accounts was a sheep house in stone with eighteen buttresses which precludes the identification of this building as the lesser barn, although there was a smaller cow house. It is possible that the lesser barn was already in existence and in good repair when New College

acquired the rectory, great tithes and glebe in 1389, and not requiring major repair was not mentioned in the 15th-century accounts. Both ends of the lesser barn were later extended and a pair of opposing double doors inserted midway along each side with a threshing floor in the local limestone. As with the larger barn, there was no artefactual evidence to date the floor. The floor foundation material gave no hint of the original use of the barn whether for livestock or whole crop storage.

The stone quarry discovered to the west of the rectory house was presumably sited beyond the wall described in the accounts as enclosing the domestic buildings. The quarry, extending perhaps 15 × 30 m., does not appear to have received significant quantities of domestic waste until the 15th century. It is not known when quarrying began but this sporadic activity appears to have ceased by the time the great barn was built with its north porch overlapping the infill of another quarry pit. Other buildings had been similarly ill-founded as there were payments for underpinning other structures during the 15th century.

Most of the building stone in the barns and house is ironstone and was probably quarried locally, perhaps from the quarries east of the church or elsewhere in the village as well as from the one beneath the present farmyard.⁴³ Small quantities of stone were being quarried locally during the 15th century, probably for repairs, and the employment of a quarryman occasionally receives separate mention in the New College accounts. Lesser buildings such as the bakehouse and stable mentioned in 1439–40 were also in local stone, although the great gate built in 1409–10 had a strikingly different appearance, built in light-coloured stone from Taynton in the Cotswolds.⁴⁴

The farm buildings were also enclosed within a wall with both a main entrance and a field gate. The main entrance is likely to have been that shown on the village plan of 1772 (Godson), and subsequently moved to the present position in the south-west corner of the yard. There is a sharp break of slope along the west and north side of the curving farm track north of the area included in Godson's map. The alignment of this break of slope with the outside edge of the outbuilding east of the lesser barn and the ironstone foundation of the southern end of the modern single-storey barn (Figure 3) strongly suggests a relict boundary, most probably that of the late medieval farmyard enclosure wall. The farm track which turns northwards downhill into former open field may reflect the field gate providing a well aligned access to the porches of the great barn.

The rectory house was approached through a 'great gate' built in 1409–10 in Taynton stone and roofed in stone slates. This gatehouse is most likely to have lain at the junction of the depressed drive dividing the rectory from the church, and the slightly curved walls are marked on the first edition Ordnance Survey map.⁴⁵ These walls are now set back from the road and marked by a change in ground level. The arrangement of the remainder of the documented buildings and boundaries requires further study.

Internal divisions within the farmyard are also mentioned in the 15th-century accounts. There were no archaeological traces of the majority of the divisions included on the first edition Ordnance Survey map, most of which probably came into being following the addition of the livestock building in 1719. A partition wall, still partly extant (Fig. 3) and curving eastward precisely from the south-west corner of the medieval lesser barn, may well be earlier. Farmyard partitions are normally for livestock control, which may indicate either the initial or an early use of the lesser barn.

The farmyard appears to have undergone a degree of reorganization during the early 18th century when the residual depression marking the quarry was levelled and built over. Prior to this there appears to have been little need for a level yard area. The small barn or animal shelter built over the quarry fill is a rare example of a precisely dated early 18th-century farm building, with a date stone and initials 'I 1719 A' built into the west face of the south-west corner about 1 m. above ground level.

⁴³ O.S. 1/2,500, Oxon. v.13 (1881 edn.).

⁴⁴ For these other rectory buildings, see *VCH Oxon.* x, 238; for the stone, W.J. Arkell, *The Geology of Oxford* (1947), 47–9.

⁴⁵ As note 43.

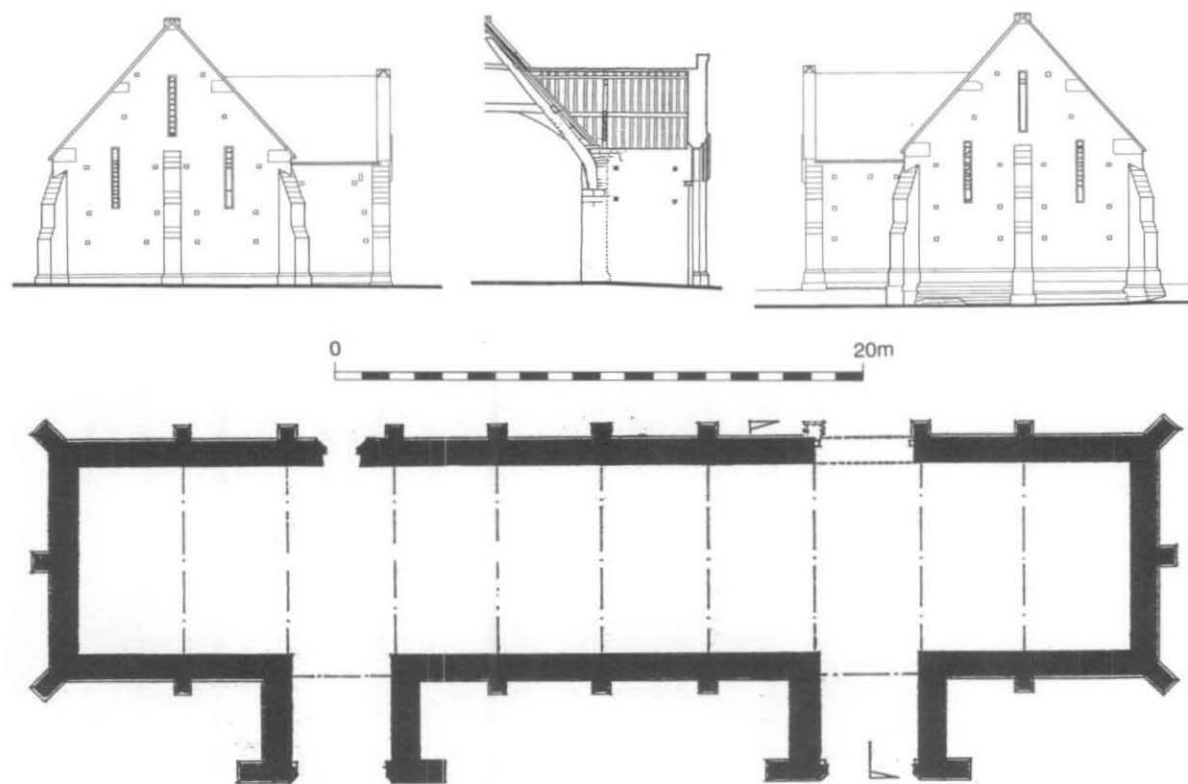


Fig. 8. Great barn: plan (after Wood-Jones), and masonry of gables.

V. ARCHITECTURAL DESCRIPTION

THE MASONRY OF THE GREAT BARN, by JOHN STEANE

Two descriptions of the building have already appeared in print. Sir Henry Dryden's account is brief but factual.⁴⁶ It tends to concentrate on the architectural details of the masonry and the dimensions, and devotes scant attention to the roof. It is illustrated with a plan at the scale of 4 ins. to 10 ft. which shows that by 1888 the north-west doorway had already been removed, and also contains drawings of the last four bays of the north-east corner and the north elevation. In his time the windbraces still seem to have been in place. Wood-Jones's plan and cross section are more detailed, but his description does not add much to Dryden's.⁴⁷ He does however compare the Swalcliffe barn with two others in the district built for New College, those at Upper Heyford and Adderbury.

The foundations and footings

The site of the barn slopes downwards from south to north. Although the area of the building has been levelled there is still a drop of about 7 to 10 ins. (18–25 cm.) from the south end of the barn to the north end. The natural rock breaks through the surface on the east side and can be seen underlying the first course of masonry in bays 4–7 and 9. At both ends the barn walls are seated firmly on bed rock. At the south end, where a service trench was dug down outside in 1991, it was noticed that the footings of the gable end were composed of five bands of masonry each set back from the course below it. The footings here were 2 ft. 8 ins. (81 cm.) in depth from the present surface. At the north end where the slope begins to drop away, footings below the plinth on the east side are of uncoursed rubble. Below the north gable there are five offsets but the masonry is carefully coursed here. The chamfered plinth, 5 ins. wide (12 cm.) and approximately 1 ft. 3 ins. (38 cm.) above the present ground surface, runs right round the building, including buttresses and waggon porches.

Walling and scaffolding (Figs. 8–12)

The walling of Swalcliffe Barn is remarkable in that it is composed entirely of squared ashlar blocks lining the exterior and internal faces of the building. The side and end wall are 3 ft. 1 in. (94 cm.) thick and are of uniform thickness. The jointing for the most part is extremely fine, often 5 mm. or less. These narrow joints have been achieved by tapering the blocks towards the wall face. The stones themselves stretch back as much as 18 ins. (46 cm.) to 24 ins. (61 cm.) into the core of the wall. The rubble wall fill and the ends of the ashlar blocks are set in a red loam (the 'red earth' of the building accounts), and only the outer joints between the ashlar are truly mortared. The mortar, according to one of the workmen engaged in the current repairs, is a mixture of lime and stone dust. There certainly seems to be very little sand in it and this is borne out by the sparse mention of sand in the building accounts. Almost every stone bears the deep grooves of vertical or diagonal tooling left by the strokes of the mason's tools (Fig. 12a). Judging from these marks their main tools for 'finishing' the surface treatment were wide chisels of up to 1 inch in breadth and boosters used for broader surfaces.⁴⁸ No attempt had been made to remove the grooves except on the worked stone around the finer areas of masonry by the doorways and windows. The size of the blocks, which compare closely with those used in the Warden's Barn and the Cloister walls at New College, was dictated by their weight and the

⁴⁶ Dryden, *op. cit.* note 1, pl. 2, pp. 7–8.

⁴⁷ Wood-Jones, *op. cit.* note 2, 20, Fig. 3.

⁴⁸ W.J. Arkell, *Oxford Stone* (1947), 124–5; A. Clifton Taylor and A.S. Ireson, *English Stone Building* (1983), 86–7.



