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MADELEY COURT, SHROPSHIRE:

FROM MONASTIC GRANGE TO COUNTRY HOUSE HOTEL

EXCAVATIONS 1978–9 AND 1987

by

Cameron Moffett

with

Bob Meeson

with contributions from

Ivor Brown, Charlotte Cane, Shelagh Lewis, Peter O'Donoghue, Christopher Phillpotts, the late Andrew Somerville and Paul Stamper

and

AN EARLY SEVENTEENTH-CENTURY MALTINGS AT

MADELEY COURT BARN, TELFORD

EXCAVATIONS 1991–2

by

Fred Aldsworth and Michael Worthington

with contributions from

Kate Clark, Martin Harrison-Putnam and Pamela Spriggs

edited by
Shelagh Lewis

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Front Cover: Madeley Court, An early nineteenth century watercolour and wash drawing, by J. Holmes Smith (Ironbridge Gorge Museum Trust: SS/MT81).

PREFACE

By SHELAGH LEWIS

This volume results from three episodes of archaeological investigation at Madeley Court. In 1978–9, and again in 1987, recording and excavation took place prior to conservation and restoration work on the main building, the gatehouse and the garden. In 1991–2 further recording and excavation were undertaken in advance of the conversion of the derelict 17th-century outbuilding sometimes known as the 'mill'.

The 1978–9 work was directed by Bob Meeson (for Telford Development Corporation) and the 1987 work by Cameron Moffett acting on behalf of English Heritage. Recording and excavation of the outbuilding in 1991–2 were carried out by Fred Aldsworth (recording of the standing building) and Michael Worthington (excavation supervision). This work was undertaken on behalf of English Heritage.

Both reports were written up, initially during the 1990s, but, for a variety of reasons, publication was delayed and the present volume has been edited for publication by Shelagh Lewis, working with the original authors, on behalf of the Shropshire Archaeological and Historical Society with the support of English Heritage and Madeley Parish Council, and with additional support from Telford and Wrekin Council.

Shelagh Lewis

Madeley
2008

The Council of the Shropshire Archaeological and Historical Society acknowledges with gratitude a grant from English Heritage for this publication.

D. T. W. Price
Hon. Editor

PART I

MADELEY COURT, SHROPSHIRE:
FROM MONASTIC GRANGE TO COUNTRY HOUSE HOTEL
EXCAVATIONS 1978–9 AND 1987

PART I LIST OF FIGURES

PART I LIST OF PLATES

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Ivor Brown
Dr. Ivor Brown is a retired mining engineer, lecturer and geologist. He is an active member of the Shropshire Caving and Mining Club, a prolific author on mining and its history and is mining adviser to the Ironbridge Gorge Museum Trust.

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Charlotte Cain specialized in ceramics after graduating from Birmingham University. She then retrained as an accountant and went on to have a successful career in the public service. She is now a senior financial officer for the Forestry Commission.

Shelagh Lewis
Shelagh Lewis graduated in archaeology from the Universities of Manchester and Liverpool, after which she was involved in the museum world for many years. She now works in Madeley and is Education Liaison Officer for CBA West Midlands.

Bob Meeson
Bob Meeson is a former County Council Archaeologist for Staffordshire, now working as a freelance historic buildings consultant. He is the Archaeological Consultant to Lichfield Diocesan Advisory Committee and is a past Secretary and President of the Vernacular Architecture Group.

Cameron Moffett
Cameron Moffett is a graduate of the University of Sheffield's Department of Prehistory and Archaeology. She has lived and worked in Shropshire for many years and is a Curator of Archaeology for English Heritage. She also works for Shropshire Council on the documentation of their archaeological collections.

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Christopher Phillpotts
Dr. Christopher Phillpotts obtained his Ph. D., at Liverpool University in 1985, for research into medieval diplomatic history. He subsequently worked as an archaeologist for the Museum of London and is now a freelance archaeological and historical research consultant based in Shrewsbury.

The late Andrew Somerville (1923–1990)
Dr. Andrew Somerville was founding Chairman of the British Sundial Society. He made an extensive study of the remarkable multiple sundials of Scotland and had a particular interest in the Madeley Court sundial.

Paul Stamper
Dr. Paul Stamper, who currently works for English Heritage, has a long-standing interest in post-Roman English landscape history. He is Joint Editor of *Landscapes* and President of the Medieval Settlement Research Group.

PART I
Acknowledgements

Inevitably, in the case of a project that has sprawled episodically over three decades, some people will be omitted from the acknowledgements.

Our apologies to those people and our thanks to everyone who helped in any way, including The Abraham Darby School (whose pupils provided many of the excavators in 1978–9), Nigel Baker, George Baugh, Heather Bird, Tony Carr, Martin Ellis, Mrs. P. Halfpenny, Dave Higgins, Dr. Mike Hodder, Dr. Sara Lunt, Ellen McAdam, Mrs. Jean Meeson, Madge Moran, Margaret O'Sullivan, the Shropshire Archaeological and Historical Society, David Symons, Mike Watson, Hilary White and the late Eric Mercer, who was always generous with his time and advice.

Lastly, thanks to the editor, Shelagh Lewis, without whose enthusiasm and encouragement this volume would never have been published.

PART I
Summary

Two episodes of archaeological investigation, in 1978–9 and 1987, have taken place at Madeley Court, both associated with repairs to the principal buildings.

The site originated in a monastic grange, probably founded *c*.1200. Initially it included at least one stone building and a set of fishponds. The site experienced rapid development over a period of *c*.50 years, probably starting from around the second quarter of the 13th century. During that time at least four domestic buildings were added to the complex and it was in this period that buildings originally constructed as free-standing were incorporated into a larger arrangement of linked structures. The chronology of these 13th-century buildings is not clear, but they include at least one hall, possibly co-existing with a second hall, a probable chamber block and a chapel.

New living accommodation was added to the existing buildings in the years immediately after the Dissolution when Madeley Court was sold into private ownership.

The buildings were remodelled and extended on a large scale in the 1570s, resulting in a U-plan house. Additions to the buildings were made almost continuously until the second quarter of the 17th century. From the beginning of the 18th century, the estate was sold off piecemeal, and the house was leased to tenants. In 1828, together with part of the estate, the house was sold to an ironmaster who exploited the nearby mineral deposits. These changes signalled the beginning of a decline that continued until the 1970s.

The surveys

The following surveys provide source material for the drawings and report. These all form part of the archive.

The principal sources

Meeson Survey 1977/8:
Plans of the house at all levels and drawings of many elevations – more internal than external; panelling details. Plans and elevations of the gatehouse. Imperial scales.

Arroll & Snell Survey 1987:
Architect's plans of the house at all levels, plus some drawings of the garden walls.

Photogrammetric Unit survey 1987:
External elevations and plans of external wall faces derived from elevations.

The minor sources

J.A. Roberts Architect's plans with additions from N. Cooper – 1977. R.C.H.M.
Authors' supplementary plans, elevations, photographs – 1987.

There are, however, still areas that are not recorded, or only recorded as far as architectural features. These are principally at the west end of the building, where the large-scale rebuilding by the Telford Development Corporation in the 1970s, made stone-by-stone recording pointless by the time of the photogrammetric unit's visit. Occasional gaps in the drawing of details of stone work are the result either of lack of access/sight lines or basic omission. It was not possible, in every case, to fill in the blanks of the earlier surveys as part of the 1987 work. The author takes full responsibility for any unresolved anomalies between drawings, or omissions of detail, where this might affect interpretation.

PART I

MADELEY COURT EXCAVATIONS 1978–9 AND 1987

INTRODUCTION

Madeley was a Saxon foundation. The earliest recorded form of the place-name is *Madelei* in Domesday Book. This derives from the common combination of a personal name (Madda or Mada) with the suffix 'ley' (clearing). It is first mentioned in a document of *c*.729 which records the purchase of the manor of *Magdalee*, by Milburga, Abbess of Wenlock Priory, from one Sigward (see p. 53 below).

The town is in the south-central part of the East Shropshire Coalfield, an area rich in deposits of coal, iron ores, clay and other mineral resources, which also has good river access. These factors combined to make it a natural focus of industrial development. The earliest indication of mineral exploitation in the vicinity dates from 1250 when Philip de Benthall granted the monks of Buildwas free access over his estate for the conveyance of coal, stone and timber (*VCH Salop*, **XI**, 247). Sea coals were being dug in the Brockholes by 1322 and, in the 16th century, ironworking was being carried out in Coalbrookdale (*VCH Salop*, **XI**, 52). The name Coalbrookdale, however, has nothing to do with local industrial activity. It derives from the 'Caldebrok' or 'Cold Brook' a tributary of the Severn along which the original settlement straggled. The alteration of the first element to 'Coal' was probably an 18th-century substitution, due to the industrialization of the area at that time.

Madeley achieved town status in 1269 when it was granted the right to hold an annual fair and a twice-weekly market. The earliest settlement seems to have been focused on the area around St. Michael's Church and the present Station Road, while the 13th-century planned town was laid out along the Shifnal to Much Wenlock road. The manor of Madeley remained the property of Wenlock Priory until the Dissolution in 1540 when it passed into private hands.

Madeley Court (SJ695051, SMR no.1067) comprises a discrete group of buildings and the associated walled garden situated on a steeply-sloping site in a small valley *c*.1km. north of Madeley town and 6.5km. south of Telford town centre (Fig. 1). It was built as a grange of Wenlock Priory, and a 13th-century hall, probably the work of Prior Humbert (Prior 1221–60), forms the core of the present main range, although fragmentary elements of an earlier, 12th century, structure were identified during the 1987 investigations.

At the centre of the complex of buildings at Madeley Court is the former manor house of Madeley (Fig. 2.1), an impressive L-plan building. In appearance it is predominantly Elizabethan but, in fact, it contains elements that range in date from the medieval period to the present day. With one notable exception, the medieval and later parts of the building are all constructed in the same buff-grey Coal Measures sandstone, which probably came from the area near Bedlam and Jockey bank, 2.5km. south-west of Madeley Court (*VCH Salop*, **XI**, 52). The house has two principal ranges, the north range and the unit comprising the east addition and east wing. Each is of two storeys with attics and cellars. Figure 3 gives the terminology used here for the various components of the building.

All the structures in the northern part of the house (the north range and the east and west additions) are terraced into a steep, north-facing slope, and, in the case of the north range, this allowed direct external access at cellar level to the north and, at ground level, to the south. Of the surviving structures built on the slope, the early- to mid-13th-century north range is the earliest. Most of the east wing is later 16th century in date and forms an extension of the mid-13th-century east addition, although it encapsulates a fragment of a 12th-century structure. Running eastwards from the east wing is the surviving western part of an early- to mid-17th-century double-pile structure (the east service range). A small, square, pavilion-like building was added at the south-east corner of the east wing in the early 18th century.

Figure 2 shows Madeley Court within its wider setting: the hatching indicates surviving structures. The house (Fig. 2.1) forms the north, and part of the east, side of a forecourt (Fig. 2.2) access to which is guarded by a

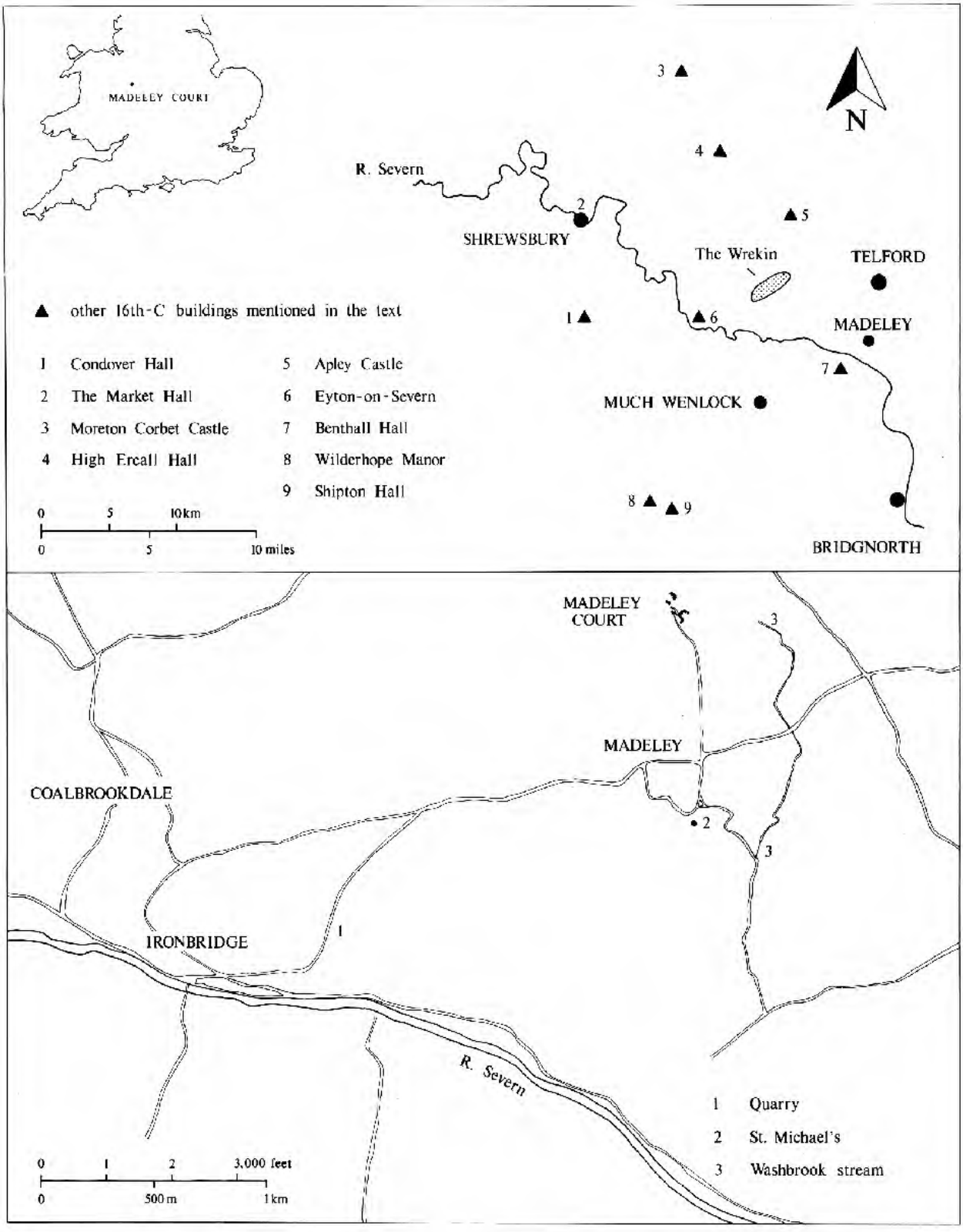

Figure 1 Madeley Court, Shropshire: location (Sources: O.S. 1st edition, Robert Baugh map 1808 and Roque map 1752)

late-16th-century twin-towered gatehouse in the south wall (Pl. IV and Fig. 2.6). The house consists of the hall in the north range, entered through a late Elizabethan porch, and the 16th-century east wing. To the west of the forecourt there is an early- to mid-17th century brick-walled garden (Fig. 2.3) containing a contemporary sundial (Pl. VI and Fig. 2.4) and, to the east, there is a garden of probable 18th-century date (Fig. 2.5). Outside the forecourt walls, to the south-east of the gatehouse, is the Old Mill, a large brick ancillary building of the

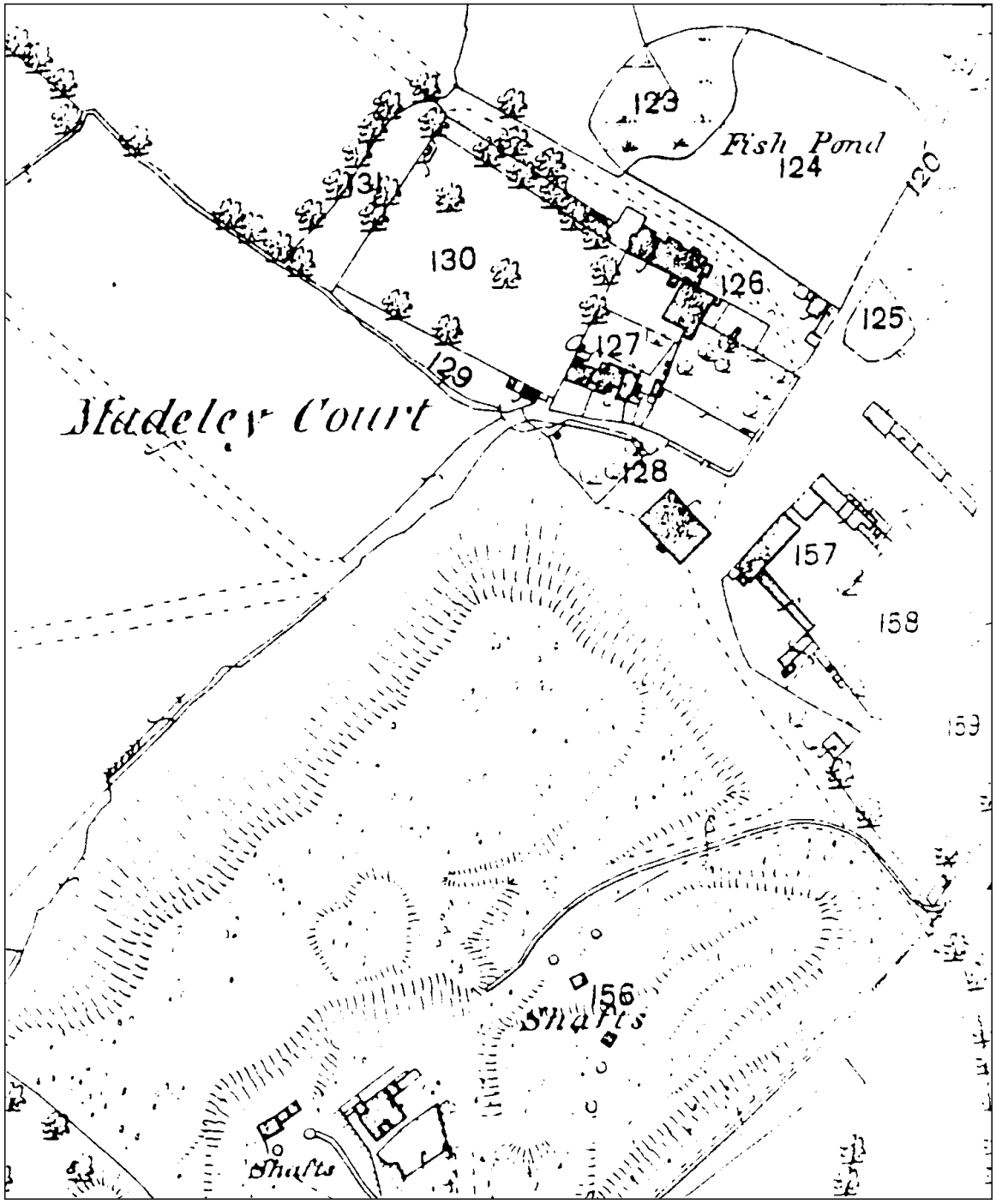

Plate I 1883 O.S. 25 inch plan (surveyed 1882) showing subdivision of buildings and grounds and 19th-century outbuildings

early- to mid-17th century (Pl. V and Fig. 2.7), which forms the subject of a separate report in this volume. The gatehouse is listed Grade I, and the house, Old Mill, sundial and north-west sections of the 17th-century garden walls are Grade II*. The south-east portions of the garden walls are Grade II. A large farmyard (Fig. 2.9) with buildings of probable late 16th-century to early 17th-century date or later formerly stood about 100m. east of the house, but did not survive the 1970s.

The landscape immediately surrounding Madeley Court was much altered in the late 19th century, when intensive coal mining resulted in large-scale dumping of upcast to the south and north-east of the buildings, infilling the medieval fishponds that had lain east of the gatehouse (Fig. 2.8 and Pl. III). An artificial lake was created to the north of the main building at about the same time, and a balancing lake to the west was added more recently in connexion with surface water management (Fig. 2.10).

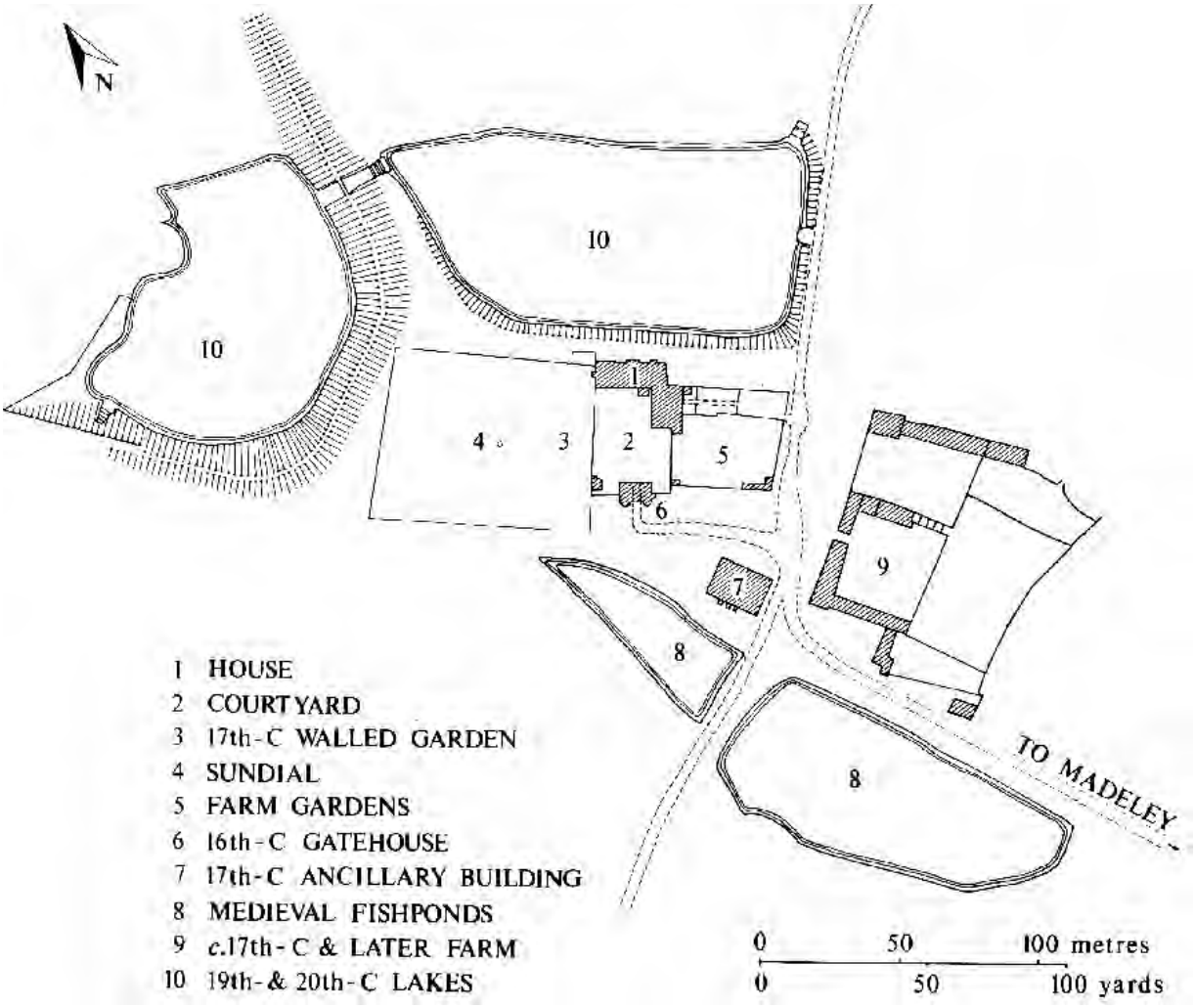

Figure 2 Madeley Court within its wider landscape (1:4,000)

Plate II View of house from north-east in 1960 (S. T. Walker Collection)

Plate III Early 19th-century watercolour and wash drawing by J. Holmes Smith (Ironbridge Gorge Museum Trust: SS/MT81)

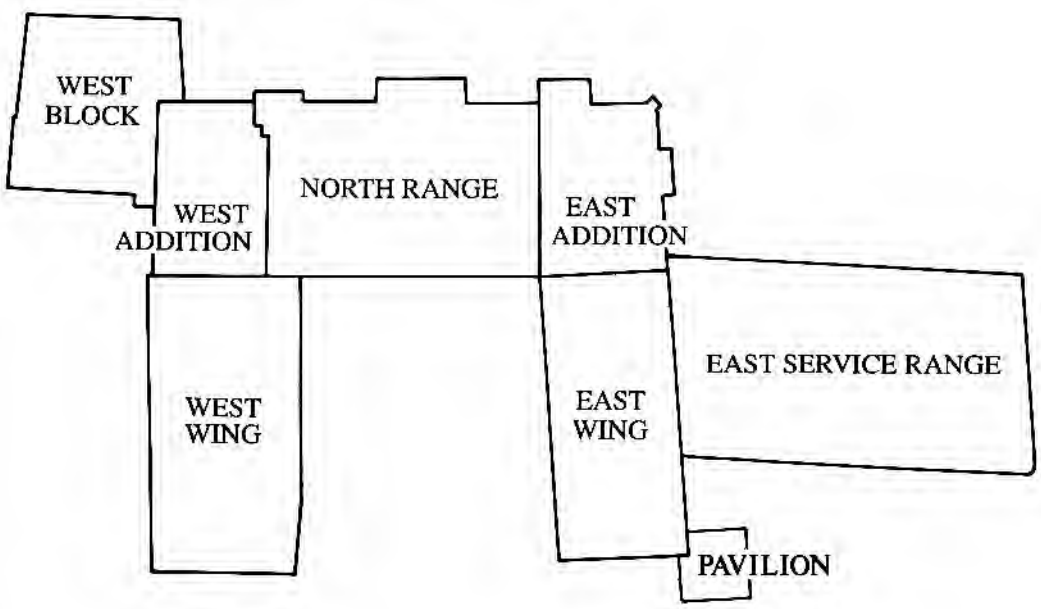

Figure 3 The terminology of the building

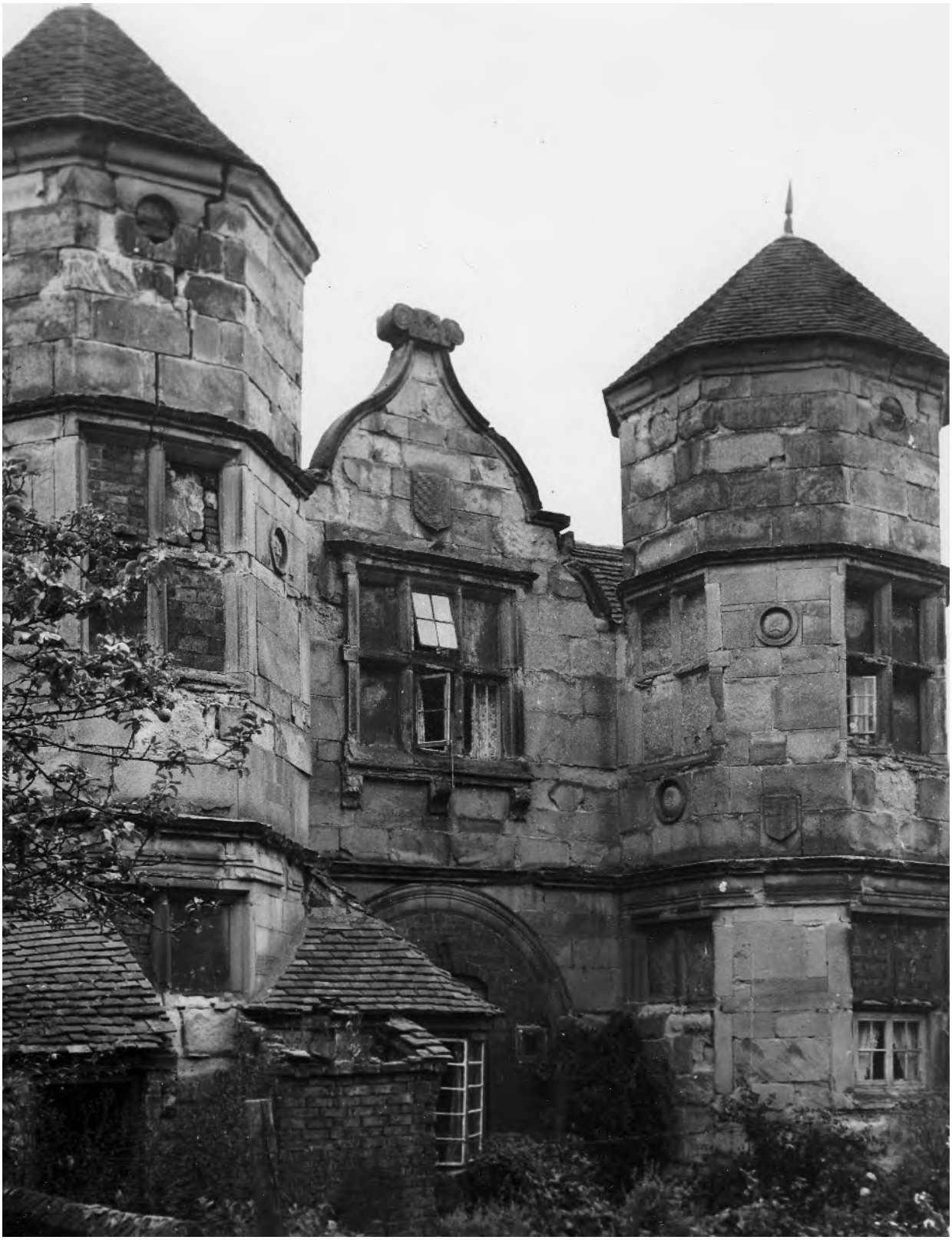

Plate IV The gatehouse, *c*.1950s (J. Rea, S. T. Walker Collection)

Plate V The brick ancillary building in 1954 (SA: PH/M/1/7, neg. Lloyd 469)

Archaeological and historical investigations and structural recording at Madeley Court

Dawley Development Corporation acquired the buildings at Madeley Court and the adjacent fields in 1964. In 1973 their successors, Telford Development Corporation (TDC), carried out emergency repairs to the building to mark the tenth anniversary of the designation of the new town. As part of this work Bob Meeson undertook excavations and surveyed the standing buildings. He excavated *c*.300m² of the courtyard over two seasons in 1978 and 1979 (Fig. 4, Areas A and C), as well as producing measured surveys of considerable portions of the principal standing buildings.

The Corporation hoped that, once it was structurally sound, Madeley Court would attract a commercial tenant, but it was not until 1987 that a local developer, Mr. M. Ebelis, bought it for conversion into a luxury hotel. English Heritage offered a grant, conditional upon an architectural recording and analysis project, and archaeological excavation, being carried out in advance of the proposed work. The Photogrammetric Unit of the Institute of Advanced Architectural Studies at York prepared a photogrammetric survey, and the Birmingham University Field Archaeology Unit (BUFAU) were responsible for the recording and excavation, working primarily with Community Programme field and finds staff seconded from the Unit's Shrewsbury Heritage Project. Three months of excavation during 1987 concentrated on a large area to the south-west of the standing building (Fig. 4, Area I). BUFAU also examined a number of smaller areas both inside and outside the standing building, and carried out watching briefs on restoration work to the standing building, during the digging of foundation and service trenches, and during road construction. The subsequent post-excavation programme was funded by English Heritage, and the resulting publication has brought together the results of the 1978–9 and 1987 investigations. The primary records for both campaigns, the archive, and the finds have been deposited with the Shropshire County Museum Service.

The finds were, for the most part, post-medieval and modern, and were residual and uninformative. A catalogue and report form part of the archive. This report includes stratified material where relevant, and describes a single late 17th-century assemblage in detail (see p. 46 below).

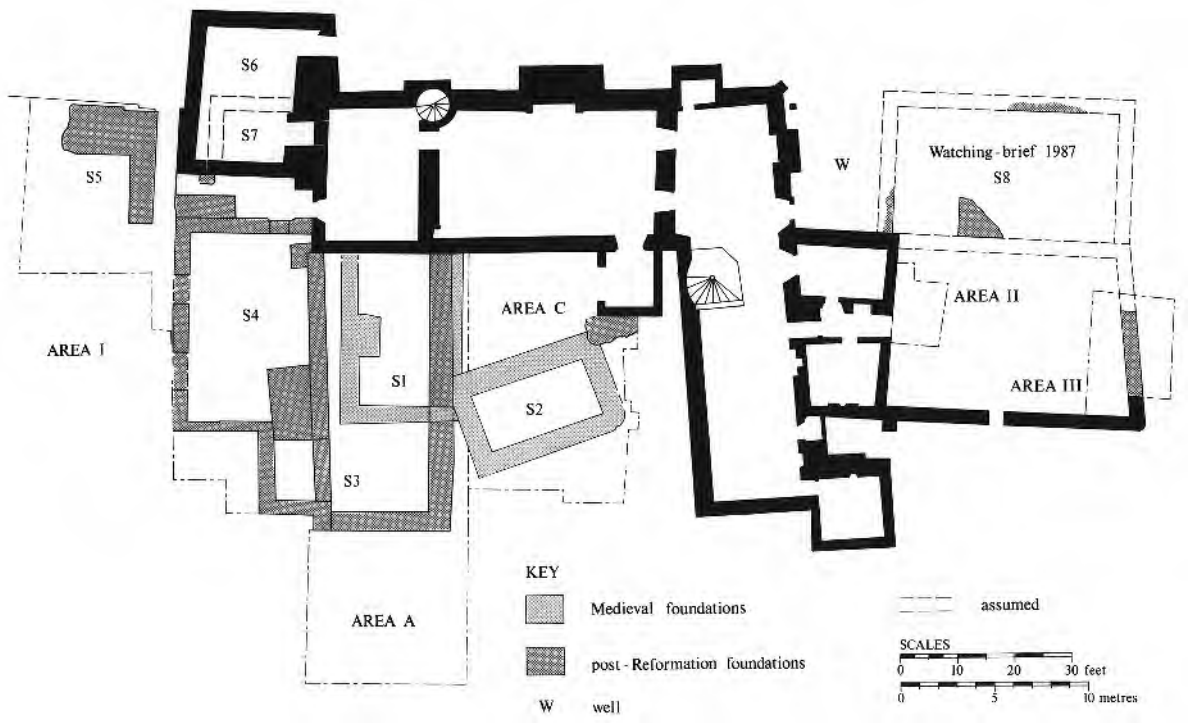

Figure 4 The standing building and excavated foundations (1:400)

There is remarkably little documentary evidence relating to Madeley Court, either from the medieval or from the early post-Reformation periods. Dr. Chris Phillpotts undertook research on the documentary sources to supplement the two recent volumes of the Victoria County History of Shropshire (*VCH Salop*, **II** and **IX**), but found few new documents relating to Madeley Court, and none of any importance. His report provides a synthesis of the known historical evidence for the site before the modern/industrial period (see pp. 53–57 below).

The structure of the report

The introductory section contains all the major drawings. Figure 4 shows the main excavated areas and relates the standing building to excavated foundations. 'S' numbers refer to structures known primarily from excavated foundations. Where orientations are given in the text they refer to site north (that is, the top of the page) rather than true north.

Because of the episodic nature of the work at Madeley Court, the architectural drawings, published here, are the product of a number of different surveys undertaken at different times and to different criteria: details of the surveys are given on p. xv.

MEDIEVAL MADELEY COURT

The earliest reference to the manor of Madeley dates from the 8th century when it was acquired by St. Milburga, Abbess of Wenlock Priory, and it remained the property of the Priory until the Dissolution in 1540. The fortunes of Madeley rose and fell with those of the Priory and it is through the connexion with Wenlock Priory that documentary evidence for the history of Madeley Court and its surrounding landscape must be sought. Unfortunately, no cartulary of the Priory survives, and miscellaneous deeds and surveys provide the only sources of information. We do know that, in the 13th century, the Priory and Madeley Court enjoyed a period of prosperity and development, under Prior Humbert, followed by a lull in construction. The Priory experienced its last period of prosperity in the early decades of the 14th century, after which it became involved in costly disputes with the Crown over status. The documentary evidence is summarised by Phillpotts (see pp. 53–55 below).

Period 1: late 12th century

The earliest recognised building phase at Madeley is dated to the 12th century on the grounds of stone type and size and surface treatment of the ashlars. All that appears to survive of the 12th-century structure is a small section of masonry in the east wall of the east wing at ground floor level and now encapsulated in later fabric (Fig. 5). The surviving section is 1.5m. high and 3.3m. long, but it was not possible to determine its thickness. It is constructed of red-brown sandstone, softer and more granular than the buff-grey Coal Measures sandstone found in later work on the site. The blocks are smaller and more nearly square than those in the later medieval phases and have a light, diagonal tooling characteristic of medieval ashlar. A thin layer of render composed of sand and lime was observed on the accessible east face of the wall. A secondary layer of render overlying this was abutted by the south wall of the Period 7 (1570s) former stair turret. The earliest render here was taken to be the primary wall treatment.

A single architectural fragment, recovered from a 20th-century rubbish dump, may relate to this early structure. It appears to be the end of a stair tread with an integrated round newel block and a chamfer on its soffit (Fig. 6). This piece of sandstone is darker than the standard Coal Measures stone, but is iron-coloured and does not seem clearly to belong to the red-brown type either. The red-brown sandstone does appear unequivocally in one other context; it was used in the construction of a substantial drain (Fig 7, F89) which ran far below the foundations of the 17th-century structures at the west end of the main building. Its size, position and marked fall to the north suggest that this drain was an overflow or by-pass from the fishponds to the south. Within the fill of the drain was a crocket or fragment of a capital of 13th-century date (see Fig. 8 and p. 24 below).

The masonry of the early structure is similar to that of the majority of late Norman churches along the Severn Valley in Shropshire, in dimensions, surface treatment of the facing stones, and the stone type used. The red-brown sandstone is likely to be from one of the Keele Bed deposits occurring along the Severn Valley. Easily accessible in the sides of the river channel, these deposits were much exploited in places like Shrewsbury and Bridgnorth from at least the 11th century onwards. An area of Keele Beds, outcropping east of Madeley Court, may be the source of this building stone. In Madeley town this type of stone occurs only as small eroded lumps in the ground course at the western end of the church, which was rebuilt in 1796. Its predecessor is thought to have had a late Norman tower (Cranage 1901, 205; see also lithograph, *c*.1790, Ironbridge Gorge Museum Trust: SS/MT73).

Too little survives of the red-brown sandstone wall to allow much conjecture concerning the details of the structure of which it was originally a part, although the retention of the wall in the subsequent complex of

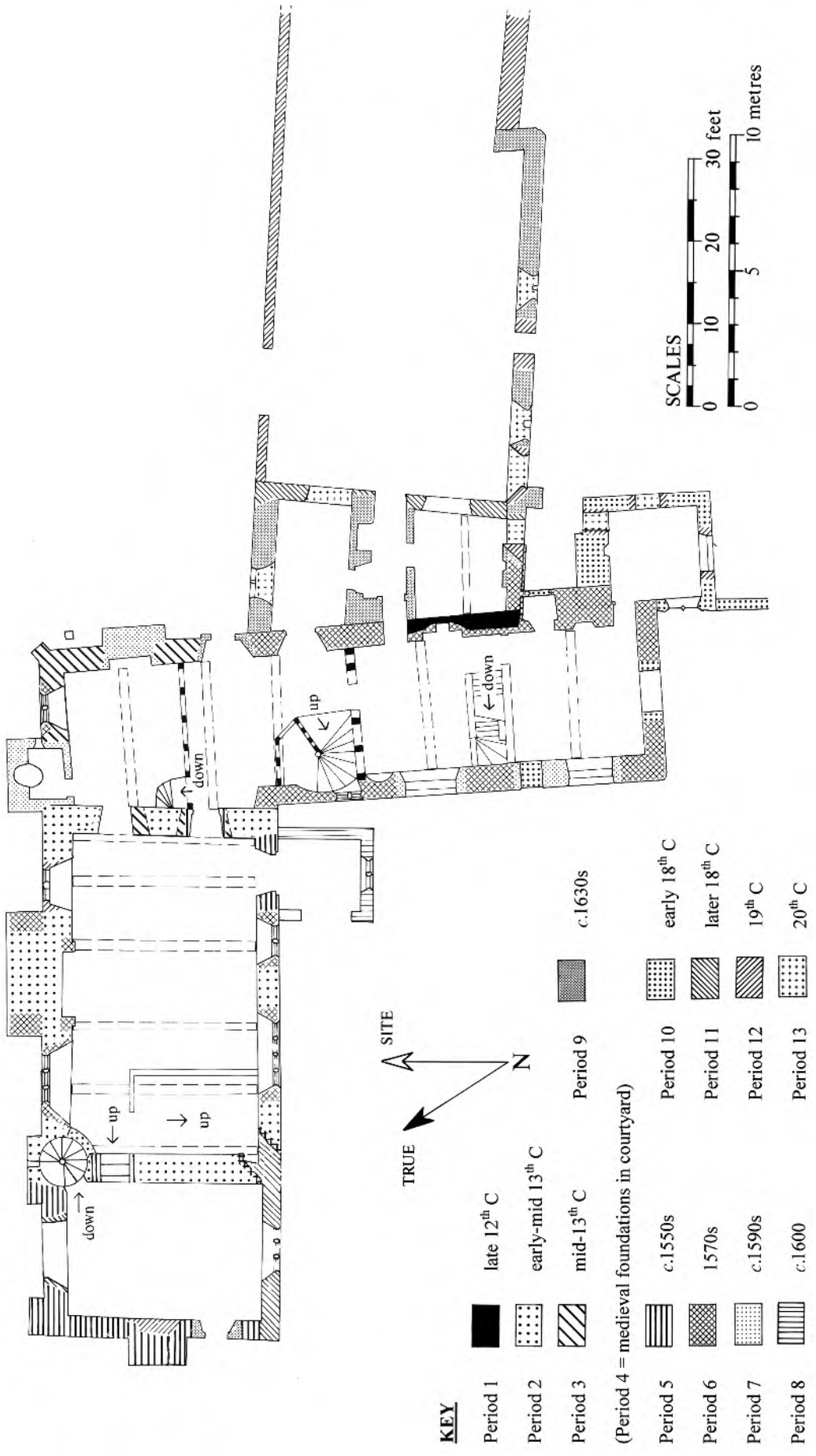

Figure 5 Phased plan at ground floor level (1:200)

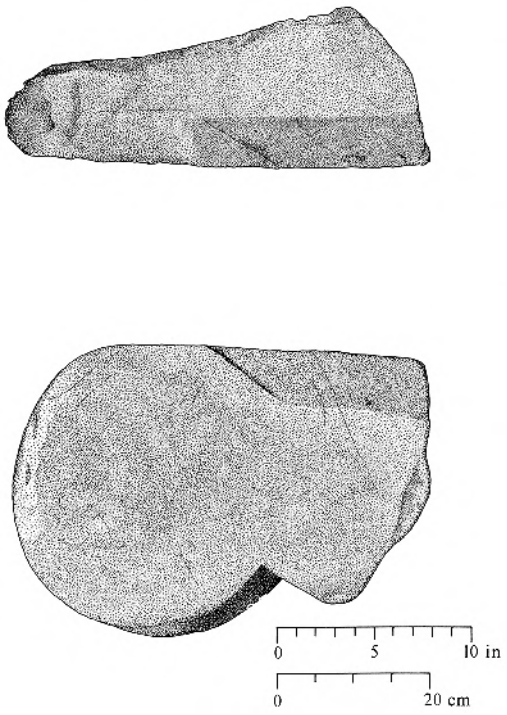

Figure 6 Possible Period 1 newel stair fragment (1:10)

buildings suggests it was more likely to have been part of a building than of a boundary wall. There is little contemporary evidence from the excavations (Fig. 9), but, from the absence of foundations in the excavated areas to the east and west of the east wing, it is possible to argue that the orientation of this building was north-south, underlying the surviving post-Reformation east wing. If the stair tread does relate to this primary structure, then the building was of two storeys and, probably, had a stair turret at one corner.