Fig. 9. Great barn: masonry details. *Left*: Door in west wall. *Right*: Gable window.

capacity of the stone-cutter and layer to move them freely around without the necessity for tackle. Such fine squared ashlar masonry was laid regularly in courses throughout the building. There was no need for scaffolding in the first six feet or so because it was possible to haul up the stone by hand without any aids. Thereafter scaffolding was essential. This was of wood and fitted into putlog holes varying in size from $5\frac{1}{4} \times 6\frac{1}{2}$ ins. (13×16 cm.) to 6×6 ins. (15×15 cm.). They are approximately 8 ft. 3 ins. (2.52 m.) apart at the north end but only 5 ft. 7 ins. (1.7 m.) in the central bays. There are three 'lifts' in the lateral walls and five in the gable ends. The 'lifts' between the first and second row of holes and between the second and third are approximately the same: 3 ft. 7 ins. (1.09 m.). The horizontal lines of the building are emphasized on the west side by the presence of two lines of bigger blocks of stone. Their location at the level of the upper offset of the buttresses suggests that the building may well have progressed more rapidly in the three last bays to the south on this side than in the next four bays in the centre of the barn. There is a masonry break on the south side of the fourth lateral buttress from the south end. Here the courses on either side of the buttress do not match up and there may well have been a junction of the work of two groups of stone layers working from opposite ends of the building.

By far the greater part of the walling is in dark brown ferruginous limestone which is obtainable locally. There is a very sparing use of an entirely different material, an oolitic limestone of a grey hue. Individual blocks are used at the base corners of the principal north and south gables and at the corners of the gables of the waggon porches (kneelers). Again, single blocks are inserted in another area of stress half way up the gable end on each side. Other blocks crown each apex. These protrude above the ridge, are cross-shaped, with roll-moulding on the top and with miniature gables decorated with trefoil cusping. The coping stones are also of the same material. They are made of slabs which lock together with simple overlapping joints one into the other: thirteen at the north end and twelve at the south (Fig. 12c).

Wall openings (Fig. 9)

Simplicity and skill are also seen in the design and execution of the doorways and windows. The north and south gable ends are each lit by three slit windows. The interior splays of the window heads are composed of four large wedge-shaped stones beautifully and accurately masoned. They are four-centred on the inside but the slit windows are square-headed on the outside elevation. The sills are steeply splayed inside to allow more light, and wooden shuttering helps to keep out pigeons. A close

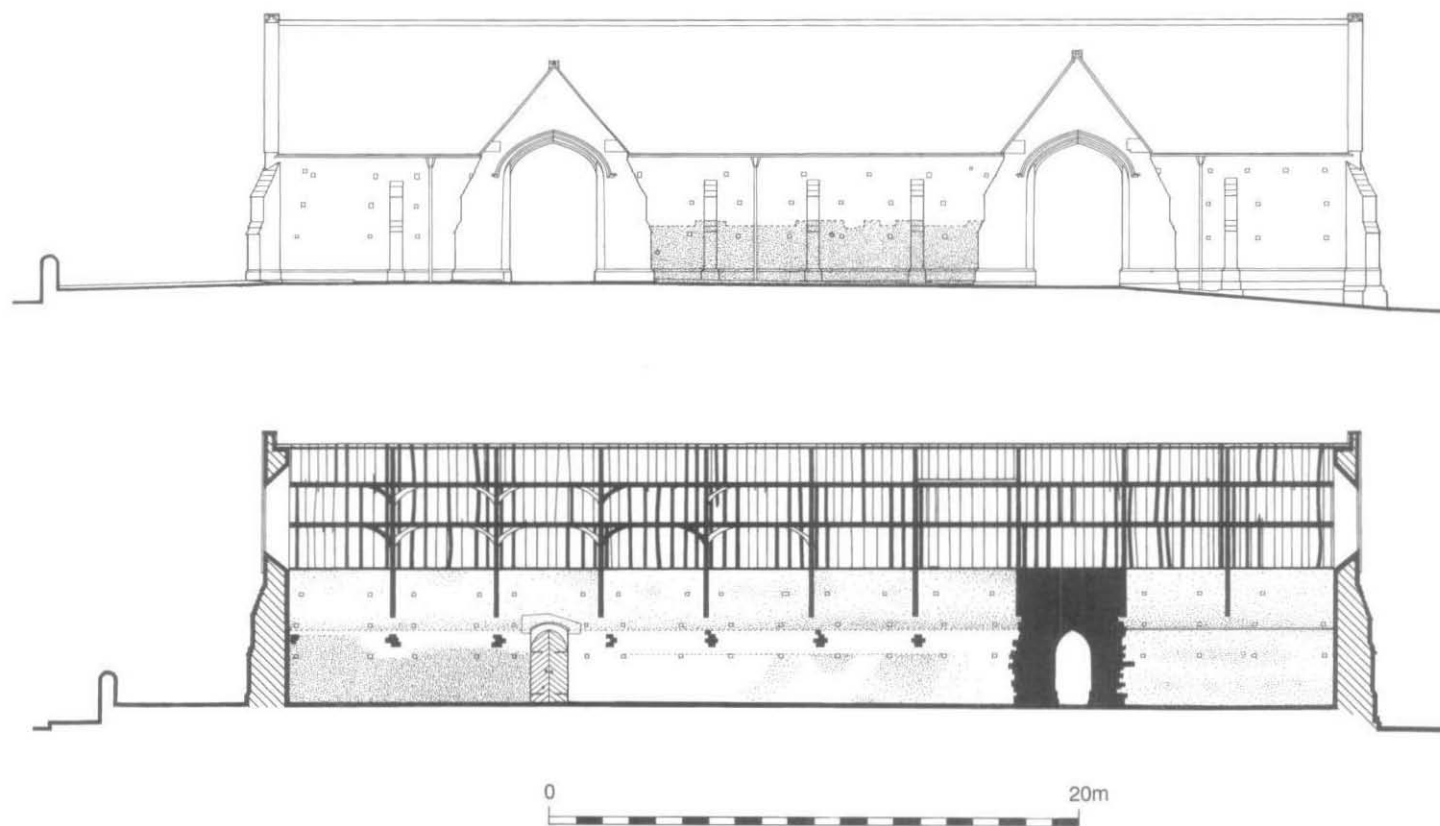


Fig. 10. Great barn: east elevation of east and west walls, showing new stone (in black), whitewash (stippled), and survival of original timbers (in bold).

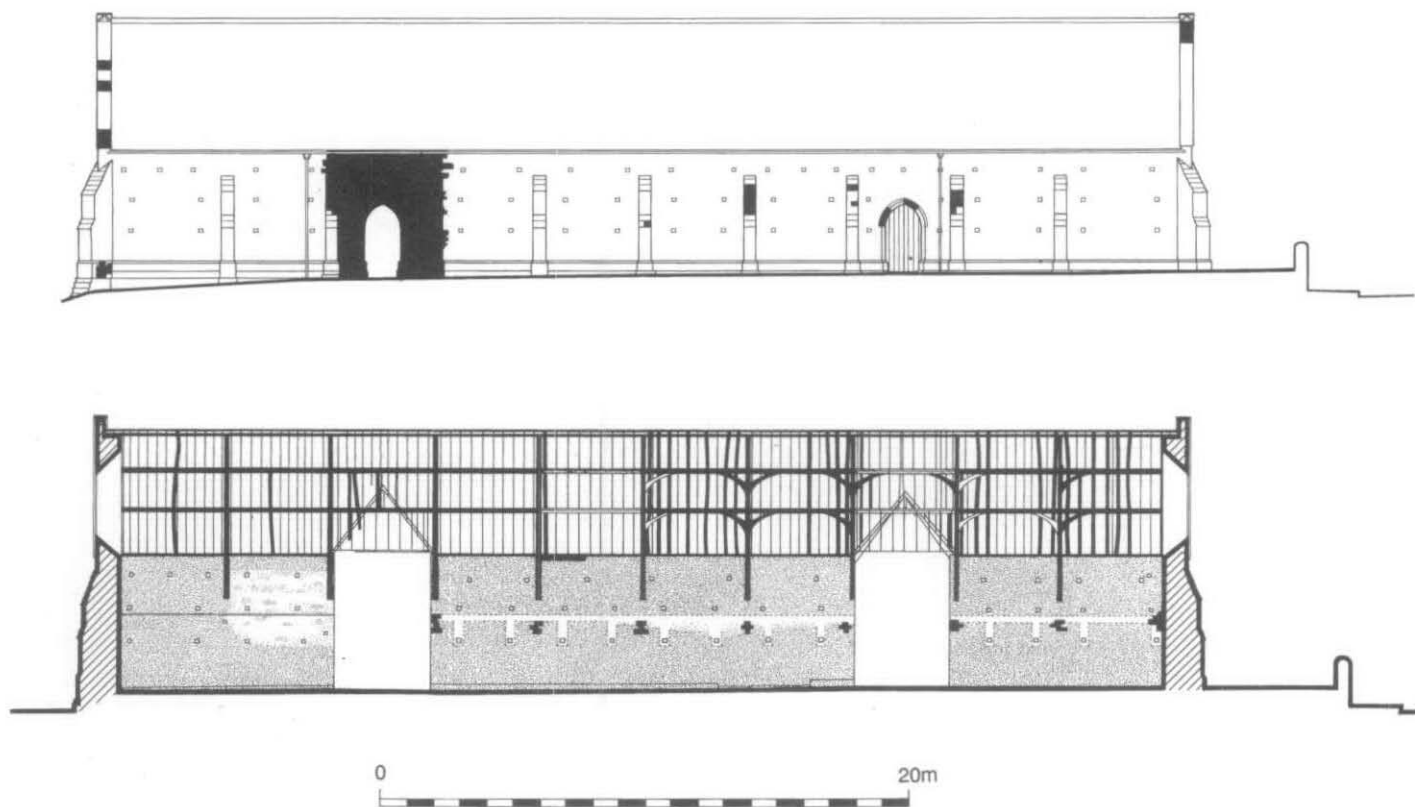


Fig. 11. Great barn; west elevation of east and west walls, showing new stone (in black), whitewash (stippled), and survival of original timbers (in bold).