Period 2: early to mid-13th century

The north range hall

At the heart of the standing building is the large (14m. x 9m.) north range (Fig. 3), its long axis running east-west. It was built over the steep north-falling slope and is terraced into the natural sand. The external ground surface, at the north of the building, was formerly level with the cellar floor, but a 19th-century clay bank, built alongside the north face of the house to retain the lake, raised it by *c*.2m. In its present form the building has a ground floor hall with a lateral fireplace in its north wall (Fig. 10). This is likely to be its original position as it can be seen externally that the primary chimney stack was enlarged in the immediate post-Reformation period (Period 3 on Fig. 11). The existing fireplace resembles others in the building which date to the late 16th and early 17th centuries. Here, however, moulded voussoirs, probably 13th century, were reused in a relieving arch above its lintel, the construction of which has destroyed any evidence of a possible earlier chimney hood.

There are remains of four primary openings within the north range. First, there is a pair of tall windows (now blocked) in the east gable wall (Figs. 12 and 13), the segmental rear-arches of which partly survive. These windows have three-quarter-round roll-mouldings on their jambs, a detail which recurs in the Period 3 (mid-13th century) features, and which also seems to have been copied occasionally in the early post-Reformation work. Of a similar window in the north wall, east of the fireplace, only the lower portion of the eastern internal jamb survives (Fig. 10). The lowest segment of the mullion had a quarter-round roll at each corner and a keel on each face (Cooper, 1977) and it was thought that this might have been a survival from the original. However, photographic evidence *c*.1950s (SA: PH/M/1/7: Madeley Court from the north) makes this seem less likely as, there, the external portions and the mullion of this window look as if they have been recently inserted, and the window is fitted with modern vertical iron bars.

In the west end of the south wall (Figs. 14 and 15) part of a primary doorway has survived. Internally, the bottom 1.25m. of its plain west jamb is visible below an inserted window; externally, where the three-quarter-

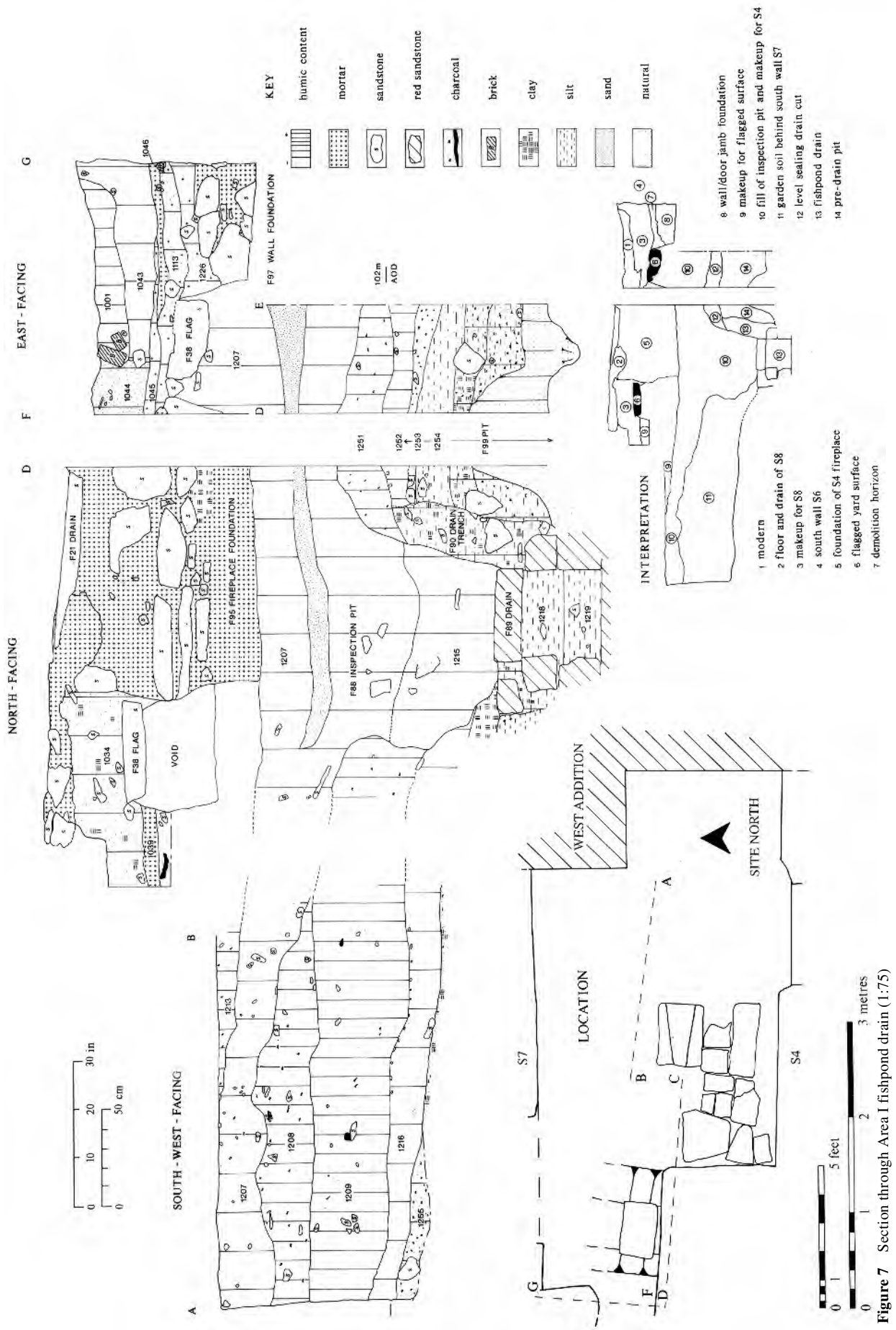

Figure 7 Section through Area I fishpond drain (1:75)

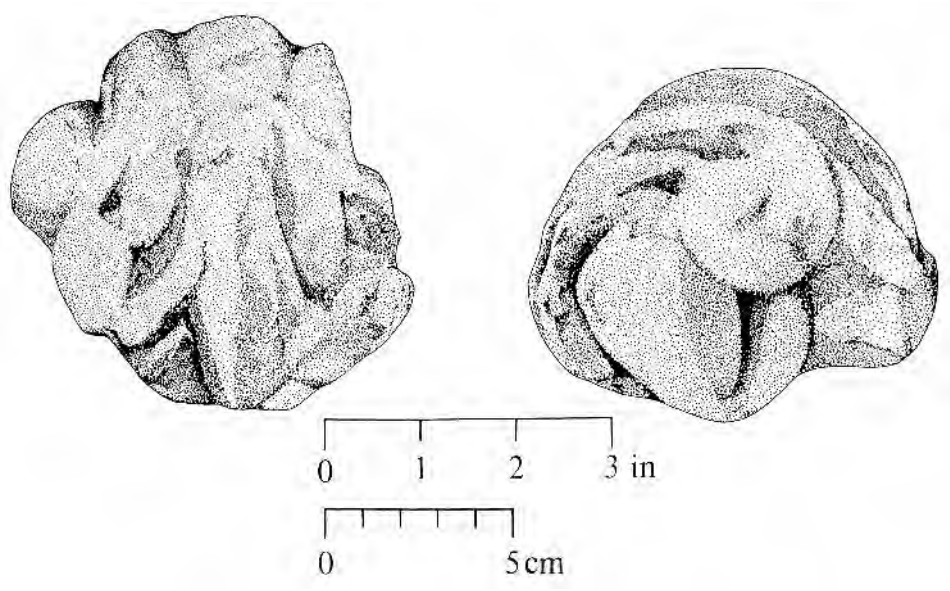

Figure 8 13th-century crocket (1:2)

round moulding is used again, even less survives, as its bottom two courses have been destroyed by later underpinning. The blocking of this doorway probably pre-dates the 1590's window there. Also in the south wall is a small length of a former string course (Fig. 14). Internally, the offset in the top of the north range's east wall (Fig. 14), now the level of the post-Reformation floor, seems likely to be the former level of the original eaves for the Period 2 hall.

A number of architectural features survive from this period. The cellar of the north range had a small primary fireplace (Fig. 10). Originally, this probably had a flat lintel, later cut away, leaving the relieving arch supporting the masonry above. East of the fireplace is a small doorway, with a three-centred arch and three-quarter-round moulding on both faces of its jambs (Figs. 10 and 11), giving independent external access. Internal communication between the ground floor and the cellar was by means of a newel stair in the north-west corner, where the walls were thickened to accommodate it. This stair (completely rebuilt in the late 1970s) now leads out into the western extension, but in 1883 it opened into the north range (Randall, 1883, 11) and must have done so in the 13th century. The north wall of the cellar contains four windows (Fig. 10). That immediately west of the fireplace is original, while the westernmost window is likely to be a replacement, inserted when the Period 6 (later 16th century) widening of the chimney stack blocked off the primary aperture. The windows to the east of the door and at the west of the cellar are also original.

In addition to the known original features, there is another feature which is likely to be of this date, but which has no surviving original fabric due to later replacement: the window west of the fireplace in the north wall. This window (Period 6) is noticeably larger than its partner to the east, although whether this reproduces the dimensions of a primary window or of a subsequent medieval one cannot be determined. There may also have been a window in the eastern section of the south wall, where a small section of a possible vertical joint can be seen above the later main doorway (Fig. 15).

The three-quarter-round roll-moulding was used in the county and elsewhere throughout the 13th century and its introduction at Madeley Court probably followed its initial use at Wenlock Priory in 1220–30, during Prior Humbert's incumbency. The north range may have been built as Prior Humbert's private quarters.

Period 3: mid-13th century

A two-storeyed, partly cellared, structure (the eastern addition, Fig. 3) was added at right angles to the east end of the hall (Figs. 5, 16 and 17) and the pair of windows in the hall's east gable was blocked (Figs. 12 and 13). The only evidence of original openings in this new structure is provided by portions of the internal jambs of the windows in the north gable at cellar- and ground-floor level (Fig. 10) and the door knocked through the east wall of the north range to link its cellar with that of the new structure (Figs. 10, 13 and 18). The cellar window (Fig. 10) is small, with a simple chamfer on its jambs and a plain timber lintel over a deeply splayed internal reveal. The ground floor window has three-quarter-round moulding on its jambs (Fig. 10) and a chamfered

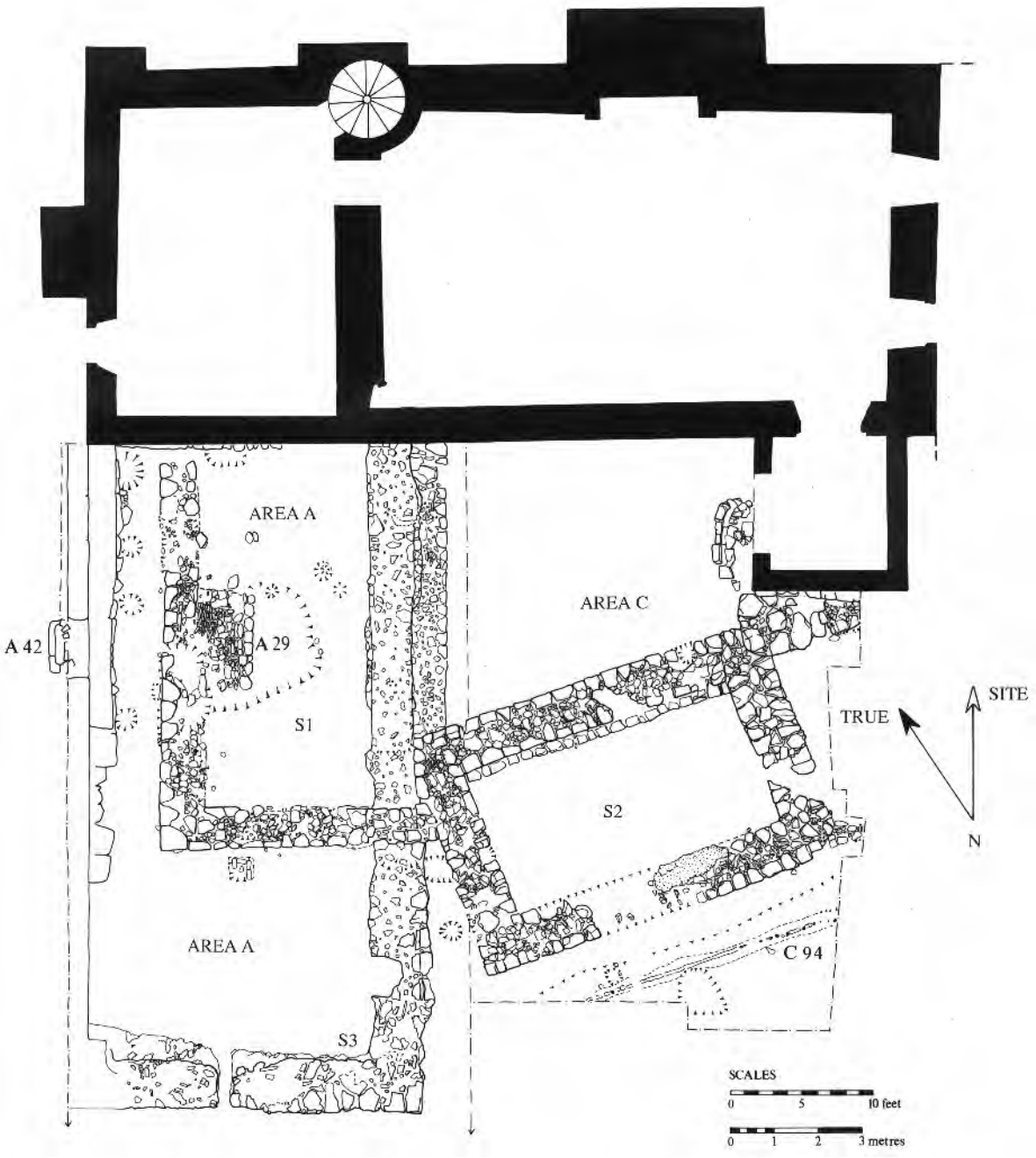

Figure 9 Areas A and C from 1978–9 excavations (1:150)

wooden lintel with straight-cut stops. The door at cellar level has only simple, straight jambs, and its lintel is formed by the overhead floor beam.

However, most of the original details and features of the eastern addition have been lost to later alterations. No direct evidence survives of the nature or position of any vertical access between floor levels in the eastern addition, or of horizontal access between this structure and the Period 2 hall above the cellar, although the presumption is that the southernmost of the two doorways in the east wall of the hall was established at this time. There is no indication of the nature of any possible heating arrangements at this date, nor any indication in the structure's fabric of its original extent to the south, where later construction has replaced this part of the eastern addition. For the surviving Period 3 fabric in the east wall see Figs. 18 and 19.

Positioned at the end of the hall, and at right angles to it (Figs. 3, 4 and 17), the eastern extension, with its skewed angles, must have formed a link between the 12th-century structure at the south and the 13th-century hall, indicating that, by the mid-13th century (at the latest), the core of Madeley Court had evolved from two or more separate structures into a series of linked buildings. The attribution of a mid-13th-century date is based

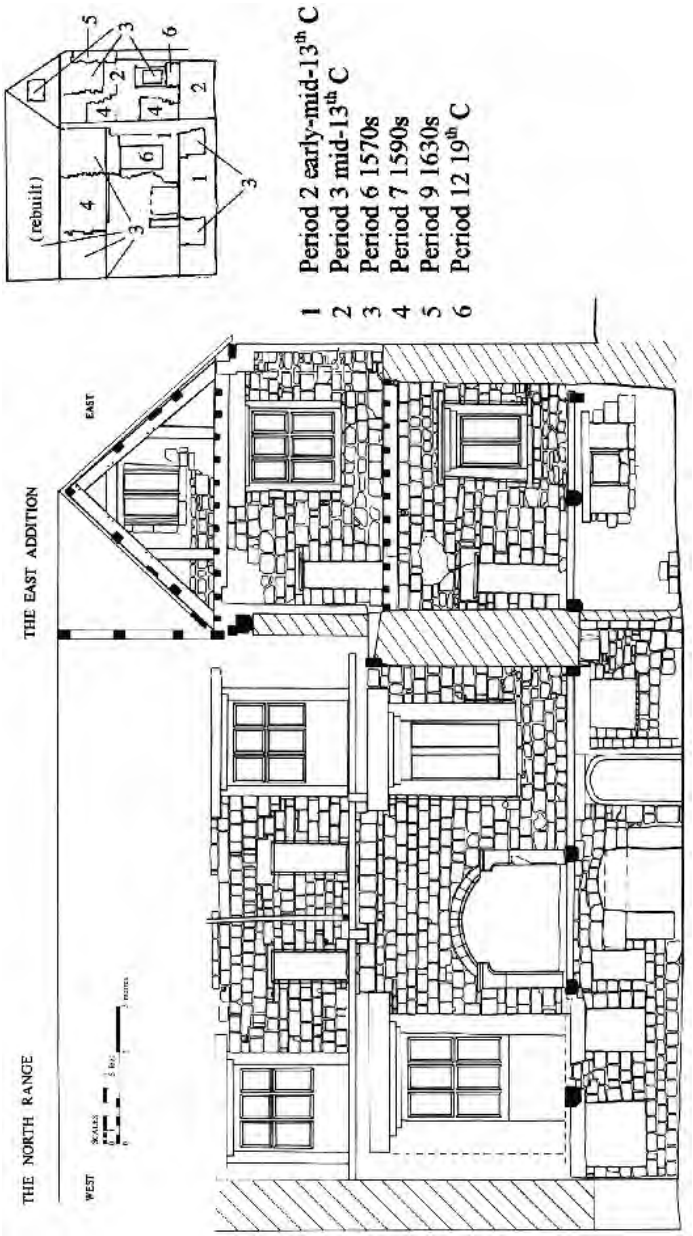

Figure 10 Internal north elevation (1:150)

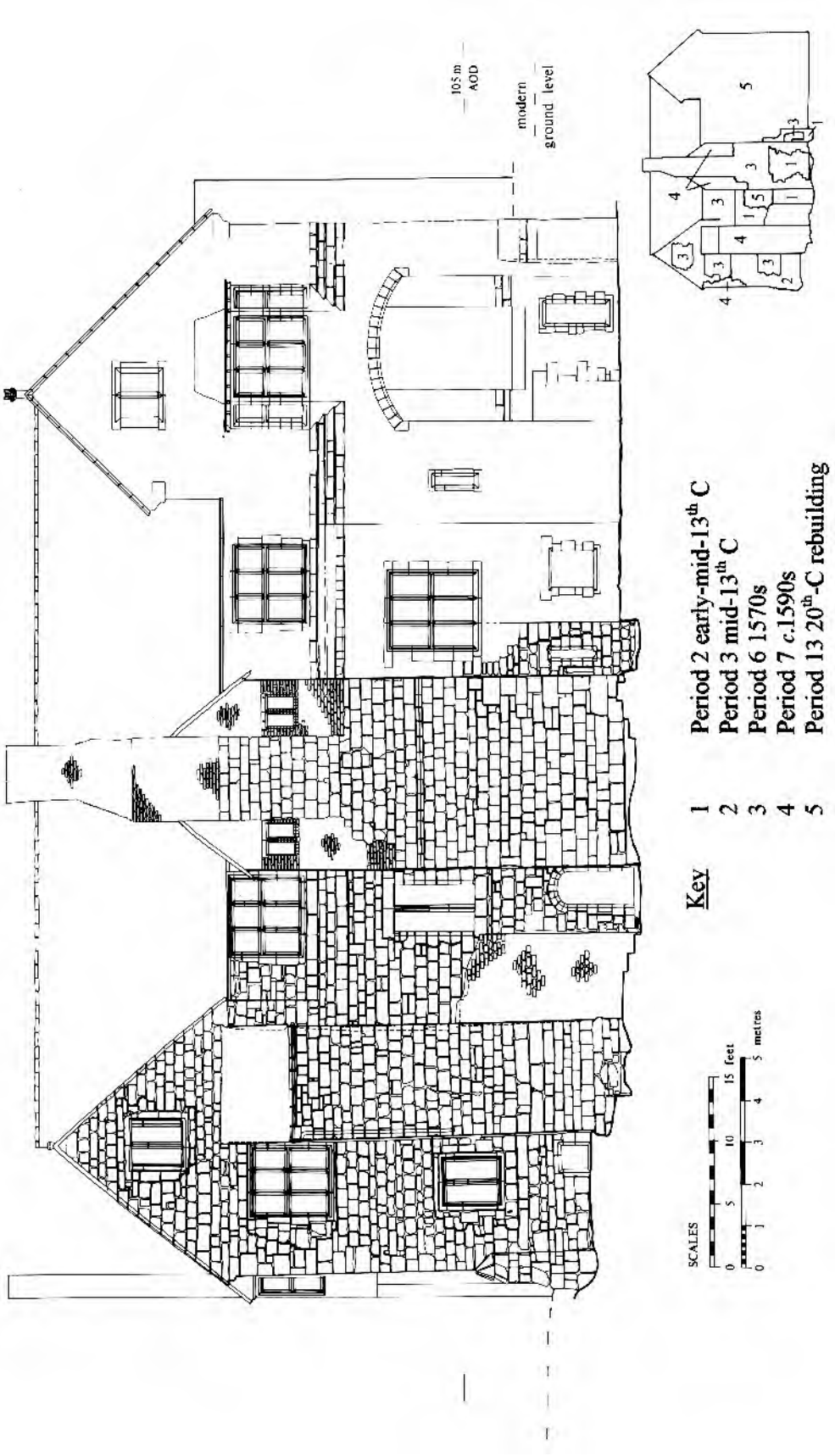

Figure 11 North elevation (1:150)

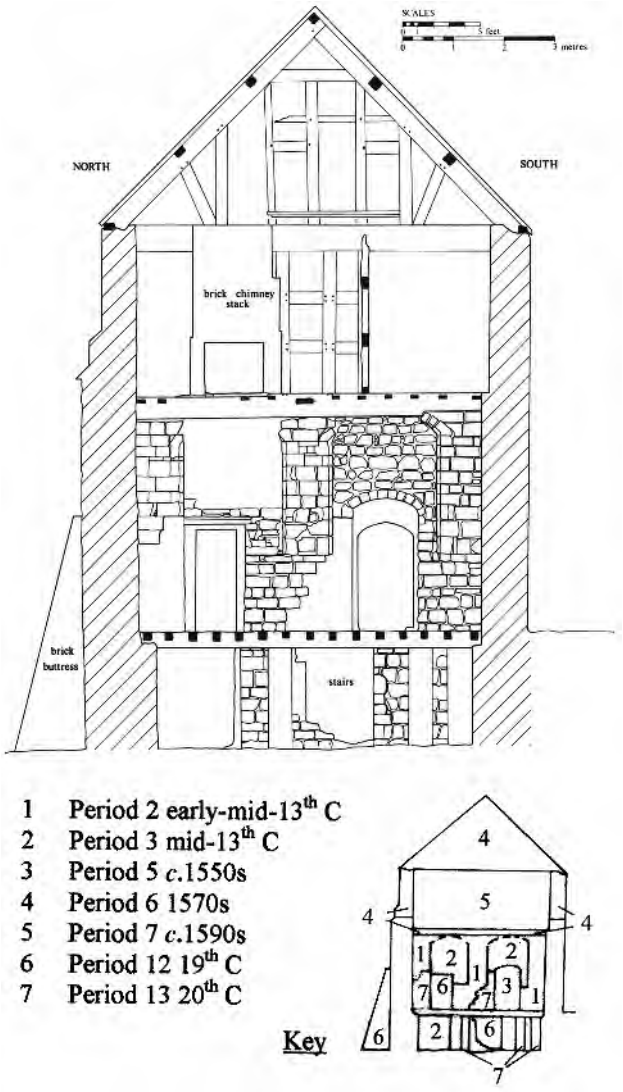

Figure 12 Internal elevation: north range – west face of east gable (1:150)

mainly on the continued use of the three-quarter-round roll-moulding after its first appearance in the Period 2 hall. In general, this phase of construction probably took place during Wenlock Priory's known mid-13th-century campaign of building.

Period 4: the two probable 13th-century forecourt buildings; Structures 1 and 2 (S1 and S2)

Meeson's excavations in the courtyard exposed the foundations of two small rectangular buildings (Figs. 4 and 17). The quality of evidence for these structures was extremely poor as their original construction was shallow, and subsequent construction and alterations to the complex have removed, or obscured, the relationships between these buildings and the standing building. Even the stratigraphic relationship between S1 and S2, where the two adjoin each other, could not be determined due to later reconstruction associated with the post-Reformation west wing (S3). Strictly speaking, therefore, Period 4 is not a discrete period but a catch-all group comprising probable elements of the 13th-century complex which are floating in the sequence because of lack of firm evidence for their date.

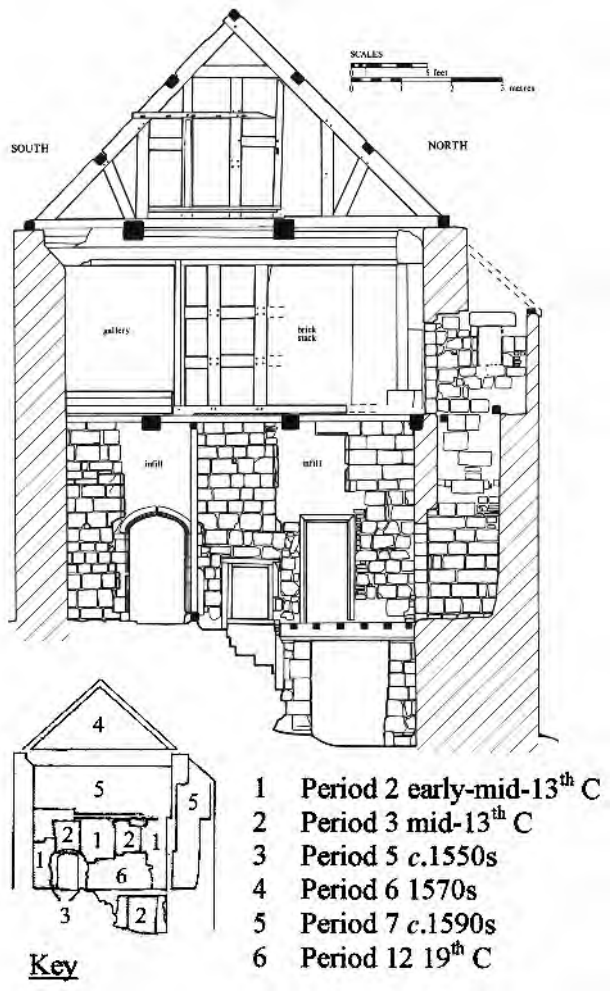

Figure 13 Internal elevation: north range – east face of east gable (1:150)

S1: the lateral hearth building

In Area A Meeson exposed the foundations of a small stone building with a substantial lateral hearth in its west wall. This building is situated at the south-west corner of the north range hall (Fig. 9). The foundations of the post-Reformation wing (S3) had been demolished (probably in the 20th century) above the top of the medieval foundations at their junction, thus exposing the earlier footings. The S1 building was also joined in the south-east to the north-west corner of S2. Excavation of S1 revealed its sandstone foundation (Fig. 9), its rammed clay floor (A27) with lenses of ash and charcoal within it and on its surface, and the substantial hearth built of river pebbles (A29) in its long west wall. The hearth sat in a depression (F53) and it was unclear whether this was part of its construction or the result of wear associated with its use. There were few contemporary features within the building other than a stakehole (A80) and a small gully (A86, Fig. 9), both immediately south of the hearth.

S2: the probable chapel

A small, thick-walled rectangular structure (S2) was built on an east-west alignment in the forecourt (Figs. 4 and 9). Below a series of late disturbances and levelling operations, the wall footings of S2 (C53 and C82) sat in a shallow foundation trench (C60, C83 and C101 with fill C49). This was cut into a surface (C84) composed of builder's debris containing brown sand, mortar, and fragments of stone lying directly above the natural sands and gravels. Above this was another general horizon (C47) of sandy yellow clay with pebbles. This extended into the foundation trench of S2 and is contemporary with its construction. It is likely that this was a yard surface. Immediately to the south of S2, the remains of a wattle fence line (C94), set in a low clay bank (A93)

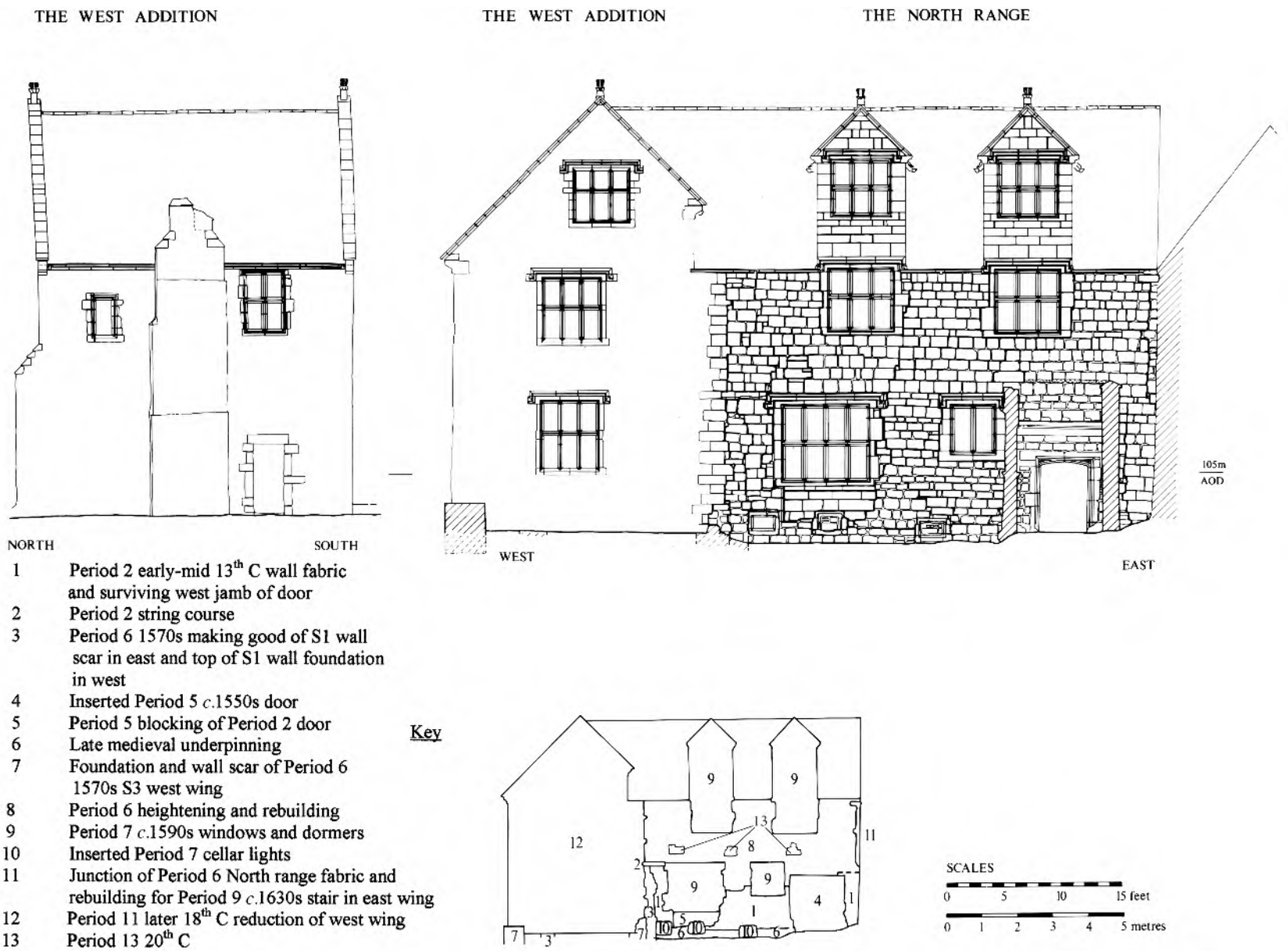

Figure 14 South and west elevations (1:150)

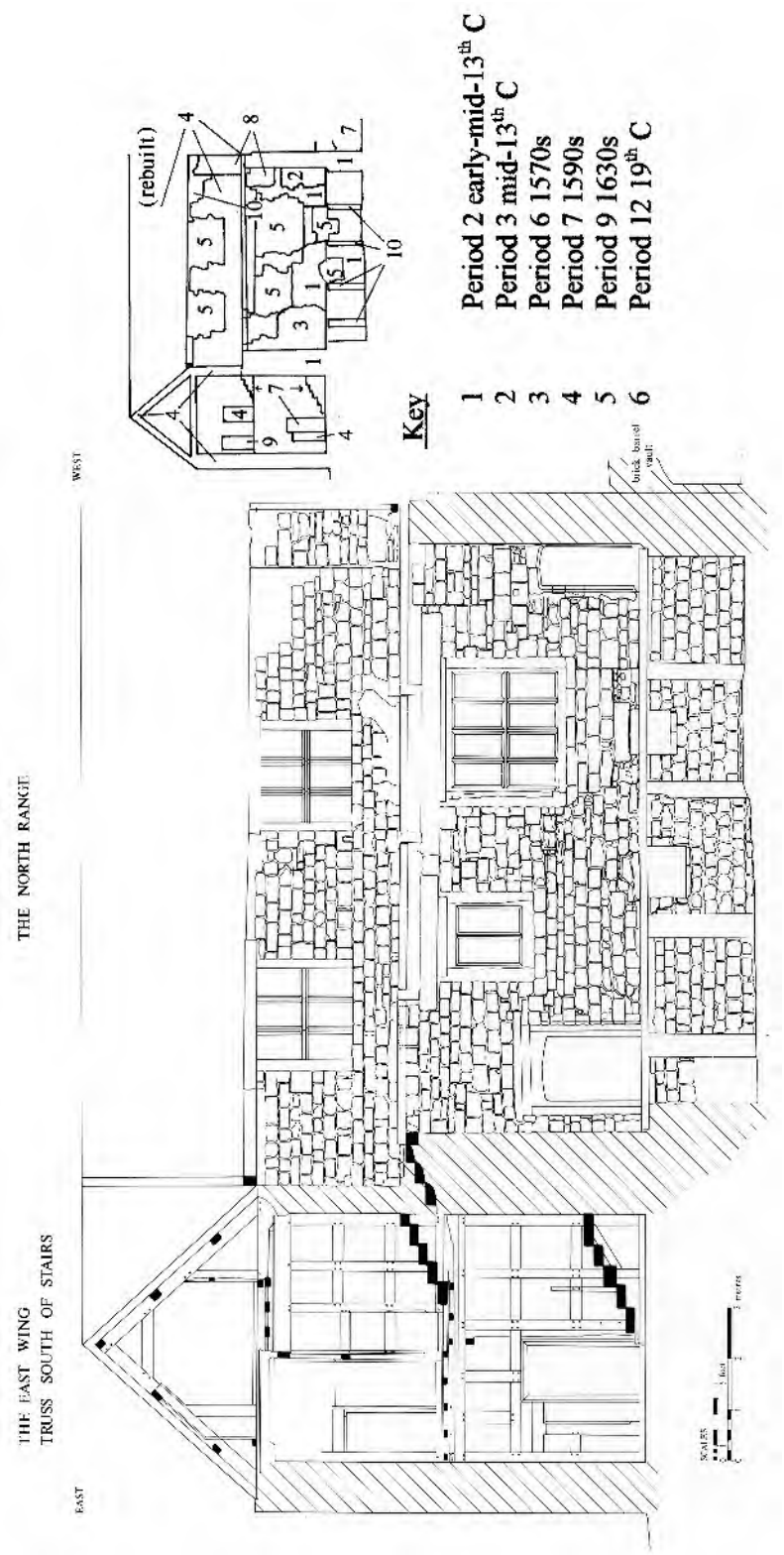

Figure 15 Internal south elevation (1:150)

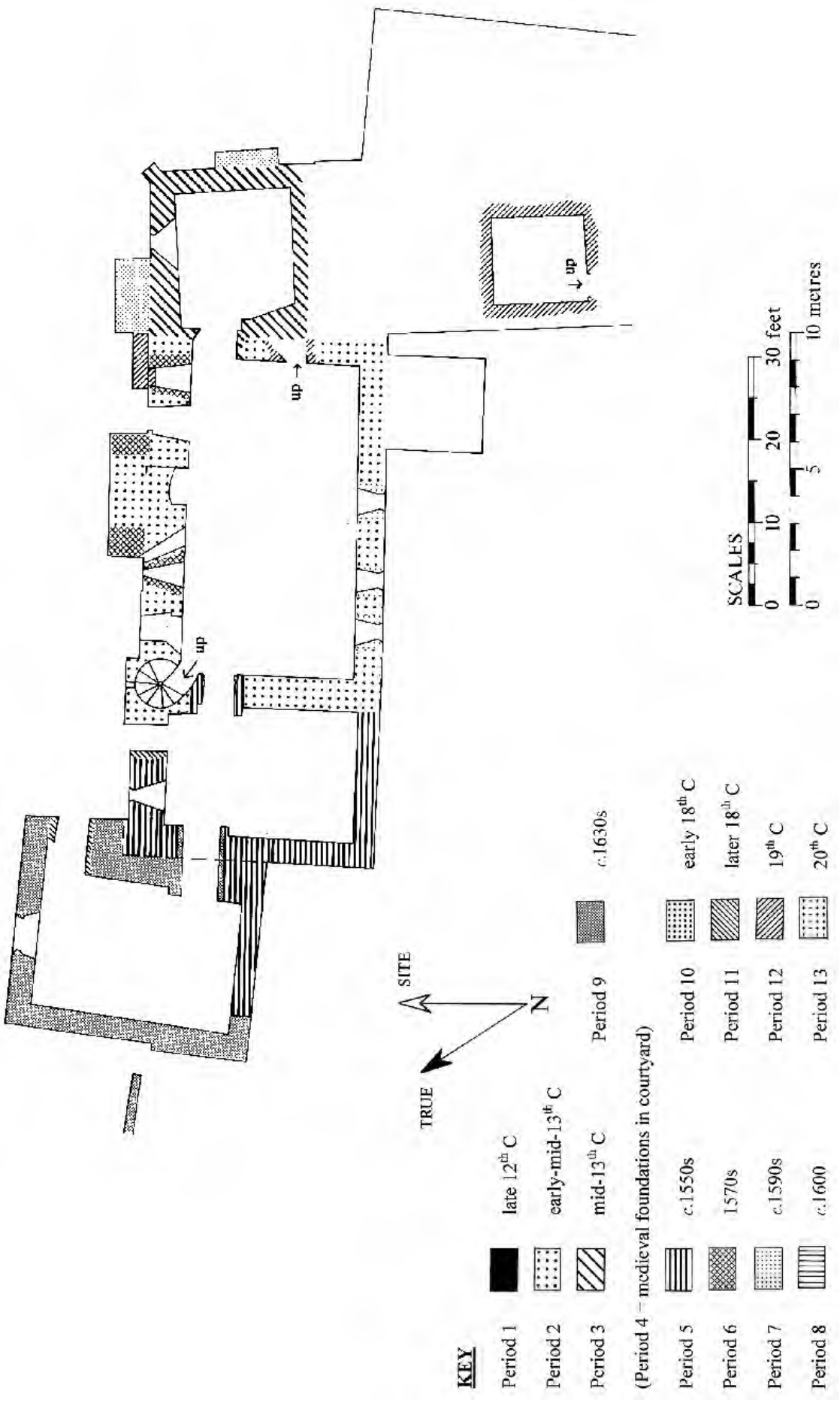

Figure 16 Phased plan at cellar level (1:200)

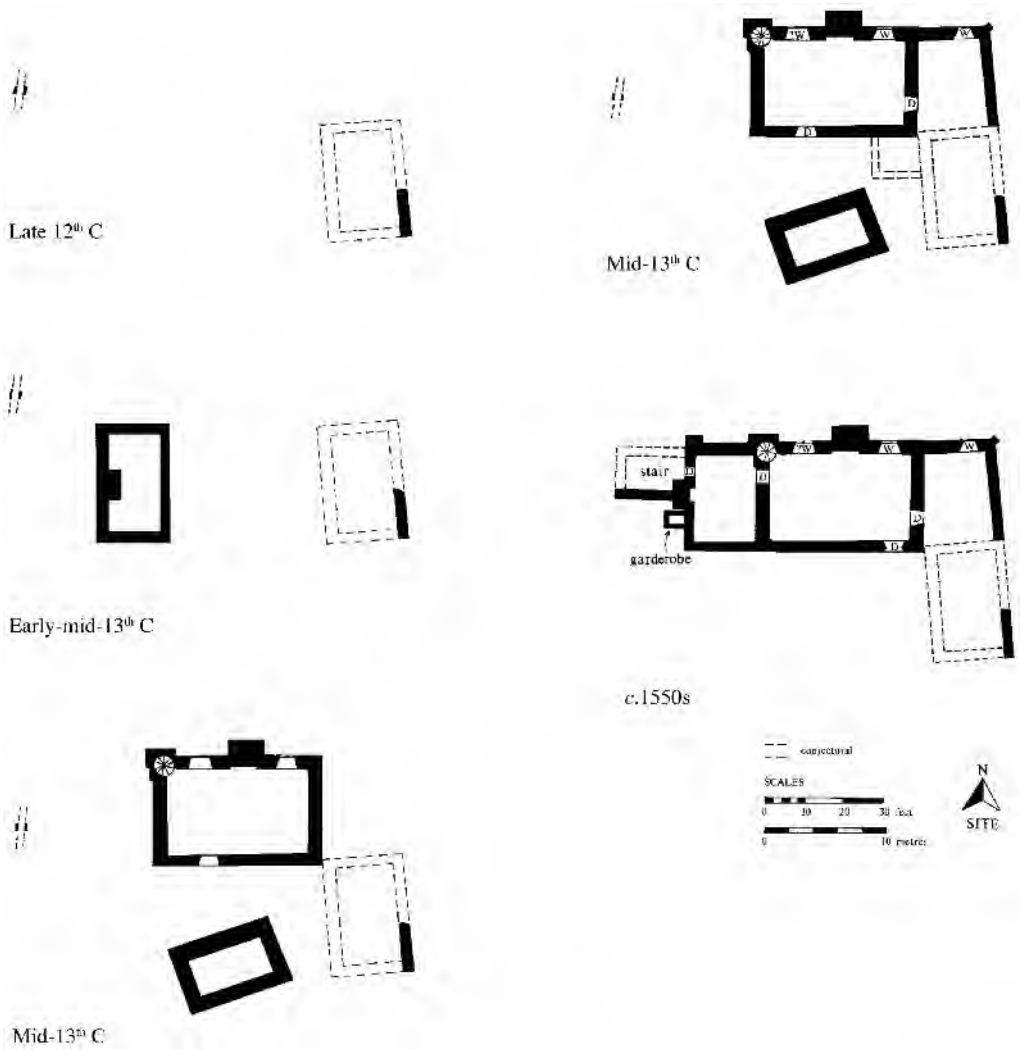

Figure 17 Possible medieval development sequence (1:500)

were excavated (Fig. 9). This ran parallel to S2 and is likely to have been contemporary with it. This is the only evidence for any kind of boundary which might have enclosed the site in the medieval period. This fence line was not observed in Area A where the construction of the 16th-century wing (S3) had presumably removed any evidence for it.

S2 has been interpreted by Meeson as a chapel (Meeson, 1979, 3), primarily because its east-west orientation contrasts with the prevailing alignment of the other known buildings of this period. Given the absence of any archaeological evidence for its function, and the survival of only its shallow foundation, it is tempting to see it in this light. There is no firm dating evidence but the desirability of a chapel on a high status grange site might suggest that this was part of Humbert's campaign of building.

On the basis of the existing evidence it is impossible to be certain of the sequence in which these buildings were constructed, but Meeson's reading is that S1 was probably demolished before the construction of S2, an arrangement that would certainly have led to a less cramped forecourt.

Meeson observed one final potential component of the forecourt structures in the area of the *c*.1600 porch (Figs. 5 and 9), where he exposed a short length of drain (C70), medieval in type, to the west of the porch. South of this an irregular spread of foundation material, not that of the Elizabethan porch, was also seen. Although on the plan this appears to extend over the reduced foundation of S2 (Fig. 9), the stratigraphic relationship was unclear, leaving open the possibility that the drain and foundation were associated with each other and belong to an as-yet unrecognised structure. In this position the obvious candidate for such a structure would be an angle tower containing stairs and, possibly, serving a dual purpose as a porch. A less likely alternative is that these features represent a very short-lived structure of the period immediately after the Dissolution.