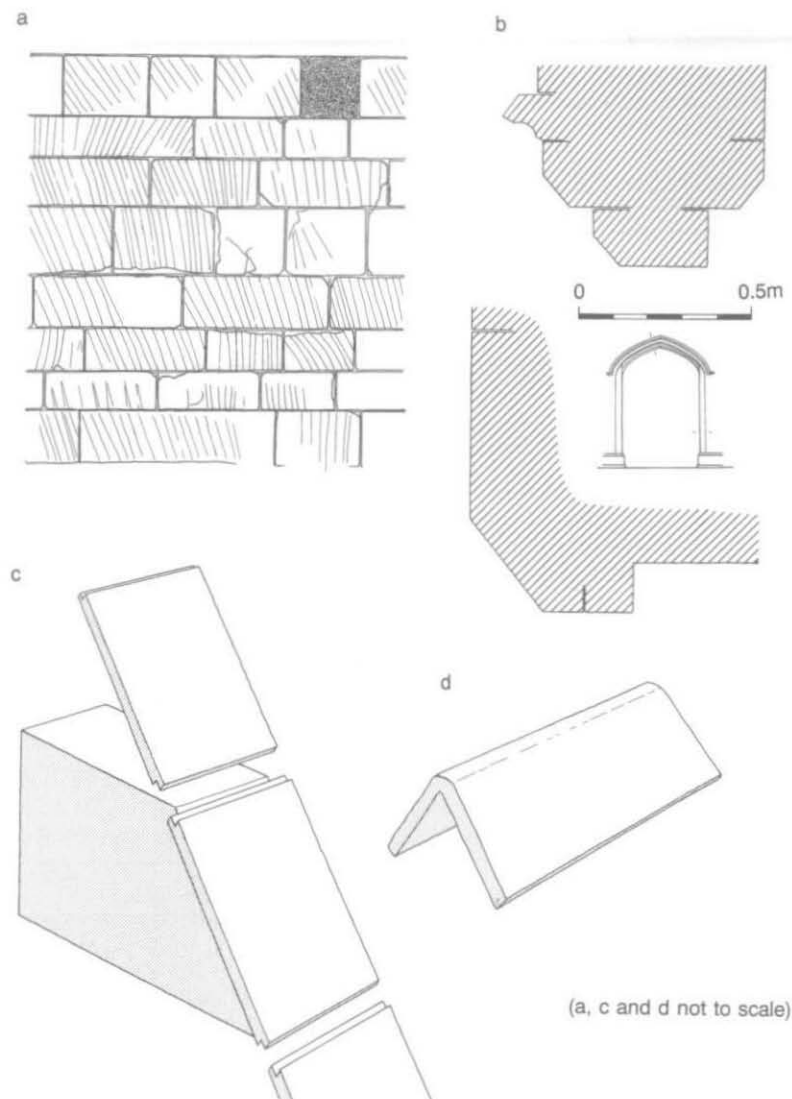


Fig. 12. Great barn: masonry details. A. Typical ashlar and tooling. B. Mouldings of SE porch door. C. Stone joints on gable. D. Ridge cresting.

study of the exterior wall indicates that the insertion of the windows has disrupted the otherwise regular coursing of the masonry. This suggests that the shaped stones comprising the windows had been separately prepared, were measured, cut out and assembled on the ground, probably marked, and then hauled up into place and reassembled and mortared into place. This must have been independent of the normal process of wall building.

Only one of the two original doorways piercing the west wall survives. It is a simple two-centred design with a chamfered moulding which sweeps round the arch without interruption from plinth to plinth. It is rebated and has an elliptical rear arch made of two stones of triangular shape on the upper

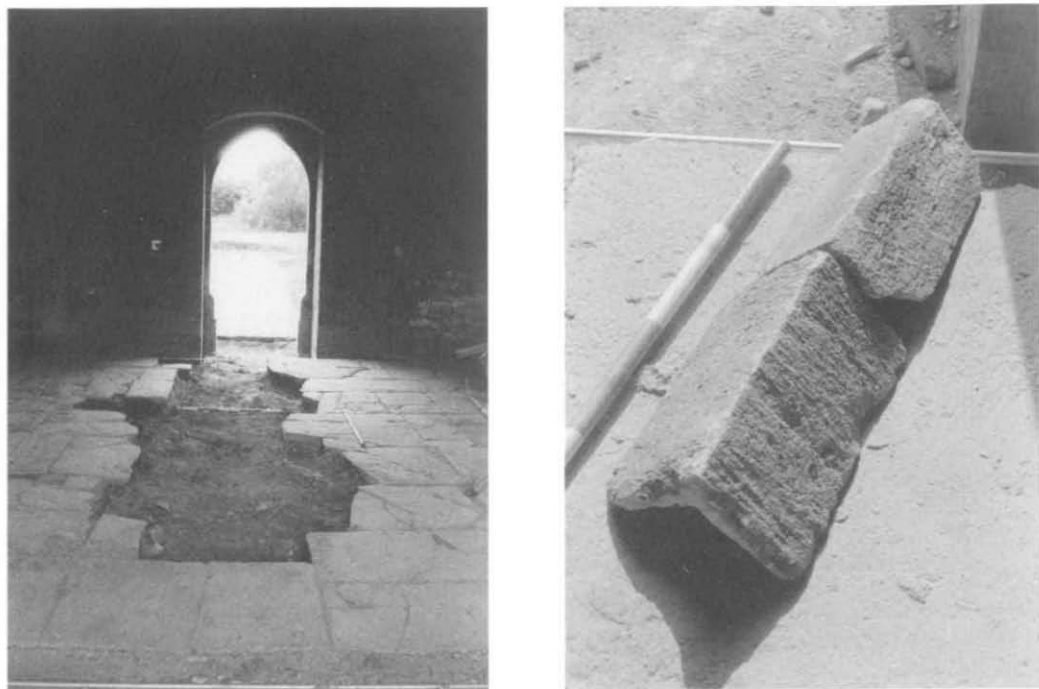


Fig. 13. Great barn: masonry details. *Left:* Threshing floor. *Right:* Stone ridge tiles.

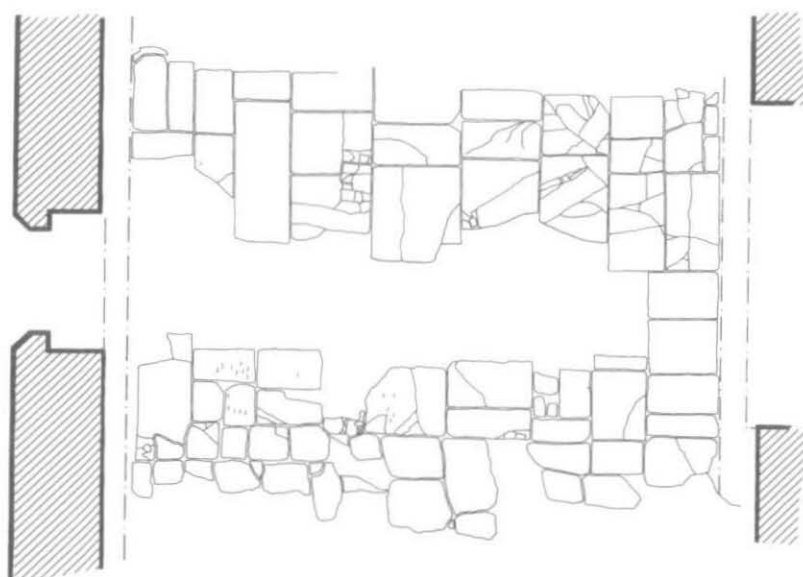
side with a concave moulding on the edge. The iron pivots holding the present doors are hammered into blocks of wood inserted on either side of the archway. From the documentary reference to the doors, it is unlikely that they were originally divided into two in this way. There are bar holes, $4 \times 3\frac{1}{4}$ ins. (10×8 cm.) which would have received a bar of wood to secure the door. A replica doorway has been made and inserted towards the north end of the west wall in the gap broken through probably in the late 19th century.

The two waggon porch doorways are much wider (10 ft. 10 ins., 3.25 m.) and higher (16 ft., 4.93 m.) than these doorways in the western wall. Their dimensions allow waggons fully loaded with sheaves of corn from the harvest field to enter and remain stationary under shelter while those ahead were unloaded. The jambs of the doorways are of single chamfered orders and the four-centred arches are of two chamfered orders, the arches being crowned with bold hood-moulds (Fig. 12b).

Threshing floors (Figs. 13–14)

These are in a damaged state. It would appear that the stone slabbing is a secondary floor covering, because nothing in the accounts refers to equipping the barn with stone-slabbed floors and it is likely that these were of earth in the earlier phases of the barn's use, possibly covered during threshing with a temporary floor of timber planking (*pace* Chambers in Section IV above). The stone slabs varied in thickness from 50 to 125 mm. (2 to 5 ins.). Those of the south threshing floor had been laid in one campaign since the edges of the slabs lined up regularly right across the floor. It had been damaged by fracturing, more heavily in two areas near the entrance to the waggon porch, less heavily on the western side near the smaller doorway. The further patches of intense wear causing fragmentation had taken place in the centre slabs. It would seem a reasonable

North Threshing Floor



0 5m

South Threshing Floor

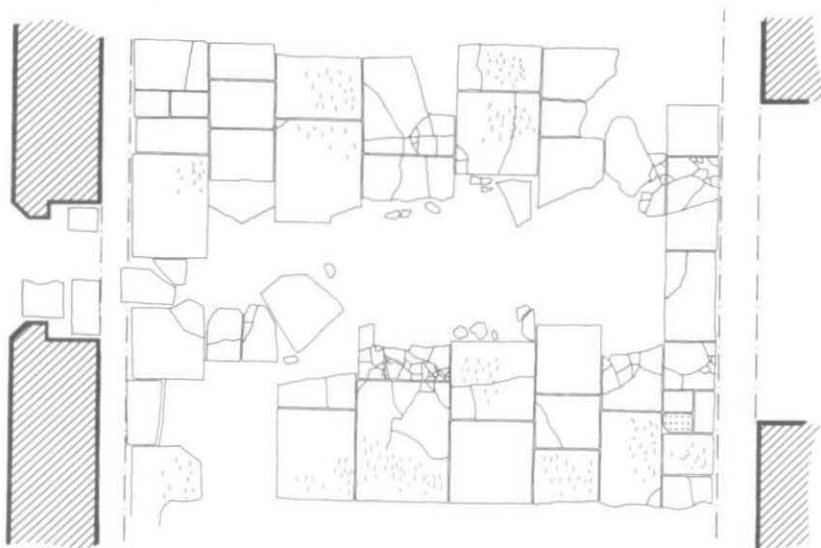


Fig. 14. Great barn: threshing floors, showing wear marks.

inference that these four areas corresponded with the stress which the wheels of a heavily loaded cart might cause when being rocked during unloading. Extensive damage had been done right across the floor with slabs broken and removed. Local information alleged that the floor slabbing had been penetrated in this way to provide space for a corn auger to operate. Another suggestion is that the slabs might have been taken up to create a void for a vehicle inspection pit. The north threshing floor showed similar fragmentation patterns but slabs were irregular in size and in general showed more signs of disturbance and remodelling. The thickness of the slabs here varied from 50 to 90 mm. (2 to 3½ ins.). A large patch of concrete near the reconstructed door was bounded on its south side by a ledge which supported the idea here of an inspection pit with a wooden cover. The rest of the floor in the barn had been covered in concrete probably during the time of Mr Douglas Jack of Swalcliffe Lea. He had adapted the barn for storing root crops and potatoes.

THE SOURCE OF BUILDING STONE USED IN THE BARN, by PHILIP POWELL

The walls

With the exception of the kneelers and finials of the gables the walls are of squared coursed Marlstone. This is the stone known geologically as the Marlstone Rock Bed, and commercially as Hornton Stone. It is a ferruginous limestone of Lower Jurassic age, forming the upper part of the Middle Lias. The exact locality, or localities, from which it is quarried is not evident from the stone itself, but it is likely to have been Hornton or Edgehill where the best material occurs, if not from the immediate site.

The kneelers were difficult to examine *in situ*, but I was able to detach a spalling flake. The stone is a cream coloured oolitic limestone. The ooliths are less than 1 mm. long and consist of micrite, which is pale in the outer layers and more yellow in the centre, so that each one looks like a miniature hard-boiled egg. They are very loosely packed and the space between them is filled with a cement of clear, crystalline calcite. Larger calcite grains are rare, and together with shell fragments (up to 8 mm. long) make up less than 5% of the sample.

Stone of this lithology occurs at several horizons and localities in the Middle Jurassic of the Cotswolds from, for example, the Lower Freestone (Inferior Oolite) of the escarpment between Cheltenham and Broadway to the Chipping Norton Limestone (Great Oolite) of Charlbury. The mention of Winchcombe in the building accounts could well refer to this stone, in which case it would probably be from the Lower Freestone of the Lower Inferior Oolite Group of strata.

The gable finials were not accessible for close examination, but are of pale oolitic limestone, probably the same as the kneelers.

The roof

The present roof is a mixture of stone tiles of two types:

- (i) Stonesfield slates originating from Stonesfield,
- (ii) Forest Marble slates, most likely from the Poulton area between Fairford and Cirencester.⁴⁹

The Stonesfield slates are thin, evidently produced by the frosting process which, according to Arkell, was not discovered until the 17th century.⁵⁰ They are unlikely therefore to represent the original roof of the barn. The ridge-tiles are sawn out of blocks of the Taynton stone of Taynton.

⁴⁹ Arkell, *op. cit.* note 48, 147.

⁵⁰ *Ibid.* 131.

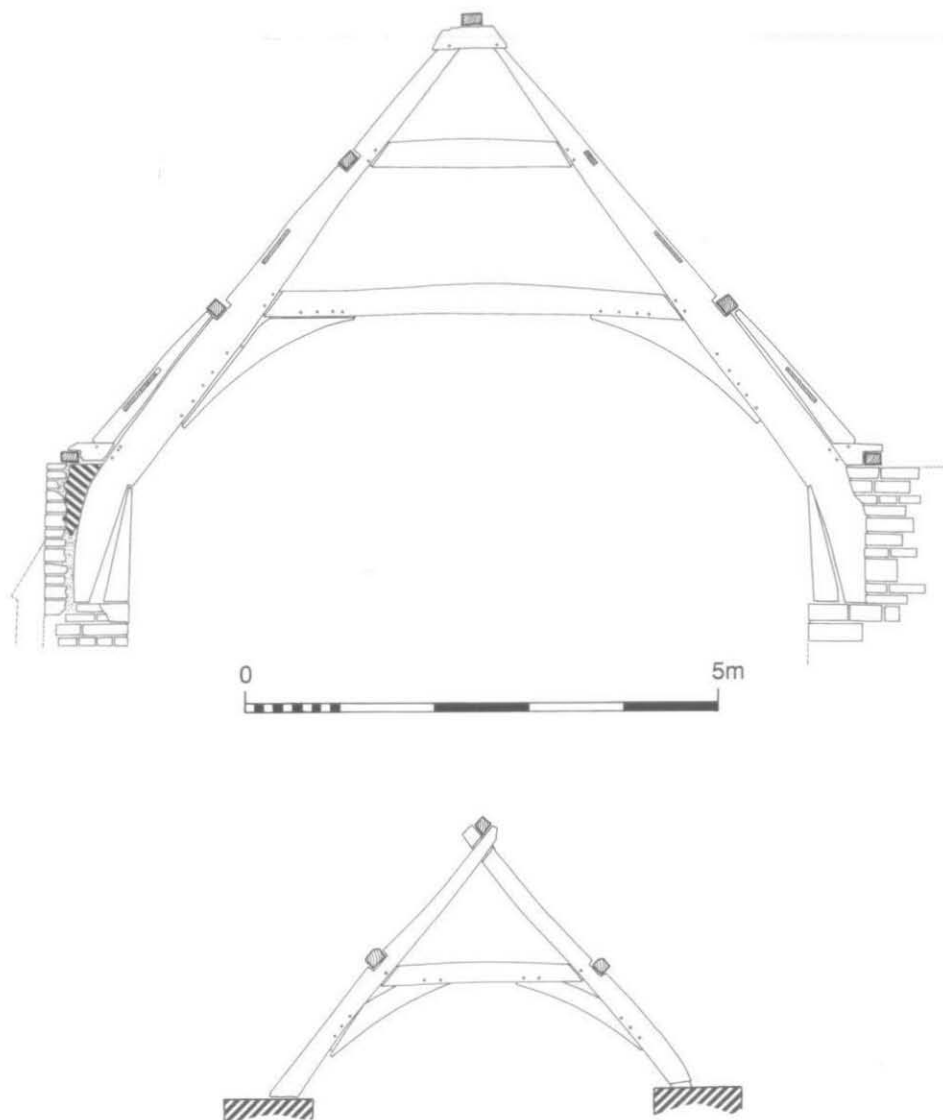


Fig. 15. Great barn: roof trusses. A (top): Truss 3. B (bottom): Truss in north-east porch.

The floor

There are two flagged areas, each between a porch and its opposite doorway. The flags are blue or blue-grey impure limestone showing irregular lamination and rippled surfaces. They are probably Blue Lias, i.e. from low down in the Lower Lias, and probably from Warwickshire. Such paving stone has in the past been obtained from Wilmcote and Binton, near Stratford-upon-Avon, and Hasler Hill, near Evesham.⁵¹

⁵¹ See T. Wright, *Quart. Jnl. Geol. Soc. Lond.*, 16 (1860), 394-5; and H.B. Woodward, *The Jurassic Rocks of Britain*, vol. III, *The Lias of England* . . . Mem. Geol. Surv. U.K. (1893).

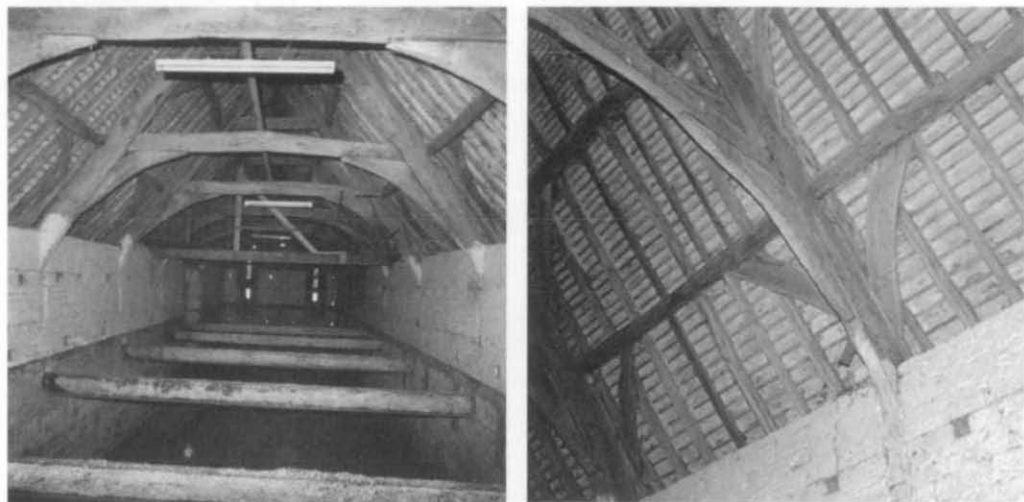


Fig. 16. Great barn: roof prior to restoration. *Left:* Interior view with inserted floor. *Right:* Cruck beam and windbraces.

THE CARPENTRY OF THE GREAT BARN, by JULIAN MUNBY (Figs. 15–18)

The barn measures 128 ft. by 22 ft. 9 ins. (39×6.95 m.) internally and is of ten bays. There are nine principal trusses of raised cruck type: that is the main rafters (crucks) descend into the masonry of the wall, but the crucks are based half way up the wall rather than resting on the ground. The outward thrust of the trusses is carried by the buttresses which are placed opposite the feet of each truss (and by the porch walls), and so transmitted down to the ground. Lengthways movement of the trusses is minimized by two tiers of longitudinal members or purlins and a series of ridge-pieces. The inner structure of crucks and longitudinal members forms the base on which the common rafters and then the roofing laths were placed to carry the stone slates.