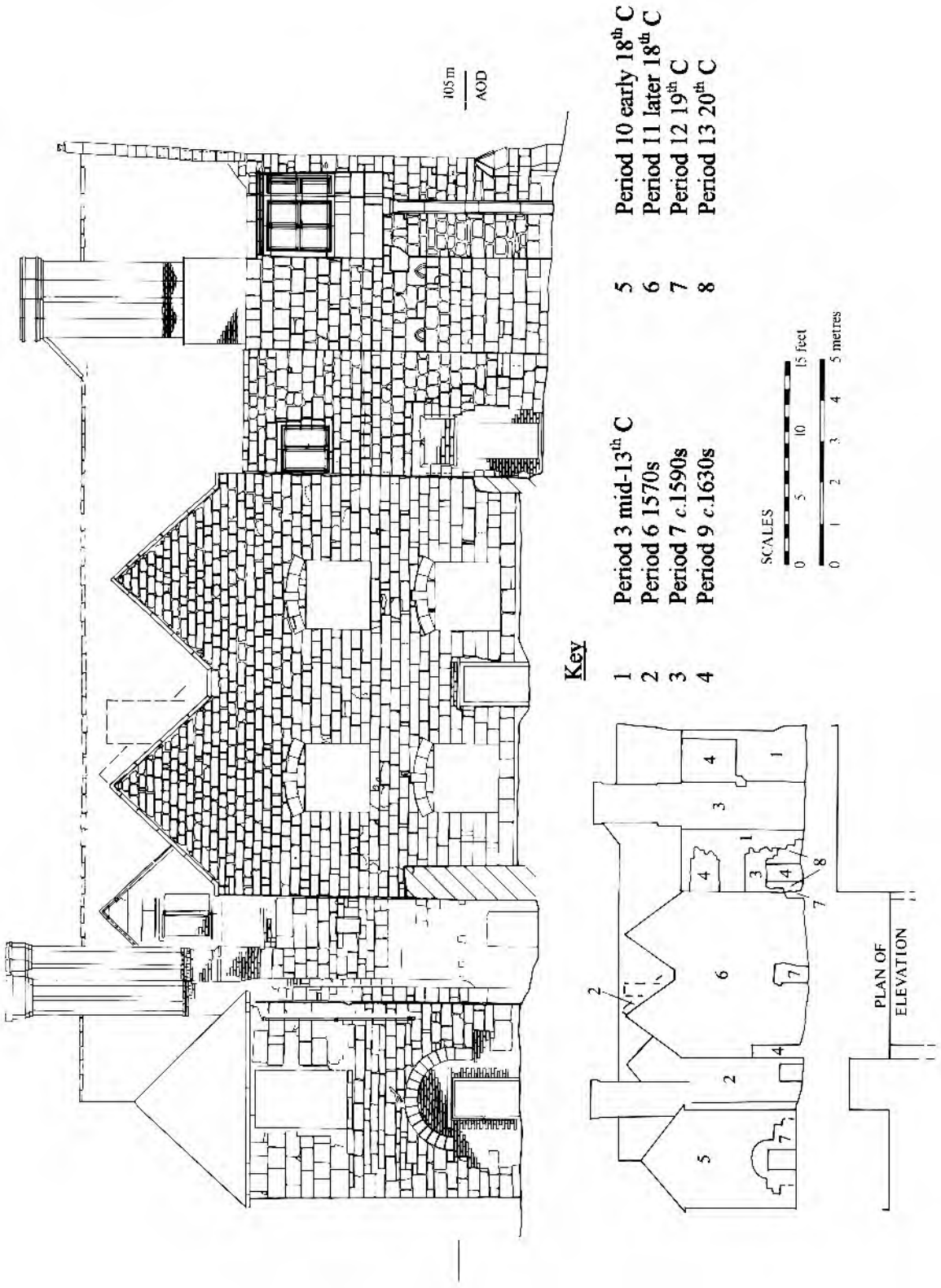

Figure 18 East elevation (1:150)

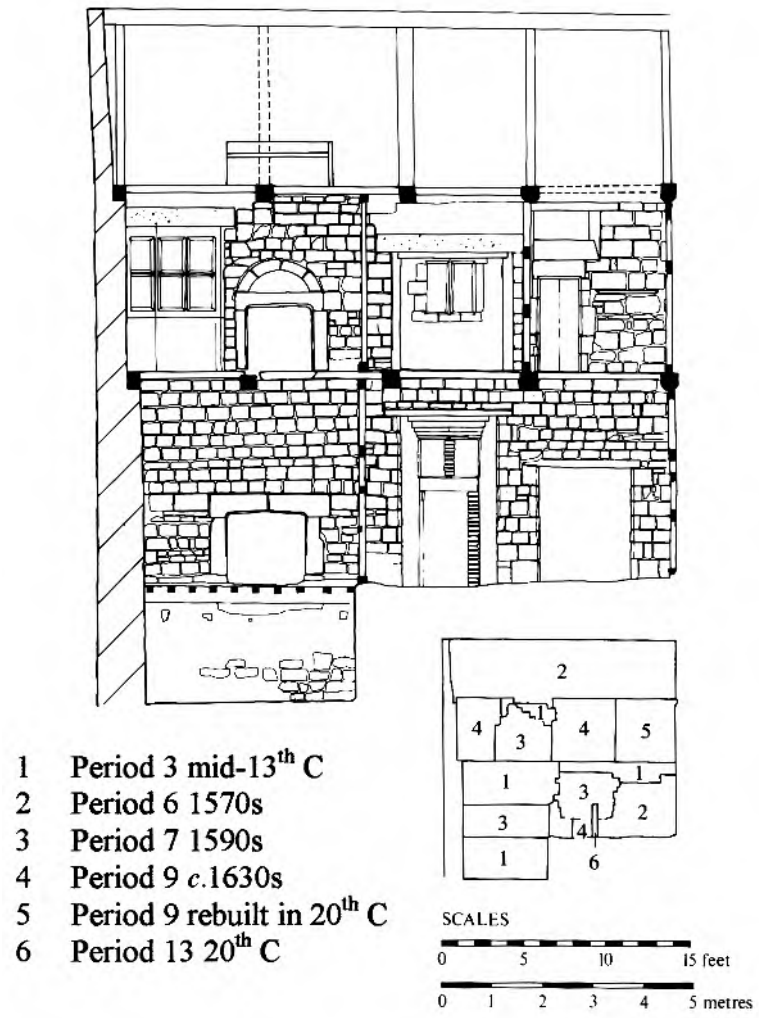

Figure 19 Northern section of internal east elevation (1:150)

13th-century architectural fragments from the site

There is a small group of 13th-century architectural fragments from the site. One was recovered in excavation and the others occurred as reused material in the standing building. They cannot be dated more closely.

The architectural fragment recovered from the Period 1 stone-lined drain described above (Period 1, late 12th century and Fig. 8) is of buff-grey sandstone and appears to be a crocket with oak leaf decoration broken from a larger detail, possibly a capital. From a dump of masonry in the 19th-century cellar there is a small section of engaged shaft with a diameter of 205mm. (see archive for drawing), also in the Coal Measures sandstone. Further 13th-century architectural details, in the same stone, were incorporated into the standing building in the post-medieval period. As well as the three-quarter-round roll-moulded voussoirs over the hall fireplace, there are two small pointed lancet windows, some 750mm. in height, set with their rebates facing outwards. These have been used at ground and first floor level in the east face of the eastern extension's garderobe[1] [see note p. 29] (see archive for elevation details). The Period 7 chimney stack on the east face of the eastern extension (Fig. 18) contains the heads only of two similar windows, used decoratively. There are no remains of similar windows surviving in a primary context in the standing structure, but such windows would have been appropriate for a garderobe or stair, elements particularly susceptible to later demolition and notably absent from the surviving medieval fabric.

Minor excavated courtyard features (Fig.9)

In both Areas A and C, where the stratigraphy is shallow and limited, the excavation encountered features which were not related specifically to any of the excavated structures there and which are difficult to date, due

to the general absence of medieval finds. The evidence is scant and the primary record does not contain plan information for all of these features.

The earliest medieval features in the courtyard were a pair of east-west cart ruts, probably pre-dating S1, which were then overlain by a construction horizon. With the exception of a pair of possible beam slots, the other features in the courtyard consisted of pits, postholes and stakeholes which could not be linked to form any coherent structure. The horizons from which both buildings S1 and S2 were constructed were predominantly composed of brown/red sand and rubble and may represent the residue of the construction of the Period 1 building. Unfortunately these levels, like the majority of the other early contexts here, contained no finds (see archive).

Interpretation

Bob Meeson (with additional material by Cameron Moffett)

The interpretation of the medieval buildings at Madeley Court is hampered both by the destructive impact of later buildings upon early foundations and by the relative paucity of documentary evidence. The discussion of the grange buildings at Madeley can take place only in the light of the current reappraisal of the planning and functions of early medieval buildings in general. The scarcity of reliably detailed surveys of medieval granges in particular imposes a further limitation, and recent advances in our understanding of the development of early medieval domestic buildings will contribute to the discussion.

Much of the buried stratigraphy was shallow, and construction and robber trenches were absent. The stratigraphic relationships of some of the foundations were ambiguous and the dating problems were exacerbated by the absence of datable medieval artefacts from stratified contexts. It was, therefore, primarily the analysis of plan form and the most likely structural sequence which informed the interpretation of the age and function of some of the buildings. It was necessary to consider not only when buildings were constructed but also when they were dismantled.

It is important to bear in mind the evidence that is missing as well as that which is available for discussion. Only small evaluation trenches were excavated on the east side of the complex, with the limited objectives of confirming the former extent of the Period 9 extension to the east wing and finding the east wall of the Period 1 building (Fig. 4). Although the area excavations of the courtyard in 1978 and 1979 provided evidence of the extent and character of several medieval and later buildings, the preservation of the foundations revealed there, and anything that might lie beneath them, leaves a gap in the site record.

The red sandstone Period 1 structure

More evidence of the earliest phases may survive in other parts of the site but, at present, only a single length of wall and a portion of drain have been assigned to Period 1. The wall is encapsulated within the later Period 6 east wing and it is not possible at present to establish the size or plan of this early structure. It is unlikely that much of it has survived later building activity. Nevertheless, consideration of its possible function is important for an overall appreciation of the site.

Given the local parallels for use of similar red-brown sandstone rubble masonry in the 12th century, this building fragment is potentially the oldest on the site. One of the earliest requirements of a monastic grange was for agricultural buildings and an agricultural function cannot be excluded. However, the survival of possible primary render on one face of the wall and the later incorporation of the building into the east wing both suggest a domestic function. Although its context was residual, the red-brown newel-block or stair tread has been associated tentatively with this building on the basis of stone type. If this association is correct it implies a building with an undercroft and/or an upper floor and a detached first-floor chamber block cannot be ruled out. Although there are exceptions, for example at Wharram Percy, most such chamber blocks were built in association with a ground-floor hall. We must therefore consider the possible location, date and relationship to the chamber block of such a hall.

Structure 1 (S1): 'hall' or 'kitchen' (Fig. 9)

The archaeological evidence is incomplete and open to a variety of interpretations. Moffett suggests (below p. 26) that the structure (S1) may be later in the overall sequence than the construction of the north range, but it

can equally be argued that it was earlier. The one place where a relationship between S1 and the north range might be seen is in Fig. 14, where '3' to the east is interpreted as a surviving portion of the east wall of S1 and the fabric of the north range appears to have been added against it. Any other evidence of this stratigraphic relationship would have been damaged by the first construction of the western extension of the north range and again when the Period 6 wing was laid out. We do not know whether S1 pre-dated or post-dated the north range, and both possibilities must be considered.

Although such stratigraphy as survives is open to other interpretations, the siting of S1 suggests that it could have been constructed when the Period 1 building was still in use, before the north range was built. The Period 1 building and S1 could thus have stood as two parallel detached structures, an interesting relationship in view of the current ground-floor hall/chamber block debate. The royal and baronial halls and chamber blocks discussed by Blair (1993) included several set out in a straight line along a common axis, as at Clarendon, Leicester and Writtle, but this axial planning was not invariable. At Cheddar, axial planning was replaced by a hall and chamber block at right angles and, at Grove in the 12th century, a detached chamber block was built parallel to the hall (Blair 1993, 6–7). At Winchester the Norman palace of Bishop Henry de Blois first consisted of two isolated parallel blocks facing each other across a courtyard (Biddle 1975, 328–33).

These are high-status sites, and are relevant to Madeley Court only if we assume a domestic use for the Period 1 building, but parallel detached ranges are known elsewhere with a wide variety of social status and functions. At Dean Moor (Devon) a pastoral farmstead of 13th-century origin, run by lay brothers of Buckfast Abbey, a parallel house and byre were set out on either side of an enclosed yard (Fox, 1959, 142–57). At the medieval moated grange of Sinai Park (Staffordshire) at least one of the two parallel ranges which face each other is of earlier medieval origin than the visible timber framing (Hannam and Greenslade, 1970, 203 and personal observation).

Even if it pre-dates the north range, it is not entirely clear that S1 was a hall on typological grounds, the principal objection being the lateral position of the hearth; medieval halls generally had central hearths. It appears not to have been a two-storey chamber block, as there is no evidence of stairs. Because the north wall was destroyed by later building activity the original length of S1 cannot be confirmed; however, it was set out at right-angles to the scarp which once defined the northern edge of the site, and it is most unlikely that it extended beyond that line. The internal dimensions of the building can therefore be estimated as 8.3m. long and 5m. wide, giving an area of *c*.41.5m². If the length of the building has been correctly defined, the hearth was located near to the centre of the west wall. The position inside the line of the west wall and the absence of reveals or an external stack imply that the hearth had a hood with late 12th- and 13th-century parallels as at Boothby Pagnell. Although such hoods are generally associated with what are now interpreted as chamber blocks they are also known in halls. Had the hearth been offset to the north, it might have been argued that the south end was taken up by a cross-passage or the space between opposed doorways, and that the building began life as a ground-floor hall with services beyond. However, excavation proved that there were no integrated services at the south end and none are likely to the north because of the topography. S1 is therefore open to interpretation as a free-standing ground-floor domestic hall.

The second option is that S1 post-dates the north range, in which case it is less likely that it began life as a hall. On the other hand, there is no conclusive evidence that it was a kitchen, although it was sited close to what is interpreted below as the lower end of the north range, a logical position for such a function. Support for the use of S1 as a kitchen is found in parallels such as the manorial moated site of Penhallam (Cornwall) where the stone-built kitchen of *c*.1300 is set at a right-angle to the lower end of the hall, although there the original hearth was central and there was an additional chamber for baking and brewing (Beresford, 1974, 112–3). Square or octagonal monastic kitchens like those at Glastonbury and Durham are readily identifiable by their plan-forms and structures but smaller kitchens are more difficult to recognise. As Martin has shown for a later period, detached kitchens can easily be misinterpreted as small houses (1998, 85–98). Conversely, on the sub-manorial moated site of Hawksden (Sussex) the kitchens were clearly identified by fire-breaks, a hearth, fire-room and oven and, in the presumed kitchen at Bodiam there was a central hearth (Martin 1990, 4, 93–100). At Northolt Manor the Period 2 kitchen (1300–1350) was recognised by its square plan, central hearth and oven (Hurst, 1962, 214–5), but the excavator concluded that much of the cooking was done outside the kitchen in a yard with many hearths. The survival of ovens or boilers in the west range of the hall at Sydenhams Moat (Warwickshire) did not convince the excavator that this was a kitchen area (Smith, 1991, 50).

The location of S1 near the lower end of the north range is consistent with a kitchen function but, internally, there is no specific evidence for its use for this purpose. The single lateral hearth with an internal hood and no external stack is more typical of an early 13th-century hall than a kitchen. There were no attached or associated ground floor rooms to serve as a buttery or pantry, no upper rooms for alternative storage, no drains, and nowhere to bake. If S1 pre-dates the construction of the north range there is no evidence of the reorganisation or conversion from a former hall to a kitchen that might have been occasioned by the new accommodation. On the

other hand, if the grange continued to function as an agricultural unit after the construction of the north range, even for a short time, an earlier hall might have been retained as a separate building following the completion of the north range.

The north range

If the fragmentary nature of the Period 1 wall and the S1 foundations leaves us with major doubts about their functions, the more complete survival of the 13th-century north range brings its own interpretive problems. Although some early buildings may be missing from the known sequence, it is clear from the later development of the site that the north range was the nucleus around which all later additions were made. As Moffett has indicated above (Period 2: early- to mid-13th century: the north range hall) it is likely that the north range was built during Prior Humbert's incumbency, possibly as his private quarters. However, detailed analysis and interpretation have failed to identify this structure as a clearly defined hall or as a conventional chamber or solar.

The north range was built on an east-west axis over sloping ground, so that the chamber, which appears to be at ground level from the south, is on the first floor to the north. In his paper, on domestic planning from the 12th to the 14th centuries, Faulkner (1958) identified two main plan types, the upper hall house and the end hall house. As discussed below (p. 29), buildings of the former type have now been redefined as detached chamber blocks. The end hall house, with service rooms attached at the lower end of the hall, appeared in the late 12th century, and halls of this plan type generally came to include a cross-passage or opposed entrances, access at the lower end to service rooms and a central hearth. While many subsequent writers have come to expect these elements as standard, Faulkner observed that there are many examples of lateral fireplaces, opposing doorways 'do not appear to have been considered essential' and often no distinction was made between the high and low ends of the hall (Faulkner, 1958). In short, although in the course of time the main elements of the end hall house plan became standard in many houses, there were also exceptions to the rule.

Because it does not conform to a theoretical norm the interpretation of the north range at Madeley Court depends primarily upon analysis of access and the use of space. The absence of a central hearth or an immediately apparent cross-passage is explained by the position of the building in relation to the topography. A standard cross-passage arrangement was not an option here because of the building's position on the scarp, and the resulting plan is what could be termed a terraced hall, probably with services of some kind below the hall. In its original form, the only direct access to the upper room from the exterior was by way of a ground-level doorway at the west end of the south wall and a spiral staircase in the north-west corner which communicated with the chamber below. Both points of access were at the west end of the room, creating a more private space in the well-lit east end, which was free from through traffic. In the upper room the lateral fireplace is a logical structural alternative to a central hearth, but the planning of Madeley Court may be of more than structural significance. In a standard medieval hall any visitor entering at the low end was separated from the upper end by the central hearth: to pass beyond the hearth was to enter a more private space. In some medieval two-bay open halls in Shropshire it appears that the social or functional distinction between the lower and upper ends was particularly keenly felt, as they were divided by low, open-trussed beams (Alcock and Moran, 1984). Although at Madeley Court there is a clearly-defined lower end, the lateral hearth changes the focus of the upper room and reduces the separation of the upper end. It is part chamber, part hall: not so much a place of assembly, more a private space which could be shared equally with social peers.

There are a number of published examples of the exploitation of the natural gradient of a site for the construction of halls above cellars in the mid- to late-13th and 14th centuries in both urban and rural contexts. Meeson has noted above the example of Great Oxenbold, Shropshire (Moran, 1997), a *pleasance* or day retreat of the Priors of Wenlock dated by dendrochronology to the 1240s, which may or may not have been provided with a kitchen in its initial phase. Its hall made use of the same arrangement of paired tall windows with half-round mouldings across the angles of the jambs and the main entrance at the opposing end. Great Oxenbold was also terraced to create the undercroft, but here it is the gable wall at the low end that is terraced into the slope, so that the paired windows at the other end are some height above ground level.

There is a particularly good group of these buildings in Shrewsbury (Baker, Lawson, Maxwell and Smith, 1993, 29–43), the undercrofts or half-cellars of which all had timbered ceilings like the one at Madeley Court. It would seem that the builders of Shrewsbury deliberately sited this type of structure on a slope, as an economical way of achieving an undercroft. It may be that what we see here is a regional building type, possibly developed in Shrewsbury, where the combination of hilly topography and urban density of buildings might have produced this adaptation.

The confusion which has entered the first-floor hall debate is reflected in the atypical plan-form at Madeley Court, where the function of the lower room must now be considered. The misinterpretation of chamber blocks as first-floor halls has also muddled thinking about somewhat later halls like that at Ludlow Castle, the main bone of contention being the function of the undercroft beneath the upper hall. Such undercrofts have been interpreted as lower halls for social inferiors (Wood, 1965, 272), or as storage and service rooms. Basing his case primarily on only two buildings (Rumesnil and Ticheville), Impey has argued that, in Normandy, the 13th century 'saw the replacement of the hall and chamber block ensemble by self-contained structures in which the upper and lower floors served the combined functions of hall and chamber for socially differentiated sections of the household' (1993, 114). The argument is supportable in the *logis* at Ticheville, where the lesser status ground-floor *salle basse* has a lower end with opposed doorways, service doors, a lateral fireplace offset towards the upper end, and adequate lighting. At Madeley Court the lower room was not designed in the same way. Although there are two points of access to the undercroft, one by direct entry from the east end of the north wall (Fig. 16) and the other by way of the spiral staircase from the upper room, they are at opposite ends of the building. Significantly, there was no 'upper end' or private space at basement level. Anyone requiring access by way of the lower north doorway to the upper room had to pass along the entire length of the undercroft. If any distinction between lower and upper ends had been required this could have been achieved simply by siting the undercroft doorway at the west end of the north wall. Apparently the undercroft was furnished with a lateral fireplace from the outset (Period 2, early- to mid-13th century: the north range hall and Fig. 10) but it is inconveniently sited between the two doorways in a position more suitable for cooking than for retreat to a place of warmth and comfort. Unlike Ticheville, the undercroft at Madeley was furnished with few windows and must have been very poorly lit. One might argue that any occupants of the undercroft would not have had sufficient status to command the luxury of private domestic space, but, on balance, it seems more likely that the undercroft was planned primarily for a service function rather than as living space. It may have been a single large service room, or have been divided by partitions into different service areas with functions such as buttery and pantry. If the undercroft did not have a service function we must consider why these domestic activities are so far absent from the archaeological record for this period.

The building at Oxenbold has striking similarities to Madeley Court, both in its position on sloping ground and in the general layout of the interior space. At Oxenbold the undercroft was unheated, badly lit and so mean that it can have functioned only as a service room or basement store. Curiously, direct access to the upper room at Oxenbold was by way of a small drawbridge to a doorway directly above the direct access to the undercroft; at Madeley there is no evidence of such concern for temporary defence. At Oxenbold the spiral staircase is in the same corner of the building as the direct access doorways, eliminating the need to cross the lower end from one to the other and thereby increasing the privacy of the upper room (Moran, 1997). The case has been argued for a former attic room at Oxenbold, but the post-medieval and modern reconstructions of the staircase at Madeley have removed any evidence for this possibility.