The cruck trusses (Fig. 15)

The cruck trusses carry the main weight of the roof and deliver the load to the lower part of the side walls. Each truss consists of two cruck blades whose feet are embedded in the masonry and commence at 11 ft. from the ground (about two thirds up the height of the wall); the crucks curve back into the wall, but a triangular *block* pegged to the front of each foot presents a vertical timber face flush with the masonry. The blades are at their greatest depth at the top of the wall, and taper towards the ridge, below which they meet on a short *yoke* into which they are tenoned. The size of these yokes varies according to the dimensions of the crucks, but they have an upper face at a uniform level to carry the *ridge piece*; the ridge is in sections, scarfed above each yoke with a simple splayed and pegged joint. There are two *collars*, the lower one supported by two curved arch-braces rising from the crucks.

Lengthways support

The crucks are linked to each other with purlins to prevent their lengthways movement and provide a firm base for the rafters. Two tiers of *butt-purlins* are carried on the back of the crucks for the length of a single

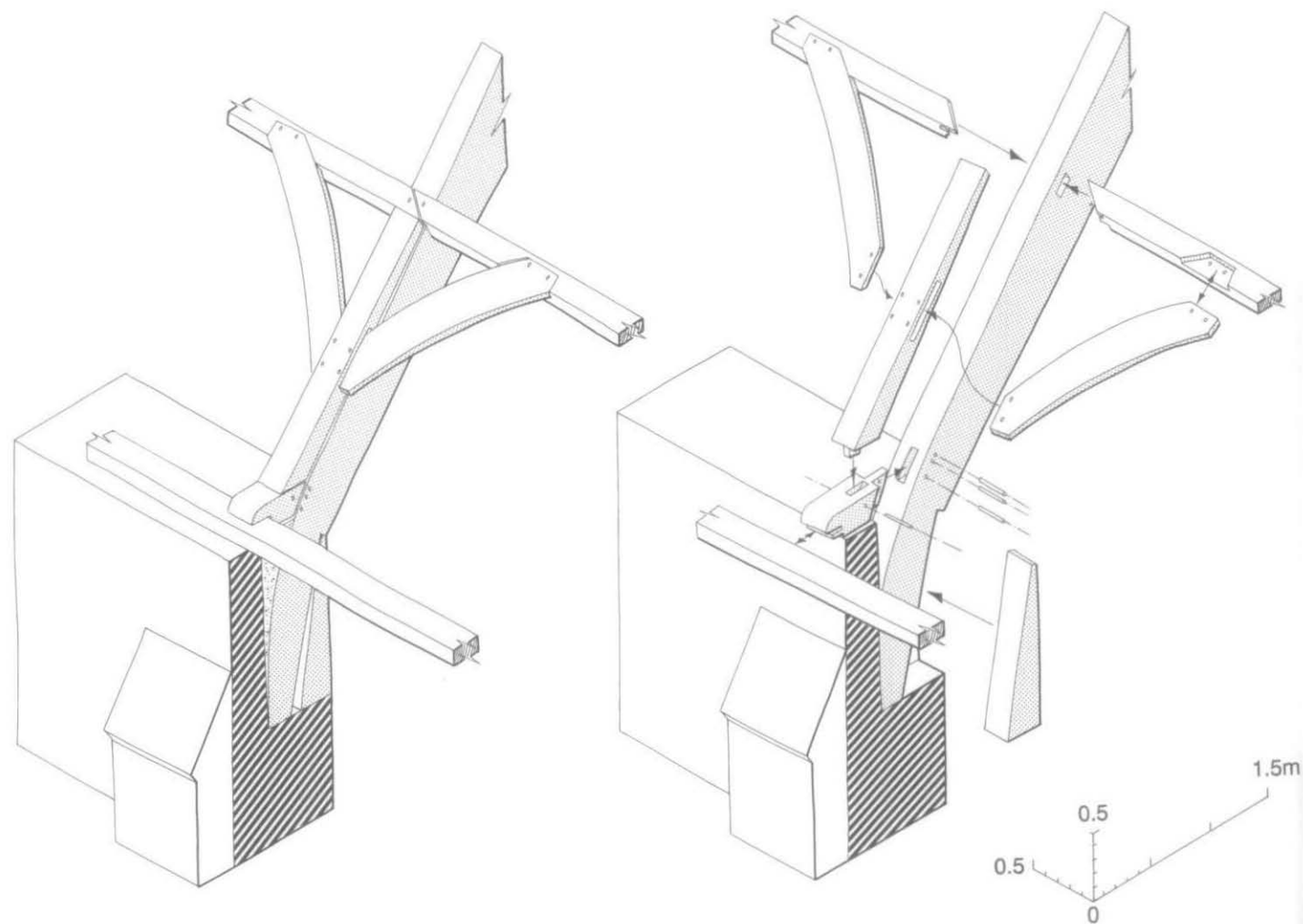


Fig. 17. Great barn: construction of cruck spurs supporting windbraces.

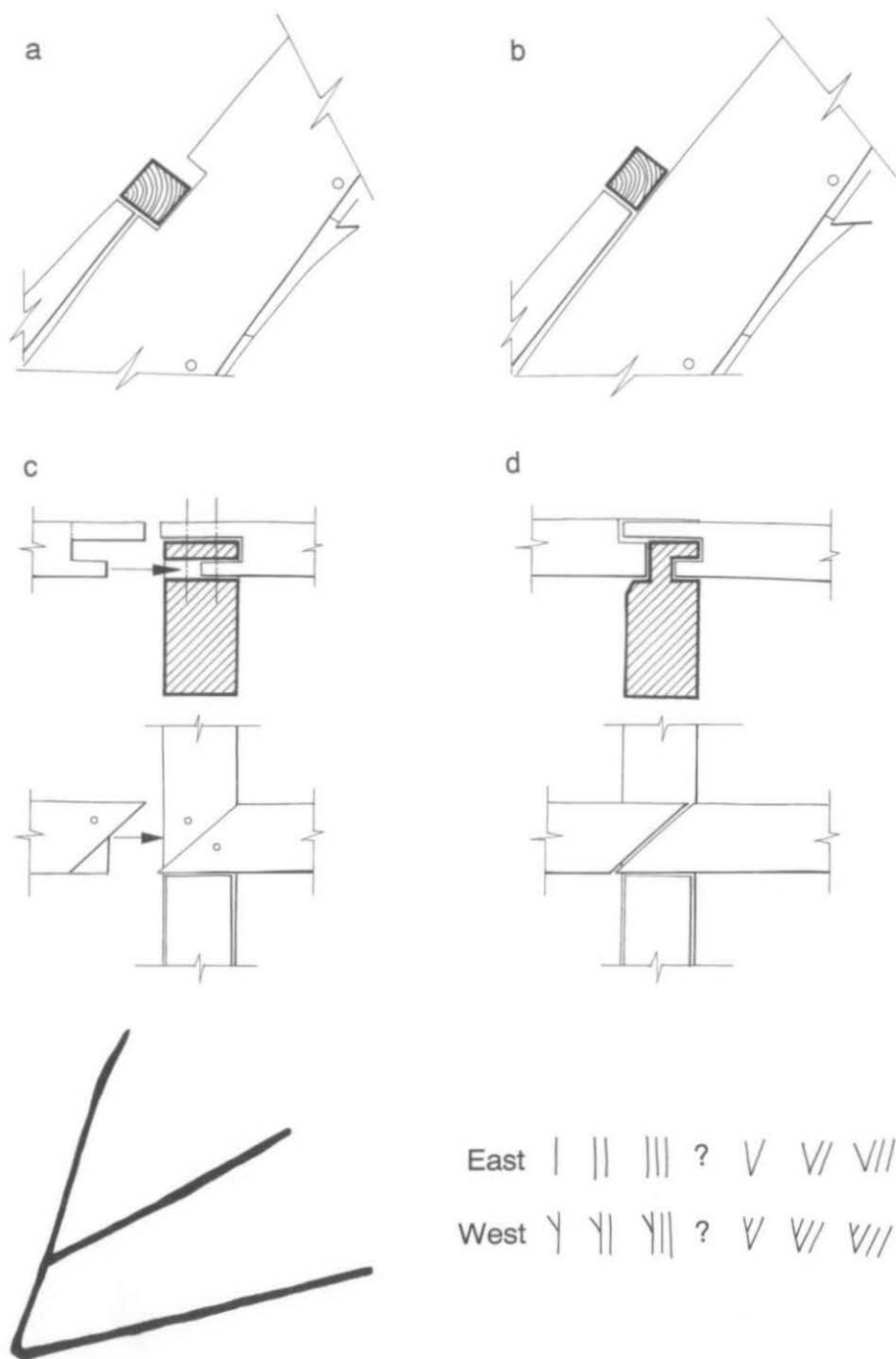


Fig. 18. Great barn: carpentry details. A. Trenched purlin. B. Barefaced purlin. C. Purlin scarf of standard type. D. Purlin scarf on waney cruck. E-F Typical carpenters' marks on trusses 1-7.

bay. They are joined to the crucks with varieties of a single type of splayed and tenoned joint. In the ideal form, this comprises a central tenon into the side of the cruck blade, and a clasping tenon over the back of the cruck; the opposing tenons from adjacent purlins are overlapped with a long splayed 'scarf' (Fig. 18c). The irregular profile of the cruck blades made this complex joint impossible to replicate on each truss; where the cruck blade is too shallow or wane the purlins are merely trenched into the back of the cruck, though still with the splayed 'scarf' (Fig. 18d). The first two bays at the north end have a single continuous purlin, and both purlins and ridge-pieces are housed in the masonry at either end of the barn.

Additional lengthways support was provided by two tiers of *windbraces*, the upper pair rising from the sides of the cruck blade to the back of the upper purlins, and the lower pair supported on a more elaborate construction; in each case the back of the purlin has a tapering trench to receive the ends of the windbraces. The support for the lower windbraces (Fig. 17) is a form of construction more to be expected in timber cruck buildings, where the framing of the side walls had to be accommodated. The lower slope of the cruck is doubled with a short secondary principal, a tapering member that rises to the level of the lower purlins and dies into the back of the cruck blade. It is mounted on a short spur that is tenoned into the back of the cruck blade and tied with a soffit tenon into the wallplate which it also overlaps, apparently with a barefaced trench. The reason for this arrangement will be apparent from the description of assembly given below; it is dispensed with in one instance (Truss 3) where the cruck was of such a size as to make it impracticable.

In the restoration work (see Figs. 10–11) new purlins have been introduced rather than removing or repairing the original ones; the new ones are easily recognized by their steel shoes bolted to the cruck blades.