The eastern addition

The addition of a secondary structure to the east end of the north range resulted in the blocking of the tall windows and a loss of light for the upper or private end of the hall. For this to have been contemplated there must either have been other windows in the long south wall, or new ones must have been added. Any such windows will have been removed by later alterations. Initially only one doorway was broken through the east wall, rather than the standard two that might be anticipated for the normal lower end service rooms. This, together with the known subsequent use of the upper floors of the east range for chambers, implies an increase in the upper end private accommodation. The undercroft beneath the north-east room is a natural consequence of the topography, allowing for a simultaneous increase in basement service room provision.

Significantly, the east wall of the addition was set out at an angle to the north range gable wall so as to align with the Period 1 structure. Not only does this support the pre-existence of the earlier building, but it also provides circumstantial support for the suggestion that the Period 1 structure was storeyed. If it did not have an upper floor from the outset, this would have been a logical juncture at which to insert a second floor. Whatever the case, a long range of chambers was the result. Unfortunately, later major structural alterations have removed most details of the plan form, fenestration and means of access between floors of the eastern addition.

One possible means of access between the main room in the north range and the upper floor of an east wing would have been an angle tower containing stairs. Such towers are known throughout the medieval period beginning in the 13th century with Little Wenham Hall (Suffolk), where the spiral continues up to a turret (Wood, 1950, 77), a feature also seen at Sutton Courtenay, Oxfordshire (Thompson, 1995, 112). Similarly, the upper end of the late medieval hall at Tamworth Castle (Staffordshire) connects with the first floor of the north

wing by way of an added Tudor brick stair turret in this position (Meeson, 1983, Fig.1). There is circumstantial evidence that such an angle tower might have existed at Madeley Court, both in the internal elevation of the south wall of the north range (Fig. 15) and beneath the foundations of the *c*.1600 porch (Fig. 17). In the former location there are more straight joints on either side of the south-east doorway than can be explained by the insertion of a single aperture; the blocking of a previous arch or doorway is implied. Externally, the porch foundations, with a white lime-based mortar, clearly overlie an earlier raft of massive rubble sandstone blocks. These project too far beyond the outer wall to be explained away as poorly aligned foundations for the porch and they are much more likely to belong to an earlier structure. From its general character, the sandstone rubble drain found in Area C adjacent to the porch is more likely to have been associated with a medieval structure than with a later one. An exterior alternative to a fully enclosed square staircase angle-tower would be an external flight of steps as at Stokesay (Shropshire) and 13th-century Aydon Castle (Northumberland) both of which have the weatherings of former pentices (Wood, 1950, Pl.1; Lloyd, 1931, 182).

The evidence is circumstantial, but, if the rubble sandstone raft foundation was not for a 13th-century or later angle staircase, an alternative interpretation is required. If there was no angle stair tower, all trace of communication between floor levels at this period has been removed by the Period 6 reconstruction of the east wing.

Discussion

Bob Meeson and Cameron Moffett

Until recently the study of 12th- and 13th-century domestic architecture was inhibited by the dichotomy between the excavation of buried remains by archaeologists and the study of standing buildings by architectural historians. While the excavated evidence from sites such as Cheddar and Writtle (Rahtz 1969 and 1979) made some scholars take a fresh look at the development of early medieval building plan forms, the study of standing buildings remained rooted in the architectural classification of plan form and structure. Thus, for example, a recent account of medieval halls (Thompson, 1995) was based upon structural classification after the manner of Patrick Walker (1958) and Margaret Wood (1965). Though this type of research remains crucial for the comparative analysis of medieval buildings, it must be used alongside other techniques. This is particularly true for Madeley Court because the earliest clearly identified buildings there apparently stood as independent detached structures (Structure S1: 'hall' or 'kitchen', Figs. 4 and 9).

Late-12th-century buildings such as Burton Agnes Old Hall (Yorkshire) and Boothby Pagnell Manor House (Lincolnshire) have generally been interpreted as first-floor halls over undercrofts (Wood, 1974, 45 and 54). More recently others have argued that, from around 900 until 1200, an open hall and a detached chamber block with ancillary buildings, stood in close proximity. The buildings at Burton Agnes and Boothby Pagnell should therefore be seen as first-floor chamber blocks rather than halls. Service rooms may have been attached at the lower end of the hall beyond a cross-passage for the first time around 1180–1195, and the main chamber block joined to the upper end of the hall only from the early 13th century (Blair, 1993). Impey discussed detached halls and chamber blocks, and the progression towards the integrated plan, citing examples in Normandy (1993, 80–120, and above p. 28). If, as a growing body of evidence suggests, many 12th- and 13th-century domestic sites contained detached halls, chamber blocks, kitchens and other ancillary buildings, this must influence our interpretation of the earliest buildings at Madeley Court.

The current debate does not relate solely to the evolution of plan forms. Grenville has argued that the terms modern scholars use to define the spaces within a medieval house do not reflect precise distinctions which would have been perceptible to those who built and used such houses (1997, 86–88). We should consider not only the spatial relationships of buildings and the definition of the spaces within them, but also the uses to which these elements might have been put.

Note

1 Strictly speaking, the toilet blocks at Madeley Court are latrines, in that they do not include room for the storage of clothing, but, however, the term garderobe has become common usage in archaeological publications for this type of feature and is used throughout this volume.

THE POST-REFORMATION COUNTRY HOUSE

The manor of Madeley was bought in 1544 by Robert Brooke of Claverley in Shropshire (*VCH Salop*, **XI**, 35) although he allowed the former Prior of Wenlock, John Bailey, to continue living there for a further nine years – perhaps because Brooke was a staunch Catholic. In *c*.1572 his son, John, inherited the property from Robert's widow, Dorothy, and it was probably during his occupancy that the house was substantially enlarged. The ownership of the estate by John Brooke coincided with the intensification of coal production in Shropshire and he was involved in the coal trade. In 1598 he was succeeded by his son, Basil, whose name is associated with innovations in coal mining and metalworking. Sir Basil followed the Royalist cause and, in 1643, was imprisoned in the Tower. Later his mines and industrial operations were sequestrated. He died in 1646 and his son, Thomas, inherited the manor. There is no record of Thomas's involvement in industrial or mining operations and, when he died in 1675, the manor went to his grandson, another Basil, the last lord of the manor to live at Madeley Court. The fortunes of the family, which had begun to wane with the Civil War, had run their course by the end of the century. On Basil's death, without an heir, in 1699, the estate passed to a cousin in Staffordshire and, in 1705, the trustees sold off Madeley Court and 520 acres surrounding it. The documentary evidence is summarised by Phillpotts (see pp. 55–57 below).

Period 5: *c*.1550s, the earliest post-Reformation modifications

The different requirements of the new residents brought about considerable structural change (Fig. 17). At the west end of the hall a cellared two-storeyed block, referred to here as the western extension, was built (Figs. 3 and 17). The western extension was provided with a stair turret along its west wall (S7, Fig. 4) to the north of the lateral chimneystack, and a garderobe to the south (Fig. 17). In the hall an elaborate doorway with a flat four-centred arch below a square head and sunken decoration in the spandrels (Fig. 14) was inserted into the east end of the south wall. With the addition of chambers at the west, and the opening up of a main entrance into the hall at the east, this must have been the point at which the 'high' and the 'low' ends of the hall were reversed.

There are two further Period 5 doorways. A doorway with a double bowtel on its east face was inserted at this date, leading from the eastern extension into the hall (Figs. 5 and 13) and, at cellar level, a doorway was inserted to link the cellar below the hall with that of the new western extension (Fig. 5). This doorway had a flat lintel and a continuous chamfer (see archive for elevation). Cooper (1977) initially ascribed the two elaborate doorways a date of *c*.1550, a date he may have based as much on the documentary sequence as on the details of the features themselves.

Little of the fabric and features of the western extension survived rebuilding in the later 18th century, the use of this part of the house as a brewery in the later 18th and 19th centuries (Period 11, pp. 50–51), and the reconstruction work of the 1970s. There is, however, internal evidence at first floor level for both the doorway to the garderobe (demolished in the 1630s) and for the original fireplace (see archive for elevation).

Intact masonry belonging to the western extension was seen in the Area I excavations where parts of its foundation, and parts of the south wall of the stair turret (S7), survived at cellar level, incorporated into the Period 9 structure S6 (Fig. 4). The foundations of the extension, its stair turret, garderobe and chimneystack were all seen to be coeval and were composed of re-used medieval masonry. The Period 5 stonework above ground level was, like that of the subsequent 16th- and 17th-century masonry, large, long rectangular ashlars.

A considerable depth of soil was dumped behind the south wall of the stair turret (Fig. 7, section A-B, 1208, 1209 and 1216) to reinstate the ground level there after the construction of S7. Contexts 1208 and 1209 both resembled garden soils in their composition, and 1209 contained a sherd of medieval pottery of 13th- to 15th-century date.

The western extension, with its heating, stairs and garderobe, must have been the private chambers of the Brooke family. Investment in the old buildings, consisting principally of the two new doorways at the east end of the hall, is minimal at this date.

Period 6: the 1570s

The east wing

An east wing was built running south from the eastern extension (Fig 3. and, for phase plan, Fig. 20). In all probability the construction of this wing involved the demolition of most of the Period 1 building. Material thought to be of similar date to the Period 1 building appears reused in the standing fabric of Period 6, in the lower courses of both the east wing stair turret and the external enlargement of the hall chimneystack.

The wing was given two fireplaces in its east wall (Fig. 5), both at ground and first floor level, indicating that each floor was divided into at least two rooms. These fireplaces, where visible behind the later panelling (see archive for drawings and photographs), had flat four-centred heads and chamfered jambs below relieving arches. The fireplace of the southern first floor room was of noticeably poor construction and the walls of the room were unplastered, suggesting that at least part of this wing was originally panelled.

On the east elevation of this wing was definite, if fragmentary, evidence of a turret, which formerly contained a winder stair, next to the northernmost of the two chimneystacks (Fig. 20). At ground floor level, where its survival is best, the surviving portion of the south wall of this stair turret runs east from the southern end of the Period 1 wall (Fig. 5). At first floor level the north jamb and flat lintel of a narrow timber doorway with a continuous chamfer, which formerly led into the stair, were exposed by contractors (Fig 21, and archive) and, east of this within the former stairwell, the dressed-back profile of three treads was clearly visible in the plaster. There is a small square light in the surviving, upstanding portion of the stairwell (see archive for elevation).

The chimneystack above roof level was demolished in the middle of the 20th century (Fig. 18, STW archive photograph and NBR photograph Mason, 13.64), but the lower portion of its brick superstructure survives in the attic (Fig. 22, and see archive for photograph), and the mortar ghost of the stair turret roof, slightly lower than the present roof, is visible on its east face. It is probable that the opening leading from the east wing into a central passage in the service range at ground level (Figs. 5 and 20) is the former entrance into the stair turret, although there is no physical evidence for this, due to later work in this area.

The east elevation of the east wing was fairly elaborate, and adjoining the stair turret to the south was a two-storeyed porch (Fig. 18), the projection for which also contained the stack of the southern fireplaces. The porch had small inner and outer doorways of the same flat four-centred form seen elsewhere at this date. At roof level the porch was topped by a dormer with a two-light window to the north and the brick chimneystack to the south.

North of the stair turret there was a large entrance in the east elevation (Figs. 5, 19 and 20), again with a flat four-centred head, although here only on what was formerly its external face: with the addition of the range to the east it became an internal doorway. The windows of the east wing are all later replacements.

The transverse frames in the roof each had a tiebeam and a single collar connected by queen-struts (Fig. 15). Two trusses survive of this period, one just south of the later newel stair (Figs. 5 and 15) and the second north of it in the eastern extension (see archive for elevation). Both of these are square-panelled timber partitions at ground and first floor levels, and are representative of all the surviving timber work within the house in Periods 6 and 7. The panels are infilled with plastered wattle and daub, and the chamfers of the narrow, square-headed doors mostly end in simple ogee scroll stops, although occasionally a draw- or run-out stop is used. The oak plank floors, where they survive, are also of this period.

Photographs from the early 20th century show the Period 6 roof of the east wing and that of the north range to have been roofed with stone tiles of the oolitic limestone, known locally as Harnage slate (Lawson, 1983–4). These are also mentioned by Randall (1883, 7).

The north range and the eastern addition

The principal Period 6 modification to the north range was the heightening of the walls for the insertion of a first floor over the hall (Figs. 11 and 14). This was at a slightly higher level than the floors of the adjoining rooms in the east and west addition, the floor joists sitting on the off-set formed by the former wall top (Figs. 10 and 15). Initially, the first floor consisted of one large room with framed partitions at both ends. At the east end a ceiling beam shows the mortices for the uprights of one of these partitions, largely destroyed when a fireplace was inserted into the wall. A single truss survives of the north range roof (Fig. 12), showing it to have been of

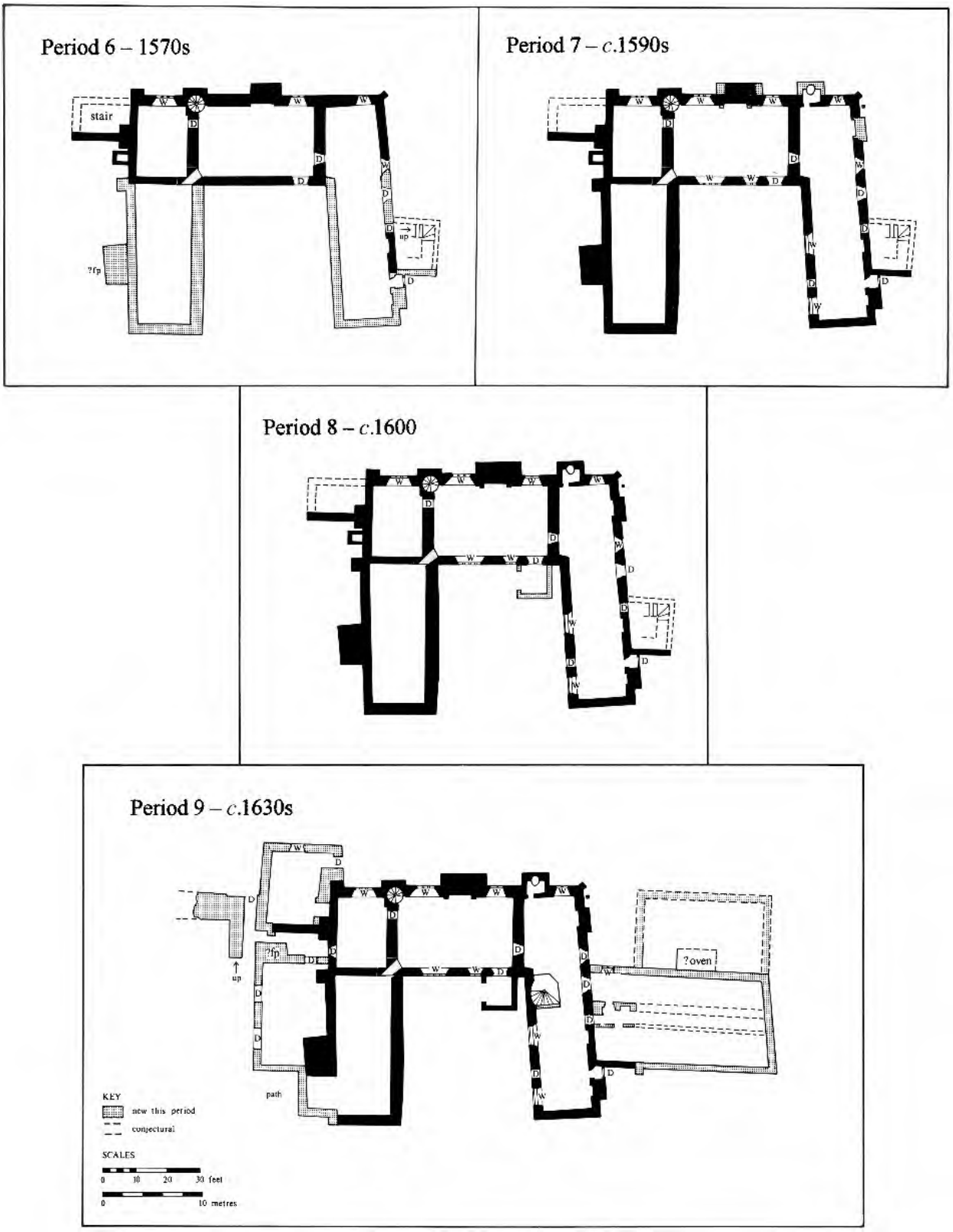

Figure 20 Sequence from mid-16th century to *c*.1700 (1:500)

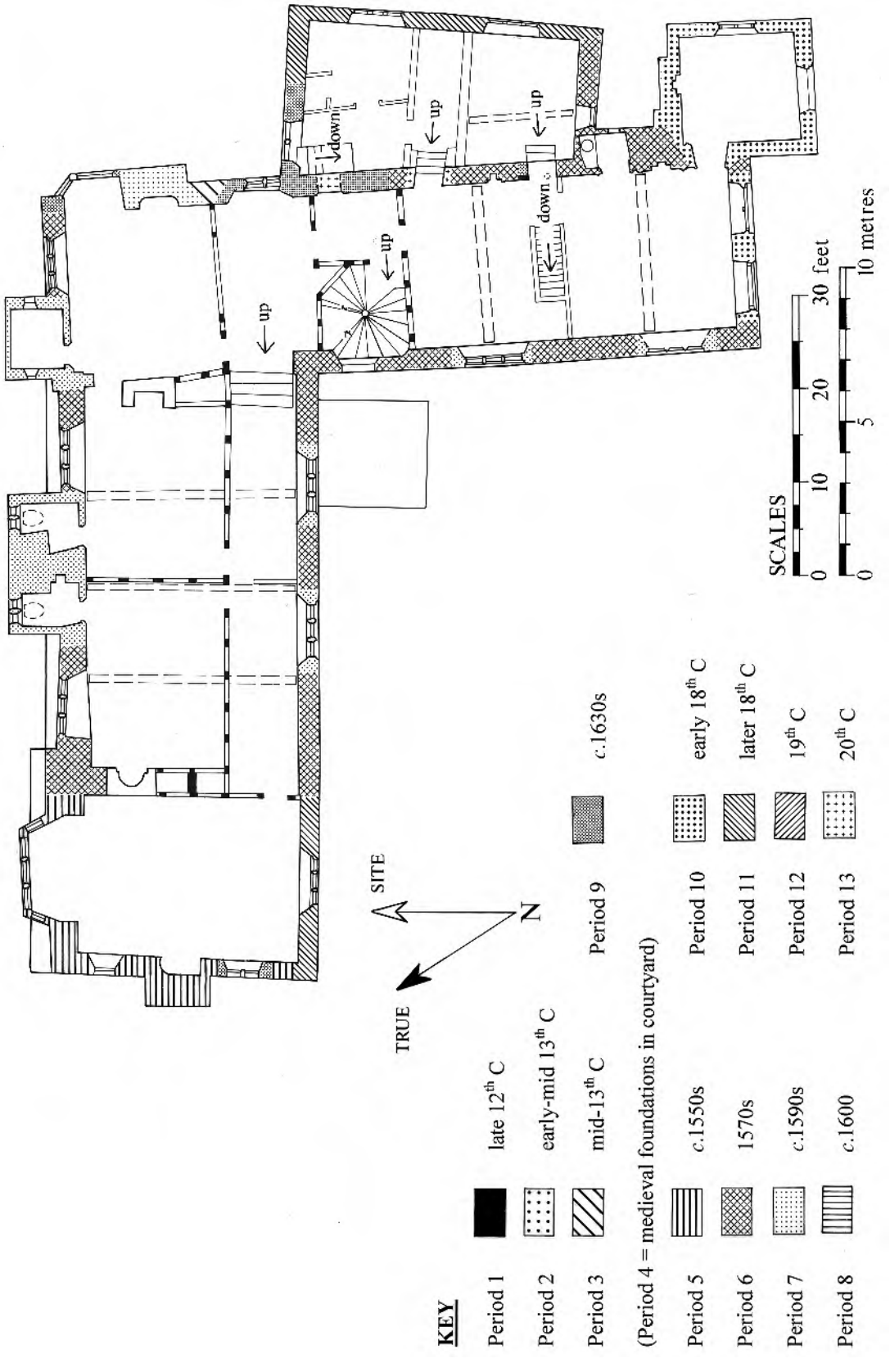

Figure 21 Phased plan at first floor level (1:200)

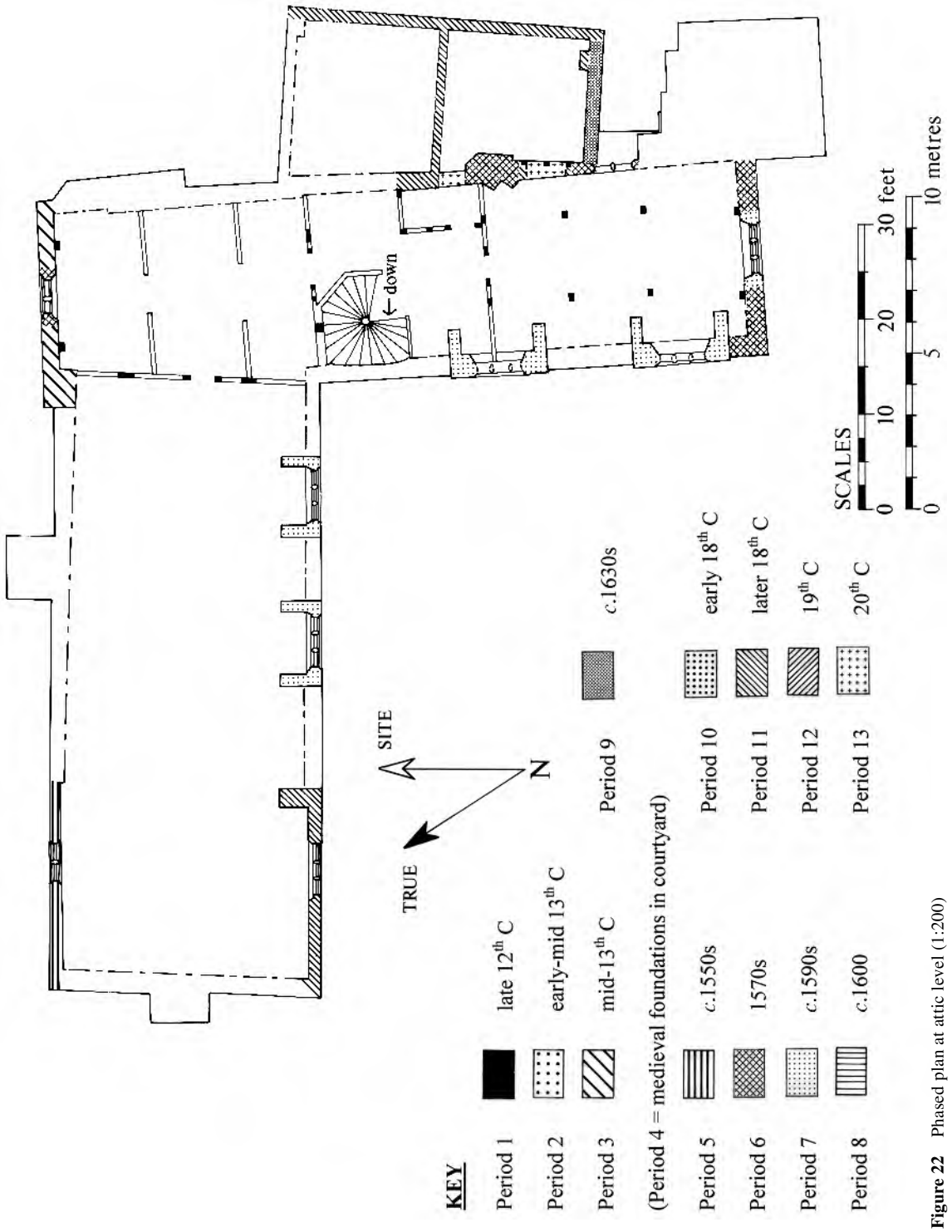

Figure 22 Phased plan at attic level (1:200)

similar form to that of the east wing, but with the addition of raking struts. Cooper observed the first three steps of a continuation of the spiral staircase from ground to first floor level (1977).