The wall top and rafters

The *wallplates* lie on top of the masonry, inside one top course of ashlar on the outside of the wall. They do not appear always to have had space for air to circulate round them, and are in many places partly embedded in the rubble fill of the wall; however, most of the wallplates had been replaced and the wall tops often remade, making details of this uncertain. The few surviving original lengths of wallplate had shallow depressions for rafter feet, and indeterminate fragments of horizontally bladed scarf-joints. The *common rafters* (eight per bay) rest on the spurs (at the principal trusses), and on the wallplates elsewhere; their feet were spiked with long nails, though it is not certain that this was an original feature; they were also pegged to the windbraces. Many of the rafters have been replaced or repaired (see Figs. 10–11), but the original ones are in single lengths reaching the apex of the roof. At each end of the barn the first pairs of common rafters are embedded in the thickness of the gable wall, offset below the upstanding gable.

The porches

The roofs of the porches (that of the north porch is illustrated in Fig. 15) consist of rafter couples rising from the top of the wall, trenched across each other at the apex, and secured with two pegs driven diagonally from alternate sides. There is a single collar supported by two arch-braces, and a single purlin on each side trenched into the rafters. Remains of wallplates presumably carried the common rafters.

Roof covering

When the carpentry was examined the original roof covering had been removed. The external roofing is now laid on short lengths of riven oak laths, the stone slates being hung with oak pegs and torched internally. They do not, as replaced, oversail the wall by any distance, and gutters have been provided to protect the walls from rainwater; as originally built large slates in the lowest course may have extended further, though no evidence was found for any sprockets extending the feet of the common rafters.

USE AND WORKING OF TIMBER

Conversion of timber

At least four of the nine cruck trusses were made by halving a single tree, as can be seen by comparing the knots and shakes in the cruck blade on opposite sides of the roof.⁵² The other cruck blades were made from single trees, and often have waney edges (the curved face left after the bark is removed) on each arris. In one instance (Truss 3 west side) the timber was so substantial that, as described above, the usual secondary principal was dispensed with, and the cruck serves as a base on which the windbraces were mounted. Nearly all the trusses (except nos. 1 and 2) are 'faced' on the north side, this being the fair side that was worked when the truss was first made, as can be observed from the disposition of waney edges on the timbers, and the carpenters' marks. Thus most of the lower collars have a waney back, and they may either be halved timbers, or timbers squared up on the face by the removal of a slab. The upper collars and purlins often appear to have at least three waney edges, and so may be individual squared branches, though others may be halved or quarter-sawn timbers. The majority of surviving original rafters were simply made from long squared poles and have four waney edges. Many of the windbraces were removed and have been replaced, but the original ones are all curved or partly curved planks with a curving grain, carefully selected from bent branches. The new laths are all of heart of oak, and the slate pegs are also of oak, as are the pegs securing the timber components.

Carpenters' marks (Fig. 18)

A consistent series of marks is used throughout the building, from truss I at the north end to IX at the south. They are sparingly employed on each truss (though they are often faint and difficult to find), and occur at the junctions of principal components, e.g. the cruck and lower brace, on the face of each truss. Each truss has the same number, the west side being distinguished from the east by the addition of a tick. The marks were made with a scribe drawn across the face of the timber, and are of standard medieval type, being Roman numerals about $\frac{3}{4}$ ins. (12 cm.) long.

Method of construction

The roof was erected from north to south, as is indicated by the scarf-joints in the ridge piece, and confirmed by the sequence of the original numbering system. The trusses rest on large ashlar blocks just above one of the levels of putlog holes which must represent the lifts in the masonry; it is likely that the wall was constructed up to that level and then only completed after the roof had been raised. This would enable the crucks (which would have been prefabricated and then taken apart) to be assembled and laid out horizontally at the level of the top of the walls as then existing, before being reared onto position. As noted above, the first two trusses are 'faced' towards the south, and all the others are 'faced' on the north side, and this suggests that they lay on a flat bed of scaffolding at an appropriate height prior to rearing, face upwards. Since the feet of the trusses are three-quarters buried in the wall, they would have to be lowered in by crane if the wall were complete, and it is more likely they were inserted when the wall reached a suitable height. The provision of a short slot by having at least one course of masonry laid above the level of the base of the cruck trusses would have reduced the chances of the foot slipping as the truss was raised. The rearing could have been done with ropes and shere-legs, as illustrated by Charles in his reconstruction of the process at Leigh Court and Middle Littleton (Worcs.).⁵³

⁵² They are numbers 2, 6, possibly 7, 8 and 9.

⁵³ Walter Horn and F.W.B. Charles, 'The Cruck-built Barn of Middle Littleton in Worcestershire, England', *Jnl. Soc. Archit. Hist. (Amer.)*, xxv (1966), Fig. 19; idem, 'The Cruck-Built Barn of Leigh Court, Worcestershire, England', *J.S.A.H.* xxxii (1973), Figs. 30-1.

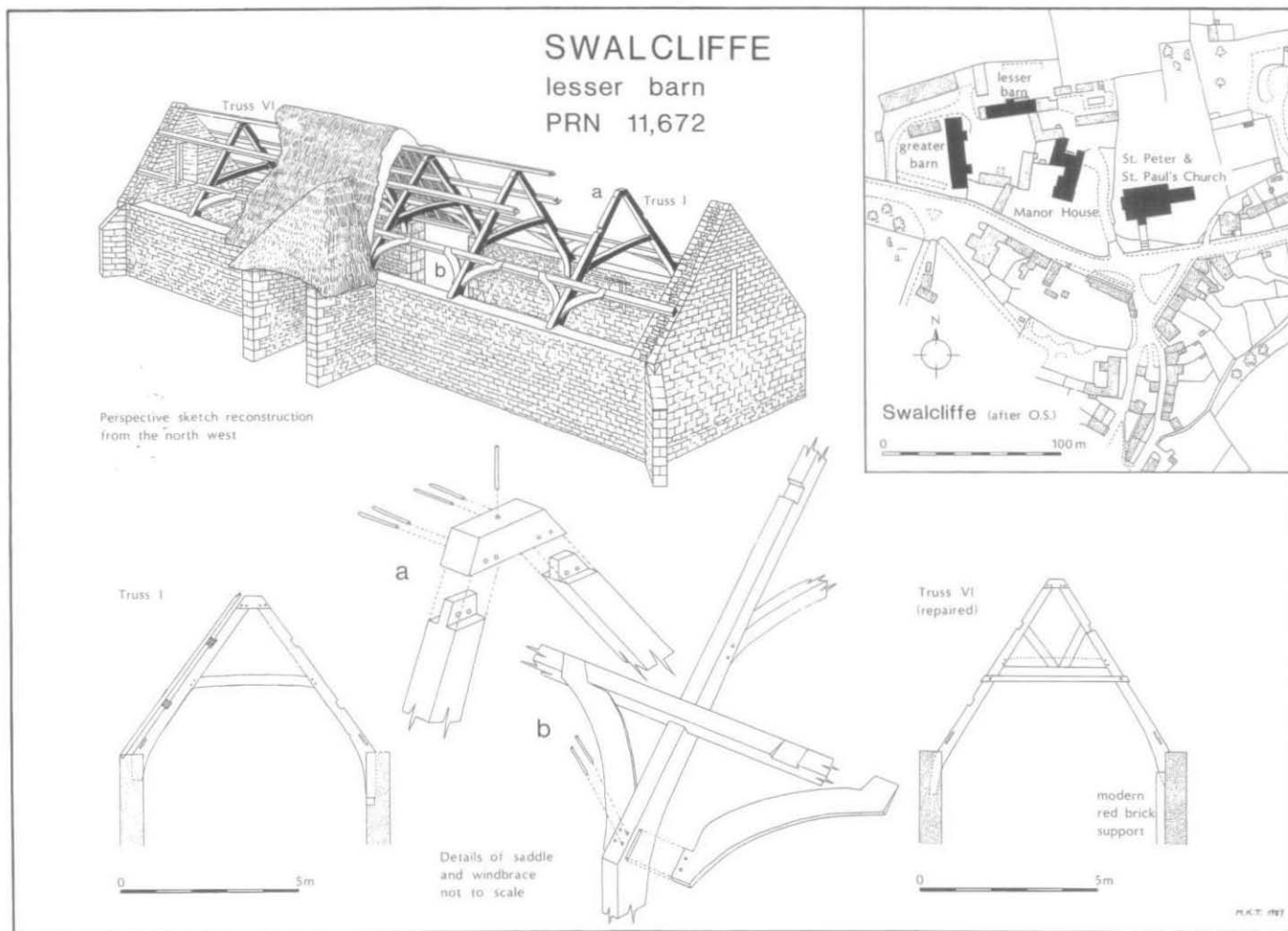


Fig. 19. Lesser barn: reconstruction and timber details (Copyright Oxfordshire County Council Department of Leisure and Arts: Sites and Monuments Record).

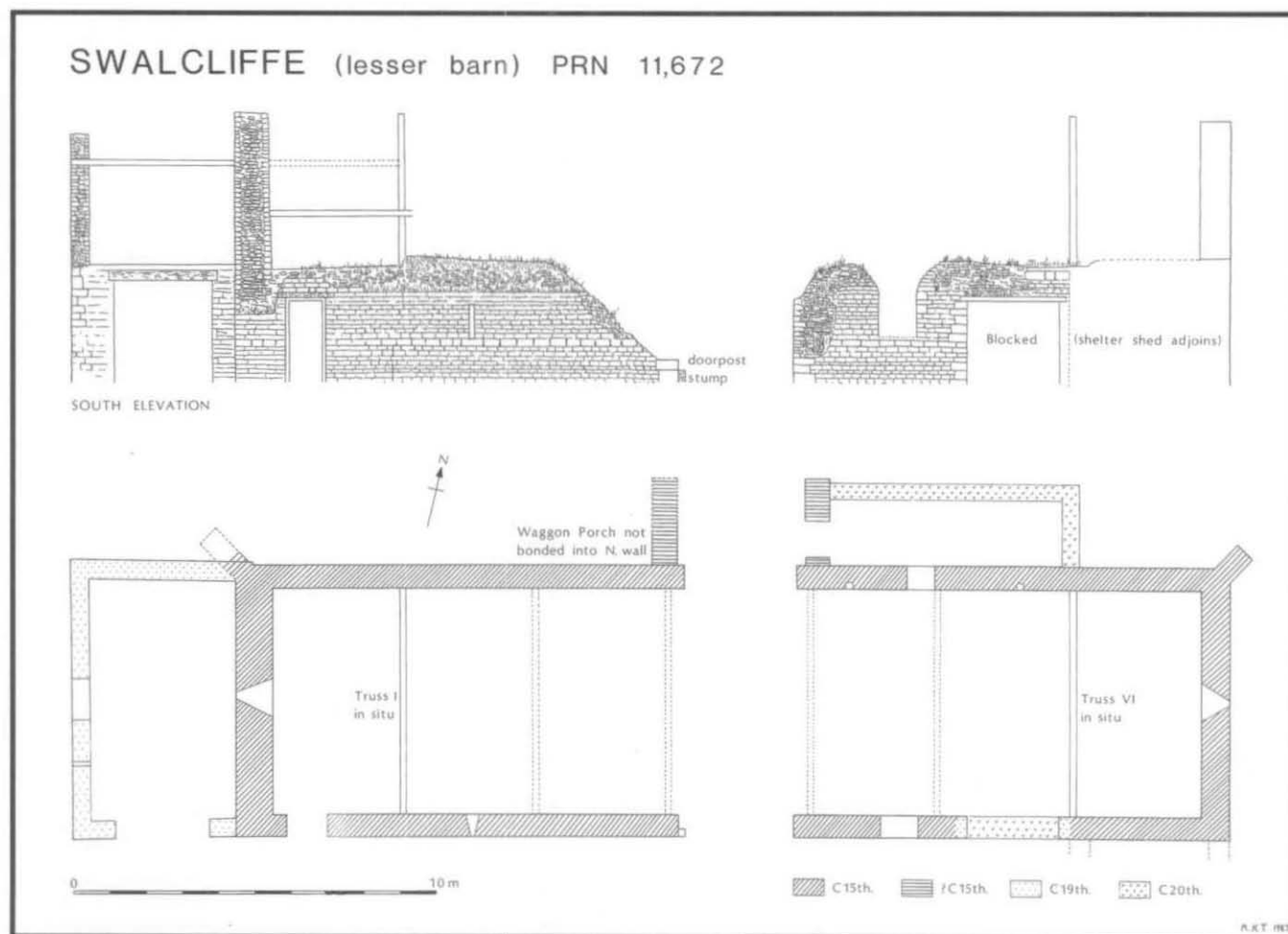


Fig. 20. Lesser barn: plan and elevation (Copyright Oxfordshire County Council Department of Leisure and Arts: Sites and Monuments Record).

As each truss reached the vertical position the ridge-piece and purlins could be mortised or trenched in to secure it, then pegged, and the whole process was repeated for the next bay. Probably to give greater security the first two trusses at the north end were erected together, with single purlins extending for two bays; it is these two trusses that are 'faced' towards the south, and it is just possible that the north gable was not yet complete when this was done. The completion of the walls must have been done in one stage rather than bay by bay since the courses are continuous along the building. Once the walls were finished the wall-plates were laid along the top, and the windbrace assembly added. The short spurs connecting the crucks to the wall-plate must have been inserted first with the wall-plates, on which was then mounted the secondary principals rising from the spur to the back of the cruck, into which finally the feet of the windbraces were tenoned. The upper ends of the windbraces were housed into the back of the lower purlins. The porches were roofed subsequently, as they rested on valley rafters and the purlins of the main roof. Finally the roof was lathed for the stone slates.

THE LESSER BARN, by MARK TAYLOR⁵⁴ (Figs. 19–20)

In May 1987 Swalcliffe was visited by the writer with John Steane and Jeremy Lake to undertake some preliminary site clearance prior to recording the remains of the lesser barn. Since these observations were made, the remaining parts of the roof were removed, and the building converted.

The lesser barn lies E–W on the north side of the farmyard, adjacent to the great barn. It is built of coursed ironstone and is of seven bays, having opposed double doors in the middle bay, of which only the stumps of the doorposts remained in 1987. The gables have dressed ironstone with diagonal tooling marks. The double doorways are dressed with ashlar. At the NW and NE corners on the north elevation there is evidence of angle buttresses of ashlar. Only traces of the buttress at the NW corner survived: it appears to have been removed when the waggon shed to the west was added. In the gable ends are tall ventilation slits (1.7 m.) just above eaves level. Below the slit on the external face of the west gable is a strip of roughened stonework in the ashlar, suggesting that there may have been a central buttress here at one time, probably removed when the shelter shed was built.

The roof consists of six upper cruck trusses of which the base of each cruck blade is well embedded on three sides in the stonework of the side walls, leaving only the inner edge of the cruck blade visible from the interior. This method of construction raises questions over the assembly procedure, as described in the great barn. Only two trusses remained *in situ* in 1987, albeit in ruinous condition; truss I which is complete and truss VI which has been repaired and reinforced with struts to support a fracture in the upper part of the southern cruck blade where the upper purlin was originally trenched (see Fig. 19). The trusses were constructed with a collar beam and were joined at the apex by a saddle into which the upper ends of each cruck blade were tenoned. Resting on the saddle there would have been a ridge pole secured to each by a single peg. There were two sets of purlins trenched into the upper edges of the cruck blades, the lower set of purlins secured by curved windbraces. Each windbrace was tenoned into the cruck at its lower end and secured to the purlin with barefaced lap joints, nailed rather than pegged in place. From the straw still adhering to the trusses and lodged in the crevices around the wall tops, the former roof covering must have been thatch. Quantities of chicken wire and occasional heaps of straw within seem also to bear this out.

In the Centre for Oxfordshire Studies collection of photographs from Packer and Simms of Chipping Norton, a pre-war photo of Swalcliffe showing the lesser barn in the background does indeed show thatch and a hipped roof to the waggon porch on the north wall of the barn, as surmised in the reconstruction drawing (Fig. 19). The waggon porch, though not actually bonded in to the north wall, may still be contemporary with the construction of the barn or added shortly after. Later additions to the building included a shelter shed abutting immediately to the west, added probably in the 19th century (at which time a former central buttress in the west gable may have been removed). A small outshut was

⁵⁴ After Mark Taylor, 'Swalcliffe Lesser Barn', *South Midlands Archaeology*, CBA Group 9 Newsletter 20 (1990), 64–5.



Fig. 21. Comparative views of New College barns in Oxfordshire. *Top:* Swalcliffe. *Bottom:* Upper Heyford.
(RCHME Crown Copyright)

built against the outer face of the north wall and against the east cheek of the waggon porch probably in the 20th century. As truss VI failed in later years, fracturing close to the trenching for the upper purlin, the base of the southern cruck blade was buttressed by a modern red brick support. Various openings have been punched in the barn walls in later years (see Fig. 20) to create windows and doorways probably reflecting a change of use in the barn in the 18th and 19th centuries.

Although listed and apparently a contemporary of the greater barn, the ruinous condition of the lesser barn sealed its fate of conversion to terraced cottage-style housing, to fund the restoration and interpretation of the greater barn.

VI. DISCUSSION, by JOHN STEANE and JULIAN MUNBY

COMPARISON WITH OTHER BARNES [JM]

The most obvious source for parallels is other New College estates in Oxfordshire.⁵⁵ Two such barns survive, at Adderbury and Upper Heyford, and their relationship to Swalcliffe can be judged from the appearance of their masonry end gables (Fig. 21).

That at Adderbury is also the barn of a rectorial manor, which was appropriated to New College in 1381; it is not a single-period building, though it shares some characteristics of Swalcliffe.⁵⁶ Expenditure on masonry and buttresses of a new building in 1421–3 may refer to either the barn or the rectory itself.⁵⁷ The barn is of five bays, with a single central entrance on the outside, diagonal corner buttresses, and three slit windows with a central buttress at one end. It was converted to a stable in 1877–8, and while some original roof timbers survive there is insufficient evidence to reconstruct the exact appearance.⁵⁸

The barn at Upper Heyford presents a close parallel to that at Swalcliffe. The manor of Heyford Warren was purchased by William of Wykeham and granted to the college in 1382, and the barn is part of Manor Farm; although the college obtained the advowson with the manor, the rectory was not itself appropriated.⁵⁹ The barn is built of ashlar and coursed rubble and is of nine bays, with two porches on the farmyard side, and originally had two smaller doors on the outer side, though these have been enlarged. There is an ashlar plinth and two-stepped buttresses, diagonal corner buttresses, and triple-stepped buttresses in the centre of the gable, with three slit windows; the majority of the masonry is coursed rubble, with no obvious break at the level of the base of the crucks. The porches have framed gables above the level of the side walls. Three levels of putlogs indicate four lifts of masonry; while limestone is predominant, ironstone has been used for the lower of the buttress offsets. The roof is of the same pattern as that at Swalcliffe, though of less refined workmanship, having two collars with braces to the lower collars, and a yoked apex. About half the cruck feet have a triangular piece to present a vertical face to the wall, and the crucks have spurs to the wallplates but apparently no secondary rafters, the lower tier of windbraces rising from the crucks. There are two purlins on each side, and a ridge over the yokes; the ridge is scarfed with a plain splay as at Swalcliffe, but the purlins appear all to be trenched over the crucks and have a form of secret splayed scarf. Many of the crucks appear to be half trees, though the recognition of pairs is not obvious from ground level. In the regularity of overall appearance, and finish of individual timbers, the

⁵⁵ The manors were Adderbury, Heyford Warren (Upper Heyford), Kingham, Standlake and Swalcliffe, see map and table in *History of the University*, op. cit. note 6.

⁵⁶ *VCH Oxon.* ix, 11 & 30, pl. opp. p.13.

⁵⁷ *Adderbury 'Rectoria'*, op. cit. note 40, 75–8.

⁵⁸ *VCH Oxon.* ix, 11; we are grateful to Niall Brady for his observations on this building.

⁵⁹ *VCH Oxon.* vi, 196, 198.

roof is not of the quality of Swalcliffe, though this may be no more than a reflection of the availability of suitable timber. Certainly the barn must have been modelled on that at Swalcliffe, if not built by the same carpenter.