In the cellar below the hall the modifications of this period were relatively minor, consisting only of the replacement of the window west of the fireplace which was blocked by the widening of the chimneystack. There is no clear evidence of the date of the inserted window at the east of the north wall, but it may well have been part of the general insertion of windows in the north elevation at this date. In the hall, the fireplace was widened and modernised (Fig. 10) and its stack enlarged externally. There was much rebuilding of the wall to the west of the fireplace at the same time. With two exceptions, the external portions of the windows of the north elevation of both the north range and the east addition, as well as the first floor window in the east elevation of the east addition, are Period 6 replacements. These are simple mullion-and-transom windows, having either two or six lights. The exceptions are those windows which were re-set or altered in the 19th and 20th centuries and, more importantly, the first floor window east of the chimneystack which, though poorly constructed, seems to be primary to this section of wall, the Period 6 heightening of the north range.

The western addition

Photographic evidence suggests that the windows of the north wall of the west addition were similarly replaced and also shows the west addition to have had a queen-strut roof in keeping with that of the east wing. Photographs of the mid-20th century show that the section of plaster ceiling of an undecorated narrow-rib design that had latterly been stored on pallets in the hall (Fig. 23) is likely to have come from the first floor room of the west addition. Randall (1883, 11) referred to this as the chapel chamber (probably because of a cupboard in that room thought to have been a priest's hole) and said that the compartments of the plaster ceiling there contained embossed coats of arms, although there is no evidence for this in the existing fragment. The plaster ceiling, of which this fragment is a part, is directly comparable with that in the drawing room at nearby

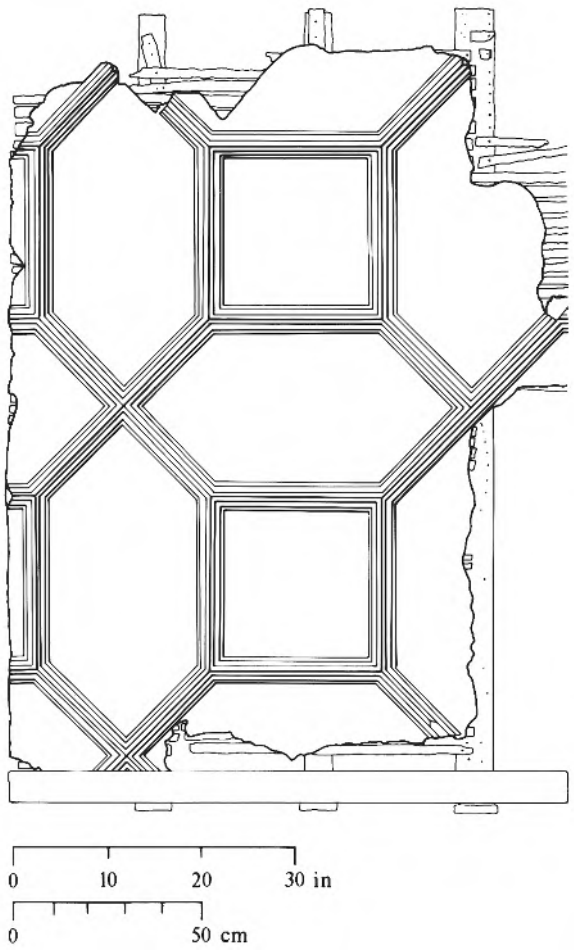

Figure 23 Section of narrow-rib plaster ceiling from first floor room, west addition (1:20)

Pitchford Hall *c*.1560–70 (Pevsner, 1958, 227, and Tipping, 1922, Pl. 13). This would indicate that, at the same time as the new constructions of the 1570s, there was some modernisation of existing interiors.

Structure 3 (S3) – the west wing

At the west end of the house, a large rectangular wing was built running south from the west addition, which had a rectangular foundation projecting from its west wall (S3, Fig. 4, Meeson excavations 1978). This wing probably had two points of access through to the main house. A doorway would have linked it with the ground floor chamber of the west addition, but, in addition, the doorway in the south-west corner of the North Range hall (Figs. 5 and 15), a flat four-centred arch with shallow chamfer, was probably for a servants' corridor linking the ground floor room of the west wing to the hall. The wing had a rectangular projection on its west face and, although the position of this projection mirrors that of the stair and chimney turret on the east wall of the east wing, it is considerably smaller and was probably only a chimneystack. This new wing respected the corner of the S2 building in the forecourt, implying that this was retained, and there was clear evidence of rebuilding of the chapel masonry at the junction of the two foundations.

In Area A Meeson examined the reduced foundation of the west wing (S3), which contained both red and buff-coloured rubble, and the interior (Fig. 9), while the west wall, standing in places to a height of *c*.800mm., and features integral to the wing and adjoining its west face were seen in the Area I excavations (Fig. 4). Little stratigraphy was associated with either the construction or the use of this wing. For the most part it directly overlay S1 material. Beyond the extent of S1, to the south, there was dumping to raise the level to that required for the new wing's floor, and this contained moderate amounts of late medieval pottery. Trial trenching to the west of the new wing showed that the ground level there was created by the dumping of redeposited natural over the natural clay, and this material was virtually free of artefacts. Only to the north, where the gradient increases, had there been any accumulation of stratigraphy. In the area of the buttress between the junction of S3 and the west addition an occupation level, which formed the horizon from which S3 had been constructed,

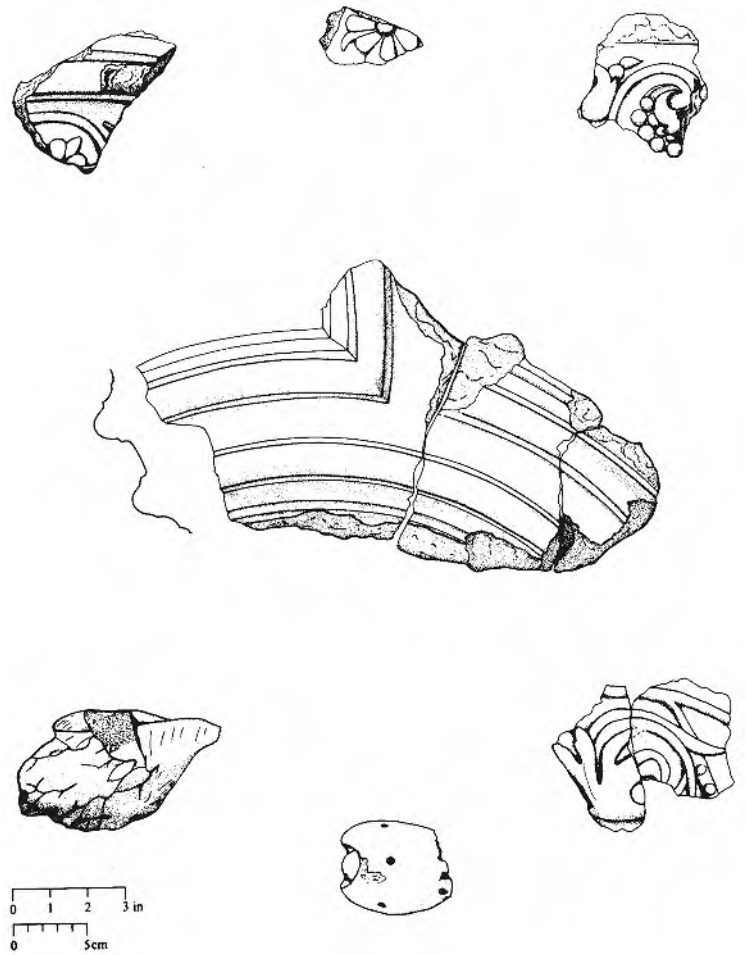

Figure 24 Fragments of Area A plaster ceiling (1:4)

was seen. While the broad spectrum of dates represented within the assemblage from this context suggests much subsequent disturbance in this area, as does the material from other deposits in Area I, the most frequently occurring type of pottery was *c*.15th–16th century in date.

Just to the south of the north-west corner of S2 (Fig. 9) were suggestions of a possible door leading into the courtyard. To the north, the west arm of the wing was buttressed at its junction with the west addition (Fig. 4). The standing portion of the west wall contains a substantial chamfered plinth. The floor levels of the wing did not survive, so there was no evidence of partitions. A bay window was added to the south of the west wall of the wing around the 1630s (see below, Period 9) and this contained two beam slots. All the post-medieval additions probably had planked floors.

Architectural details, recovered in both excavations, from 18th-century demolition levels in this area indicated a high quality of internal decoration. The considerable deposits of ceiling plaster rubble (primarily from Area I) provided evidence of the scheme of a narrow-rib plaster ceiling, which was based on a diamond pattern and included such *exotica* as birds and seashells, possibly within a central panel (Fig. 24). The fragment incorporating a vine pattern below a straight edge (Fig. 24, top right) suggests that there may also have been a frieze running around the wall top.

One fragment of architectural masonry of this period was found (Fig. 25), a small fluted column, probably from an elaborate chimneypiece.

In the absence of documentary evidence it is impossible to put a precise date to the Period 6 changes and additions to the house. However, John Brooke inherited the property from his mother in 1572 (see p. 55 below). The accession of a new adult heir during the 20–year period when new owners of monastic property invested in the refashioning of those properties after nearly 20 years of caution makes a date in the 1570s a reasonable surmise (Hoskins, 1953, 51).

There is some scope for speculation about the internal arrangements at this date. The large room above the hall may have functioned as the Great Chamber. It is likely that it had a fireplace in the north wall, the evidence for which was destroyed in Period 7. The west wing, away from the main entrances into the house, probably extended the private apartments already existing in the west addition.

Period 7: *c*. the 1590s

The gatehouse

The gatehouse is built of buff Coal Measures sandstone and centrally placed in a contemporary wall which encloses the forecourt. Although much altered and damaged in the 18th and 19th centuries, when it was subdivided and a large number of lean-to structures were built against it (Plates I and VI), the basic form of the building is intact (Figs. 2 and 26). At ground level it consists of a room on either side of a cobbled passageway, each with an ogee-headed timber doorway leading into it from the passageway. The timber-framing of these passage walls has not survived. The western room has an external door on its west side, outside the courtyard, which has a doorway with a four-centred head, like those of Period 7 in the main house. The first floor was divided into three small connecting rooms from the outset. The partition wall of the west room is composed of

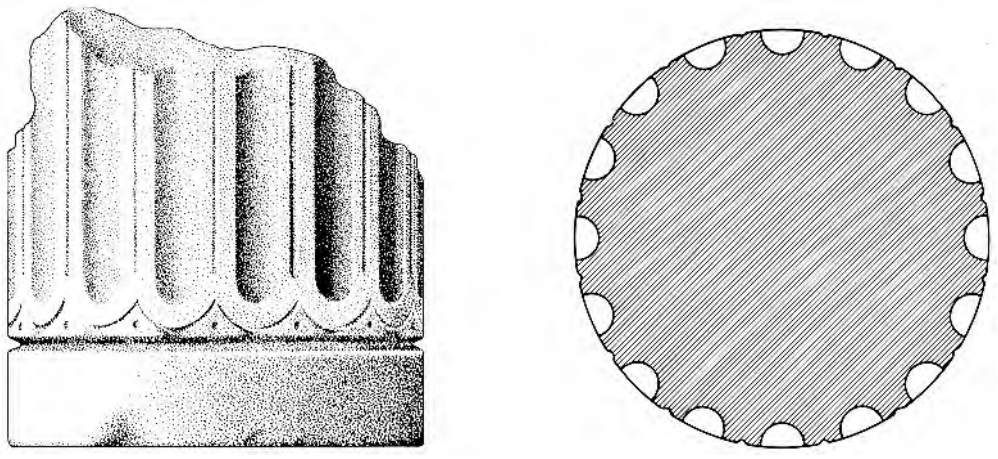

Figure 25 Column from Period 7 west wing chimney surround (1:2)

two tiers of narrow panels infilled with wattle and daub, while the partition wall for the east room is lath and plaster on narrowly spaced studs (Fig. 27). There is a staircase within the western of the two conically roofed turrets that project on either side of the passageway on the main elevation, and the east turret contains a very small room at each level. The roof is of two collar and tie-beam trusses; there are carpenter's marks throughout the building. The main south elevation contains most of the informative architectural detail (Fig. 28). The architrave over the passageway is flat and of three orders with an outer rib. The small projecting three-light oriel above is supported by three consoles carved with leaves, and the gable finial above is derived from an Ionic capital and contains a stylised coat-of-arms on a shield. Photographs taken in the earlier 20th century show the tower roofs with tall pointed finials, while the gable capital had a globe-like finial topped with a spike. The bays have simplified entablatures at two levels, with cyma-moulded cornices above, which continue around the building, and there is a floating cornice above the oriel. Smaller details in this and the other elevations consist of roundels carrying a variety of motifs, the most common device being a quatrefoil flower on a convex ground: Tudor roses and shields were also used. Some of the roundels have a raised rim and a sunken centre, while others are simply blank, and cable-moulding is used occasionally on the rims.

These details are not uncommon in the second half of the 16th century and do not, in themselves, suggest a close date. However, Tipping (1922, 158) drew attention to similarities between the specific decorative devices used in the gables of the Madeley Court gatehouse and those at Condover Hall, where Walter Hancocks is known to have been master mason in 1591 (Airs, 1984, 372). Tipping also wrote (1922, 165) that the form of the roundel, 'a moulded ring enclosing a recess', which occurs at the Madeley Court gatehouse, the Market Hall

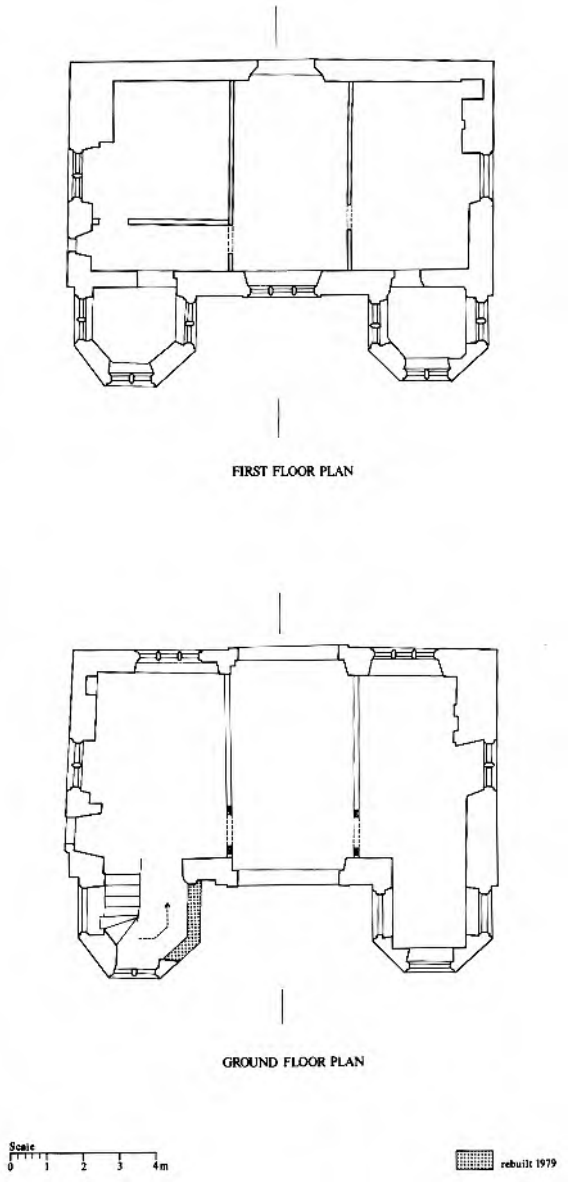

Figure 26 Plan of Period 8 gatehouse (1:150)

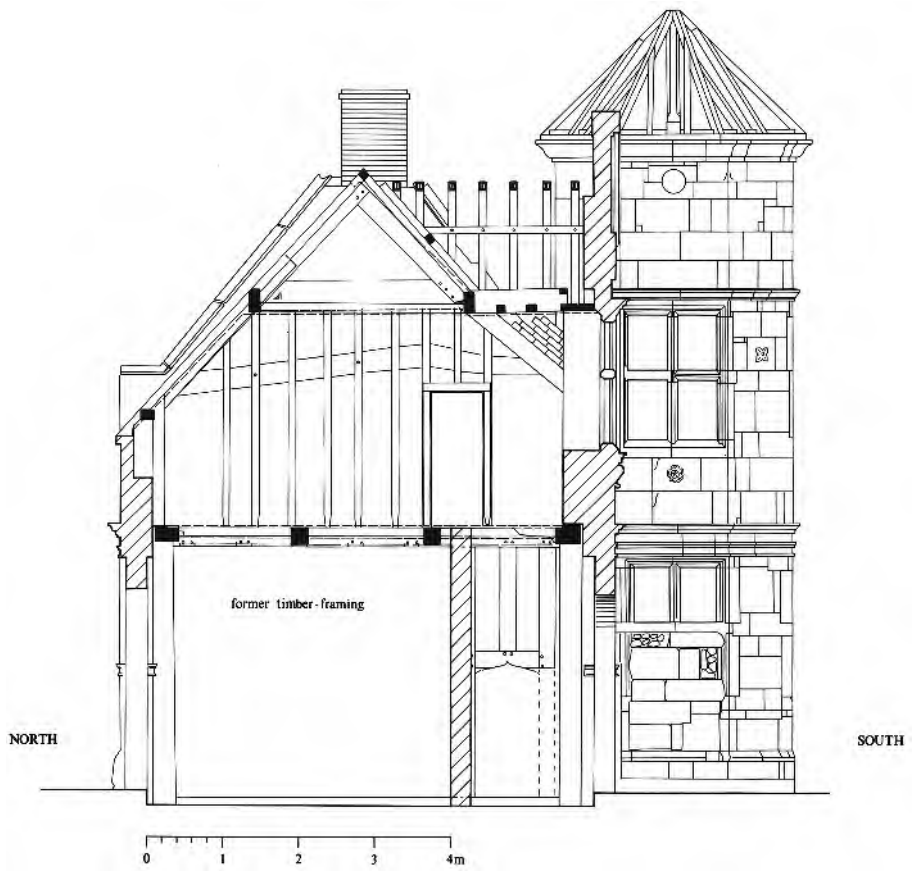

Figure 27 Internal cross-section of gatehouse (1:125)

in Shrewsbury and at Condover Hall, does not occur in other buildings of this date where some form of roundel is used. Walter Hancocks (died 1599) is known to have worked in the Shropshire/Staffordshire area at the end of the 16th century, and a number of buildings, in addition to those already mentioned, as well as monuments, have been attributed to him (see Ferris, 1986 and Lloyd, 1965–6). The best documentary evidence deals with his involvement with the construction of the Market Hall, Shrewsbury, a building with many details similar to those on the Madeley Court gatehouse, including roundels. A detailed survey of the Market Hall building, reviewing much of the material relating to Hancocks, has been produced recently (Morriss and Stamper, 1996; Baker, Morriss and Stamper, 2006).

This is not the place for a specialist assessment of the role and contribution of Walter Hancocks, but his appearance on the scene, at a point when the role of the master mason was beginning to expand into what later became the role of the architect, indicates his historical importance. Given the growing amount of material relating to Hancocks a serious appraisal is now required.

The house

The construction of the gatehouse and enclosure of the forecourt, in this period, emphasised and expanded on the new approach to the house, and it must have been during the same phase that S2 was finally demolished.

The east wing

With the opening up of the courtyard by the demolition of S2, the windows of the courtyard-facing elevations at ground and first floor level were replaced with mullion-and-transom windows (Figs. 14 and 29). These windows all have hood moulds with label returns and are all clearly insertions into Period 6 or earlier wall fabric. The mullions of all the principal 16th- and 17th-century windows have a simple hollow chamfer. A series of gabled dormers was added to the roofs on the forecourt elevations, again with hood-moulds and label returns.