The barn of Abingdon Abbey at Tadmarton, a mile east of Swalcliffe, is also of cruck construction.⁶⁰ It is of six bays, with one porch, and its roof is of the same general character as that of Swalcliffe, but different in details.

The cruck barn at Church Enstone, which contains an inscription recording the building of a barn in 1382, is a much simpler affair, with low walls, one porch and six large pairs of crucks of different design and less sophisticated workmanship than the examples described above.⁶¹ The particular point of interest here is that the rubble and ashlar walls are in several places offset at the base of the crucks (about 5 ft./1.5 m. above the floor) and are narrower above this level. This clearly indicates a break in the masonry construction, and suggests that the walls were only built to that level before the crucks were raised; this has been suggested for Swalcliffe and Upper Heyford, though in neither case is the evidence for the masonry break as clear as at Enstone.

THE FUNCTIONS OF THE BARN [JMS]

A recent study of later medieval barns throughout England has stressed their multi-functional uses and links this with the tendency during this period to comprehend the diverse functions attaching to manor houses under one roof. Le Patourel suggests that the great monastic and secular barns were used for storing unthreshed crops, for food processing as well as for holding court meetings, harvest suppers and housing implements and even stock.⁶² One is reminded of the great roofed spaces of the migration and early medieval periods in Germany when such barn-like buildings performed a multiplicity of functions.⁶³

Security

Whereas the first and most obvious function of these late medieval stone built barns such as Swalcliffe is that they provided a safe lodging for precious and portable agricultural goods they also contributed to the general sense of security in the farm complex. Their very location on the edge of farmyards with blank windowless buttressed walls facing the outside would have contributed to the sense of enclosure which meant safety for their occupants and their possessions. The vulnerable side, that pierced by the huge doors of the waggon porches, faced into the more protected farmyard.

The layout of New College's rectorial farm at Swalcliffe can be compared with other monastic, episcopal, collegiate and baronial farm complexes within the region. At the prebendal grange of the bishops of Salisbury at Shipton-Under-Wychwood there was a rectilinear plot for house and farm buildings, restricted in size because carved out of the

⁶⁰ C.J. Bond, 'The Reconstruction of the Medieval Landscape: the Estates of Abingdon Abbey', *Landscape History*, 1 (1979), 65, figs. 4-5; Wood-Jones, op. cit. note 2, 22.

⁶¹ R.B. Wood-Jones, 'The Rectorial Barn at Church Enstone', *Oxoniensia*, xxi (1956), 43-7, fig. 15, pls. II-III.

⁶² H.E.J. Le Patourel, 'Rural Building in England and Wales', in E. Miller (ed.), *The Agrarian History of England and Wales, III, 1348-1500* (1992), 866-74.

⁶³ G.P. Fehring, *The Archaeology of Medieval Germany* (1991), 157-63.

eastern part of what had been the Anglo-Saxon churchyard.⁶⁴ Here the 14th-century barn is aligned east-west and is built parallel with the medieval farm house from which it is separated by a small yard.⁶⁵ At Minster Lovell the complicated history of the site whereby an alien priory was succeeded by a 15th-century mansion of the Lovels, to be replaced in turn by a vicarage and a farmhouse, has resulted in there being three irregular farmyards.⁶⁶ The medieval barn is aligned north-south as at Swalcliffe. Its thoroughly buttressed east wall presents an uncompromising back to the Windrush water meadows to the east. North of it a circular dovecote defines the edge of the medieval farmyard.

As mentioned above there are two other late medieval barns in granges which belonged to New College in north Oxfordshire.⁶⁷ At Adderbury the medieval farm occupied a roughly rectangular site (now covered by walled gardens and paddocks) north of St. Mary's church.⁶⁸ The barn is itself aligned east-west and its north wall forms part of the farm *enceinte*, backing onto an ancient field road. The rectilinearity of this layout as at Shipton contrasts with the irregular and subdivided plots of the village houses and crofts to the north. At Upper Heyford the college built a 15th-century barn similar in scale if not in carpentry quality to that at Swalcliffe; here it is perched on a scarp slope overlooking the river Cherwell.⁶⁹ The yard now subdivided for stock management occupies a roughly rectangular area; again the barn with its north-south axes demarcates the western edge of the farmyard.

In all six cases considered here one of the functions of the barn suggested by its location appears to have been to contribute to the feeling of security within the farm complex as a whole.

Storage

That the barn itself could be made a secure storage space seems obvious from the care taken at Swalcliffe to provide solid doors with massive iron fittings and timber bars. Protection against the weather was assured by the stone-slatted roof; the putlog holes did not even need to be reopened to house the scaffolding from which such a roof could be well maintained. The two waggon porches at Swalcliffe were part of the original design and not added as an afterthought. They were undoubtedly prestigious entrances to the barn, impressive alike to a peasant tithe payer or collegiate farmer. More importantly they were a desirable adjunct in a period of deteriorating weather.⁷⁰ The climatic optimum of c. 800–1300 AD had been followed by a long period of uncertain weather with wet summers and declining average annual temperatures. Corn driers proliferated in southern and central England, so did the provision of hard surfaces within farmsteads and drainage ditches in low-lying fields and paddocks. The provision at barn entrances of roofed waiting spaces for incoming harvest wagons, queuing up to be unloaded, helped to ensure drier storage conditions.

Judging from the medieval farm accounts surviving in other parts of Oxfordshire, such as at Cuxham, barns were likely to store a variety of crops, such as wheat, barley, dredge, peas,

⁶⁴ Shipton-Under-Wychwood: O.S. 1/2,500, Oxon. xxv.1 (1880).

⁶⁵ M.K. Taylor, 'The Prebendal House and Tithe Barn at Shipton-Under-Wychwood', *South Midlands Archaeology*, CBA Group 9 Newsletter 17 (1987) 64–70; and W.J. Blair, 'The origins of the Minster Church at Shipton-Under-Wychwood: human burials from Prebendal House', *Wychwood History*, 7 (1992), 4–9.

⁶⁶ Minster Lovell: O.S. 1/2,500, Oxon. xxxi.3 (1880 edn.).

⁶⁷ Evans and Faith, 'College Estates', op. cit. note 6, esp. p. 678.

⁶⁸ Adderbury: O.S. 1/2,500, Oxon x.5 (1881 edn.).

⁶⁹ Upper Heyford: O.S. 1/2,500, Oxon xxii.2 (1875 edn.).

⁷⁰ J.M. Steane, *The Archaeology of Medieval England and Wales* (1985), 174–6.

beans and hay.⁷¹ Aisled timber barns such as Harmondsworth (Middlesex) belonging to Winchester Cathedral could accommodate different crops with ease. Here the principal posts tied to the aisled walls split the long structure into bays, each of which could be used to store a separate crop, or house implements, or lodge stock. A barn with a lofty cruck-supported roof such as at Swalcliffe was not supplied with such permanent vertical partitions. The building could however be so divided simply by slipping a framework of timber into the lowest range of putlog holes from the inside. To this could be attached hurdles. It is of course possible that the great barn at Swalcliffe housed the major crop, likely to have been wheat, while the lesser barn (which has now been largely demolished) housed barley. Certainly at Cuxham where there were two barns, one was called the Wheat, the other the Barley barn.⁷²

Food Processing

Medieval barns were not simply storage spaces, corn repositories so to speak. They were also food processing plants.⁷³ Within their airy volume the corn sheaves were stacked until the time was adjudged right for capitalizing on the resource. Sheaves were untied and the threshers were called in with their flails to begin their long, arduous, dirty and dusty task of separating the husked grain from the straw. This was done on the threshing floor which might be made of thick cut slightly springy timber planks or paved with tough stone slabs. The carpenter is sometimes described in 18th-century estate documents as supplying wood for barn floors.⁷⁴ Subsequently the opposed doors of the barn would be opened for a draught of air to separate the grain from the husks when thrown upwards by the winnowers. The grain was then bagged and stored in a granary. None is mentioned in the accounts and there is no need for it to have been a separate building. It could simply have been a staging of planks on criss-cross baulks resting on some rat-proof and damp-resistant supports such as staddle stones. Such an erection would leave no archaeological trace save pressure pads on the earthen floor where the supports had rested for a time.

Later Changes in Agricultural Functions

Swalcliffe barn like most others in central and southern England was used for other tasks as later changes in the economy dictated. They all left their mark on the building. The period of the great depression in British farming which began c. 1870 when the industry could no longer compete with huge imports of America prairie-grown wheat, caused midland farmers to diversify. Since little capital was available unsuitable buildings like barns were adapted for stock breeding. The interior of Swalcliffe barn was whitewashed several times and lofts were inserted at either end of the building to carry hay and other cattle feed. A photograph taken c. 1940 shows hay being stored in both the lofts inserted for cattle feed (Fig. 2).⁷⁵ The cattle were accommodated inside and outside to the east where a single-storey shelter shed was erected up against the side of the barn and whitewashed internally.

⁷¹ P.D.A. Harvey, *Manorial Records of Cuxham, Oxfordshire* (Hist. MSS Comm. joint publ. 23 and Oxon. Rec. Soc. 50, 1976), 256–8.

⁷² P. Harvey, *A Medieval Oxfordshire Village, Cuxham 1240–1400* (1965), 35–6.

⁷³ J. Weller, *Grangia et Horreum, the medieval Barn, a nomenclature* (Bildeston, no date).

⁷⁴ Oxon. Record Office, Chastleton archive (uncatalogued), Box 3.

⁷⁵ A copy was provided by the late Susan Digby Smith of Swalcliffe who wrote a useful information sheet on the barn.

A third phase leading to fundamentally different use occurred in the 1950s when Mr Douglas Jack converted the barn to potato and root crop storage.⁷⁶ He had steel beams inserted in the central bays to support a floor. The marks of the housings to take the beams can easily be traced in the present walls. It says much for the soundness of the building techniques of the early 15th-century masons and carpenters that the barn was able to resist the tremendous lateral pressures on the walls set up by the weight of root crops so stored.

The barn now forms the vehicle store of the Oxfordshire Department of Leisure and Arts County Museum Service, and is currently open on certain days in the summer, and by arrangement with the Swalcliffe Society.

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⁷⁶ Information from Mr Jack junior of Swalcliffe.