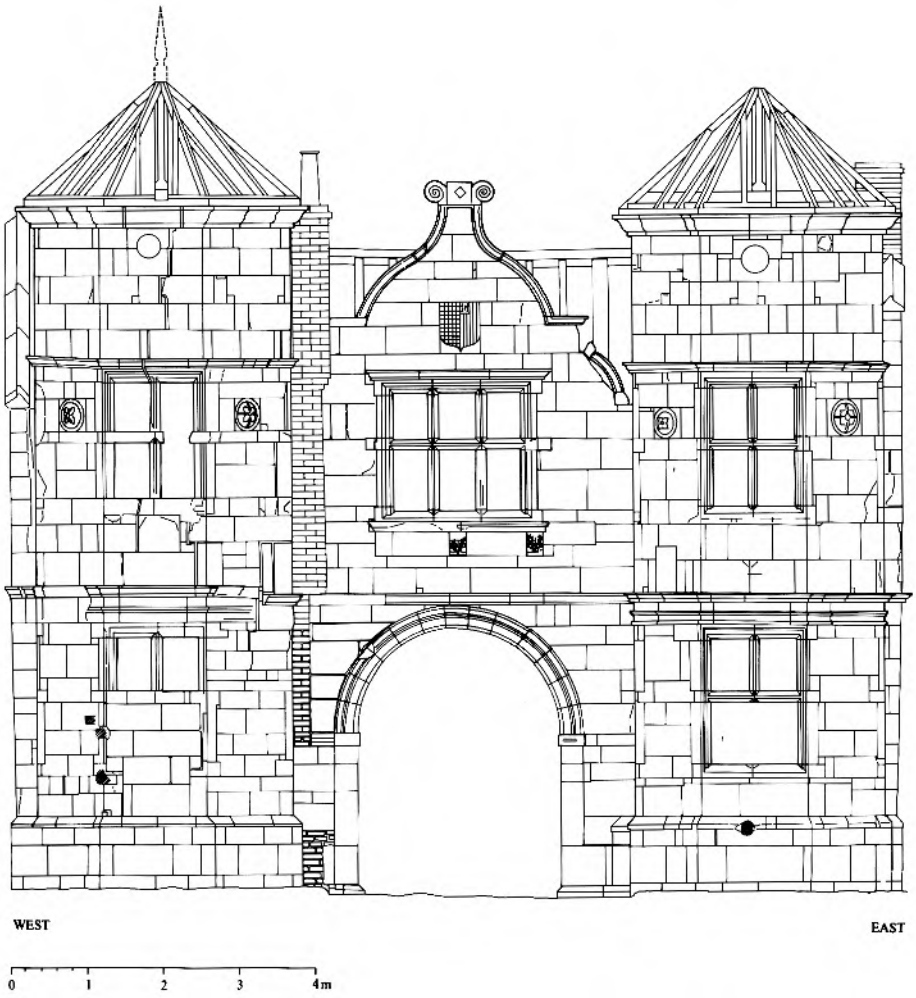

Figure 28 External elevation of gatehouse (1:125)

The apexes of the dormers of the east wing contain a blank roundel, like those seen in the gatehouse, and were formerly topped by finials, like that surviving in the south gable of the east wing. As part of the work in the attics at this date many of the trusses at attic level in the east wing were infilled on either side of a central corridor to create dormitory-type accommodation.

The Period 7 windows in the house are highly standardised, but a three-light window of a different form has been inserted into the apex of the south gable of the east wing (Fig. 29). This window, with a Tudor rose on either side of a simple lintel, is comparable in style to the gatehouse. It is presumed to be contemporary with the other secondary attic windows.

With the insertion of the windows into the courtyard elevation of the east wing, a small doorway with a flat four-centred head was added leading from the southern room of the wing into the courtyard (Fig. 29).

The north/hall range

A photograph taken in the early part of the 20th century shows what is probably the original glazing of one of the Period 7 mullion-and-transom windows in the south wall of the hall at ground floor level, with leading in a pattern of small diamonds. The three small lights inserted at cellar level in this wall are likely to have been associated with the demolition of S2 in the forecourt (Fig. 14).

It was probably at this date that the large room over the hall was subdivided into two rooms, with a corridor along the south side. Cooper (1977) noted that the framed partitions for these rooms lapped over the joists above them, rather than being morticed in, as they would have been if they were contemporary. The framing separating these rooms from the corridor is square-panelled, but here the horizontal members are notched for a central upright lath for each panel. The eastern chamber had a doorway at each end of this partition. All the

Figure 29 Forecourt elevations of east wing and porch door (1:150)

doorways to these chambers have flat lintels; most are chamfered all the way to the floor, but a simple ogee scroll-stop is used occasionally, which might suggest the re-use of some components here. The partition which divides the rooms is of square panels with wattle and daub infill. The two rooms were each given a fireplace and a garderobe. In the western room, the fireplace occupied the position of the former door through to the west addition (Cooper, 1977). The fireplace of the west room had a four-centred head and sunken chamfered jambs, and that in the east wall of the east room had a flat lintel and no chamfer (Fig. 12). Both had brick chimneystacks.

The garderobes for these rooms were added on either side of the existing chimneystack of the north wall (Fig. 10). Externally, they are built of brick and each has a small two-light window (Fig. 11). Internally, the doorways have flat chamfered lintels, which were probably re-used from replaced Period 5 and/or Period 6 windows, and chamfered jambs. This entire section of walling has been rebuilt for the creation of the garderobes, destroying any evidence of the probable 1570s/Period 6 fireplace in that position.

Within the north range there is one further addition to the house that might be connected with the mason responsible for the gatehouse. Above the dais an ornamental heraldic stone plaque 397mm. wide by 560mm. high (Plate XI, p. 71) had been let into the west wall of the hall. There is a good stylistic parallel for this over the north porch door at Condover Hall.

The east addition

The work of this period also seems to have concentrated on the addition or replacement of smaller features to improve the existing accommodation. The garderobe in the north wall (Fig. 11) again made use of re-used window lintels, one with evidence for a mullion, for the doorway heads, but the jambs for these are plain and of a slightly rounded section. In none of the garderobes are there traces of internal fittings, or of any external emit holes; only the rubble-filled shafts survive. The garderobe turret is lit by the re-used medieval lancet heads described above (13th-century architectural fragments from the site).

The chimneystack and fireplaces (Fig. 19) in the east wall of the east addition may be of this date; the stack contains the same type of medieval lancet heads used as decorative details (Fig. 18) and, although the fireplaces do not differ from the basic forms of Period 6, the form of the brick stack above eaves level is different from that of the Period 6 chimneystack to the south in the same elevation.

This period is bracketed between the *c*.1570 work, as demonstrated by the insertion of windows of this period into the primary fabric of the Period 6 east wing, and the *c*.1600 porch, shown below to have been built against an existing Period 7 window. There is also the suggested association of the gatehouse with Walter Hancocks in the last decade of the century, with some details of the gatehouse being paralleled in the main house. The construction of the gatehouse and the walled forecourt must, inevitably, be associated with embellishments to the courtyard facades of the house. Figure 30 is an axonometric reconstruction of the house at this date. No detail is shown for the west wing, but it is likely that it mirrored the east wing in its provision of windows and dormered gables.

Period 8: *c*.1600

After the insertion of the Period 7 windows in the south wall of the north range a porch was added to the main doorway into the hall (Figs. 4 and 29), slightly overlapping the hood-mould of the Period 7 window immediately to its west. The entrance to the porch is in its side or west elevation, and there is a window in its south wall. A number of Shropshire houses have porches with side doors (Shipton, Benthall, Ludstone).

Stylistically, this is a more sophisticated piece of work than the gatehouse, and its details suggest a slightly later date. The arch is of three orders above a cyma-moulded cornice that continues around the structure. On its west face there is a raised lozenge below the cornice on either side of the doorway. The gables on the two exposed faces are highly decorative and are topped by tiny pediments.

Period 9: *c*. the 1630s

There was one final large-scale phase of expansion of the complex of buildings at Madeley Court, characterised partly by the use of brick with stone details for entire structures such as the ancillary building (Fig. 2.7) and the walled garden west of the house (Fig. 2.3) and, partly, by additions to the far peripheral parts of the main house, some of which show similarities in their masonry and bonding material.

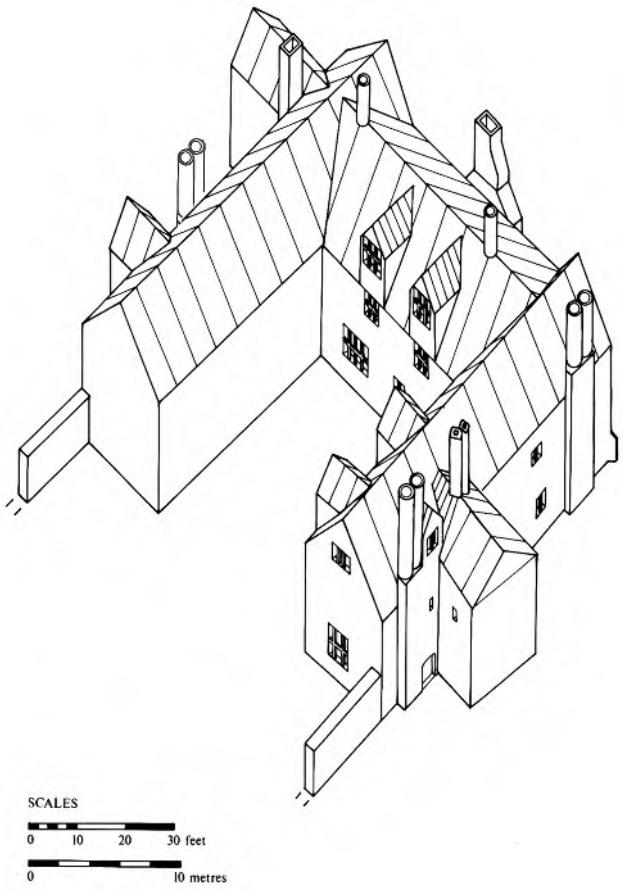

Figure 30 Axonometric reconstruction of Period 8 house (1:500)

Additions to the east end of the house: the east service range

On the east elevation of the east wing, the stair turret was dismantled and replaced by a stone double-pile building, the east service range, with a purlin and rafter roof in which the western portion of the stair turret's south wall was retained, and the junction between this and the new work was buttressed (Figs. 5 and 20). The eastern two-thirds of this structure was demolished in the 18th century, but in its surviving portion there is a central corridor which contains, at ground floor level (Fig. 5), a primary brick recess at waist height in its north wall and a flat-lintelled door with rounded jambs leading from the corridor into the northern room. The range would have consisted of a series of small rooms on either side of this corridor.

Entry to this range from the house at ground floor level (and probably at first floor level) was *via* the central corridor, which re-used the position of the former doorway into the stair turret. The adaptation of the former external entrance north of the corridor for use as a fireplace, as seen in 1987, was probably a modification of this period. As a response to the loss of the external entrance here, the Period 6 window north of this was cut down to form a new doorway (Fig. 18) in the *c*.1630s. The window above this is an insertion of the same date. In the limited surviving primary fabric there is one original window (in its north elevation: see archive), a two-light mullioned window with a simple chamfer. One further point of access from the house into the east range was at first floor level into the northern room (Fig. 19), but the dating here is more tenuous because of suspected rebuilding in the 1970s before recording work took place.

The former extent of this range was seen in excavations in Area III (Fig. 4), where the foundation of its east wall was observed, bonded in a hard, pinkish mortar seen elsewhere in work of this period. Above its ground-course, the south wall east of the buttress is, for the most part, a rebuilding of this wall as a 19th century garden feature, the two eastern windows being less obviously rebuilt or reset than the western window and the doorway. Excavations in Area II (Fig. 4) revealed evidence of fairly deep and late disturbance within the former interior of the range, presumably due to its use as a kitchen garden.

Abutting the east range on its north side were the remains of a probable kitchen (Fig. 4, S8), partly observed in a 1987 watching brief. Short lengths of its west and north walls and their foundations were encountered, and these were bonded in the same hard pink material seen in the east range's east wall foundation. Small areas of

flooring composed of a micaceous green sandstone were seen, but there were also zones of Coal Measures flagstones. Parts of a large squarish mass foundation were found along the building's south wall. This is likely to have been the base of an oven (Fig. 20). Where seen, the floor levels of this building were built on, and covered with, heavy deposits of charcoal. The structure was built over a great depth of redeposited natural.

This watching brief also recorded a stone-lined well between the west wall of S8 and the east wall of the house (Fig. 4). The dimensions and tooling of the ashlars used in its construction were characteristic of the post-medieval masonry on the site.

The east wing and east addition

As a corollary of the demolition of the stair turret, a new staircase was created within the house at the angle of the north range and the east wing (Figs. 5, 15, 20, 21 and 22). This was a massive newel staircase built of oak and contained within square timber-framed panels, enclosed at first floor level by a contemporary lobby formed of timber-framed panels. Meeson observed some recusant graffiti reading JHS (the monogram for 'Jesus') on one of the panels of the staircase, but this did not survive the 1970s.

Within the east addition, a projecting six-light mullion-and-transom oriel window at first floor level in the east wall was added in this period (Figs. 18 and 19). This is carried by a rectangular pier from the ground, and rests on a bracket keyed into the Period 7 chimneystack to its south.

Period 9, a group comprising work of the early-mid 17th century and *c*.1630, represents the most likely latest date of construction for these and the structures described below. By the following decade the fortunes of the Brooke family are known to have been too unstable to support substantial investment in building projects (see below, Documentary Evidence: the Early Modern Period, p. 56).

The use here of a double-pile structure is early. Barley (1963, 87) suggests that, as a house-plan type, they were a feature of the Midlands from *c*.1675 to *c*.1725. There is nothing inherently datable about the rest of the structures here other than their place in the larger sequence but, as far as their function is concerned, the east range was probably intended to provide accommodation for servants/workers (the small rooms) and service functions for the larger house (the servery feature in the corridor), and the construction of what must be a kitchen alongside it supports this interpretation. Although the kitchen walls abut those of the east range, the use of such similar construction materials suggests the time lapse between them may not have been great.

The Area I structures immediately west of the house

A number of contemporary structures were built as part of the garden (Fig. 4, S4, S5 and S6) and, in the case of S6, this actually formed a bastion-like projection within the circuit of the garden wall. S4 was built against the west wall of the west wing (S3) and, prior to its construction, a large inspection pit (Fig. 7, F88) was dug to examine the medieval fishpond drain in the area of its north wall (Period 1: late 12th century). A capstone of the drain had been levered off and replaced and S4's foundation built directly over the backfilled pit. It is unclear, however, whether the drain was functioning at that time or, if not, whether any attempt was made to re-establish it.

S4 was built over fairly shallow rubble footings, bonded with material similar to that seen in buildings of this period east of the house. Along its northern arm some masonry blocks of a ground course survived, but there was no evidence to indicate the composition of the superstructure. This building was probably only a ground level structure with a flat roof, so as to obscure the minimum number of windows in the west wall of the west wing. There was no evidence of direct access from the west wing into S4, but a door in S4's north wall is probably associated with the demolition of the west addition's garderobe (F33) at this date (Fig. 17) and the insertion of a doorway in its place, creating a route from the house into S4. It is impossible to see the door in the north wall of S4 as co-existing with the standing structure of the west addition's garderobe. The fill of the garderobe shaft produced a fine assemblage of material of later 17th century date (see pp. 46–47 below), suggesting that its fill was secondary to its demolition. This building had two wide primary openings in its west wall and the foundation of a fireplace in its north wall. Within the body of the building, impressions in a mortar bedding showed that, formerly, it had a flagged floor. As part of the construction of S4 an oriel was added to the south end of the west wall of the west wing (S3, Fig. 4). A path of stone tile and ceramic tile rubble ran west from this, indicating that there was a doorway in it at ground floor level. It was not clear whether the path was precisely contemporary with the oriel, but the presumption is that they were established together.

North of this, the west addition's stair turret (S7) was demolished and its south wall retained as part of a one-celled structure with a cellar (S6), referred to here as the west block (Fig. 3). It is not known how many storeys

this structure had, or what its point of access was at ground floor level. It had a brick barrel vault above the cellar of the same form as that under the west addition, which must also belong to this period. A crude connecting doorway was inserted between the two cellars. Above the barrel vault was evidence of another flagged floor. The cellar was lit by a two-light window in its north face, of which the lower portions survived. The corridor formed between S4 and S6 was also flagged (Fig. 7), and some of the flags were cut with drainage channels for the run-off of surface water.

To the west of S6 a structure built along the inside face of the garden wall was encountered (S5), and a corridor was formed by its east wall and the western walls of S4 and S6 (Fig. 4). The surviving portion of S5's foundation was L-shaped, but its former extent along the axis of the garden wall can be seen in Plate II and, even better, in a photograph used by Tipping (1922, Pl. 182). What is shown here is that the first 'bay' between buttresses along the north face of the garden wall was built in ashlar as opposed to brick. Within the garden, the bottom course of shallow ashlars survived along S5's south face and along the west face of the small projecting wall at the south-east corner. Numerous pieces of simple balustrading, many with chamfered bases for use in stairs, were recovered from the area south of S5, and these may indicate something of its original function. The small dog-leg wall is interpreted as the base for a short flight of steps up to an elevated platform with balustrading. The many photographs of Madeley Court from the north, in the early part of the 20th century, show the lake there as an attractive feature and it is possible that it is an older feature than has hitherto been thought. It may be that the observation platform S5 was sited to obtain a fine view of the water below at this point.

The corridor between S5 and S6 was paved with the green micaceous sandstone seen in the kitchen to the east of the house and ran sloping down to a former doorway in the garden wall, the bottom 850mm. of which survived. Beyond the garden wall this must have led to steps down to ground level at the north. Mortar spreads south of S5 suggest that the general flagging of this area may have extended here.

Miscellanea

Within the hall a straight stair was added at the west end behind a partition wall composed of (possibly re-used) square-panelled timber-framing infilled with bricks (Fig. 5). There is a single photograph of this and it also appeared on Cooper's plan. There is no close date for this feature although it is clearly later rather than earlier, but it is included here with the changes in staircases seen in the east wing.

The farm buildings

In the S. T. Walker photographic archive are three images from *c*.1900 showing some of the farm buildings which lay east of the house. The earlier buildings appear to be those comprising the range along the north of the group (Fig. 2). Of the two barns shown, one was brick-built over re-used masonry plinths and another was timber-framed with square brick-filled panels. These are likely to be *c*. early 17th century in date. It is worth noting that the alignment of these buildings continues that of the Period 10 east service range to the house. The farm buildings and the east service range may have been planned together and represent one side of a post-Reformation outer court.

The other photograph shows the large barn which lay north-south at the south-west corner of the southern farmyard. This is brick-built with ventilation apertures and is 18th/19th century in date.

Post-Reformation Madeley Court: Discussion

The development of the medieval buildings at Madeley Court between the Dissolution and the Civil War (Fig. 20) provides a sequence similar to that of many large houses based on former monastic properties (see Coppack, 1990, 136–40). There was an initial stage, during which caution prevailed and when the best was made of the existing buildings with a minimum of new construction. The best documented case is Longleat, discussed in Girouard's book on Smythson (1983, 42).

The addition of the wings of the 1570s (Period 6) with the associated heightening of the north range seems to make some gesture towards the concept of symmetry and pairing, then gaining popularity, but the initial retention of the chapel in the courtyard spoils the effect. By the 1590s (Period 7: Fig. 20), with the clearance of the courtyard and the enclosure of the forecourt with its integral gatehouse, the Brookes were coming closer to achieving the kind of balanced perspectives that were considered so desirable for the exterior of a building at that date. Internally, the subdivision of the space over the hall into private rooms, with a corridor or gallery

along the main elevation, is also typical of this period and Coope deals with this category of plan, in the context of adapted medieval buildings, in her article on Long Galleries (1986, 56). This type of building is a compressed form of the medieval courtyard plan and, while at Madeley Court this layout was primarily a result of the progressive development of a set of existing medieval buildings and was always fairly modest in scale, prestigious late examples of this essentially medieval plan-type were built until the early 17th century such as the high-status Hatfield House (Girouard, 1978, 115).

The E-plan Condover Hall provides a good local example of this kind of house, newly-built at the very end of the 16th century, and Apley Castle compares even more closely with Madeley Court, in that it developed from a similar medieval nucleus, a hall range with right-angle wings at both ends (Morriss and Shoesmith, 1989). The late 16th century development resulted in a U-plan house with very long wings. It had extruded corner blocks in the angles of the wings, one containing a porch and the other probably a staircase.

The structural remains of the late-16th- to early-17th century house at High Ercall are difficult to understand, but it seems to have been a rambling variation on an H-plan house. It is worth noting, however, that these houses, like Condover Hall and Madeley Court, were all built by lawyers, and the builder of Apley Castle was Sheriff of Shropshire. This type of house is thus closely associated with the late-16th-century *nouveau riche* men whose money came from court appointments rather than inheritance. This plan-type had inherent drawbacks, particularly with regard to access *versus* privacy in wings which were one room in depth, and it rapidly gave way to what Mercer (1954, 21) calls the 'gentry plan-type', block-like buildings, represented in Shropshire by examples such as Shipton Hall, Benthall Hall and Wilderhope Manor, all of the late 16th century.

The garderobe assemblage

Charlotte Cane

The garderobe pit along the west wall of the west addition contained an exceptional group of artefacts. Within the group were an unusual number of conjoining sherds. Figure 31 shows some of the ceramics and glass; not published here is the group of iron objects, principally horse harness and spurs, from the same context (1084) and the clay pipes which are dated to 1660–1690 (pers. com., D. Higgins).

Fig.31.1, the Thomas Toft dish:
12 mainly conjoining sherds from a slip-ware dish with the head of Charles II. 'Appears to be from a standard form of slip-ware dish produced in Staffordshire by Thomas Toft. The decorative style is consistent with known pieces dated to the late 1670s and 1680s made by Thomas and Ralph Toft' (pers. com., Mrs. P. A. Halfpenny, Keeper of Ceramics, Stoke City Museum and Art Gallery).

Fig.31.2:
6 mainly conjoining sherds from a 'Midlands yellow ware' ointment pot with a date range of 1530–1680.

Fig.31.3:
Bulb from the stem of a '*façon de Venise'* wine glass, comprising a hollow-blown melon knob above a merse with the beginnings of a squared funnel bowl. Possibly of Northern European origin. Date range 1660–1670 (pers.com., Martin Ellis, Birmingham City Museums and Art Gallery).

Fig.29.4:
13, mainly conjoining, sherds from a squat, onion-shaped bottle with a relief seal containing the initial P in a circle. Date range 1680–1690.

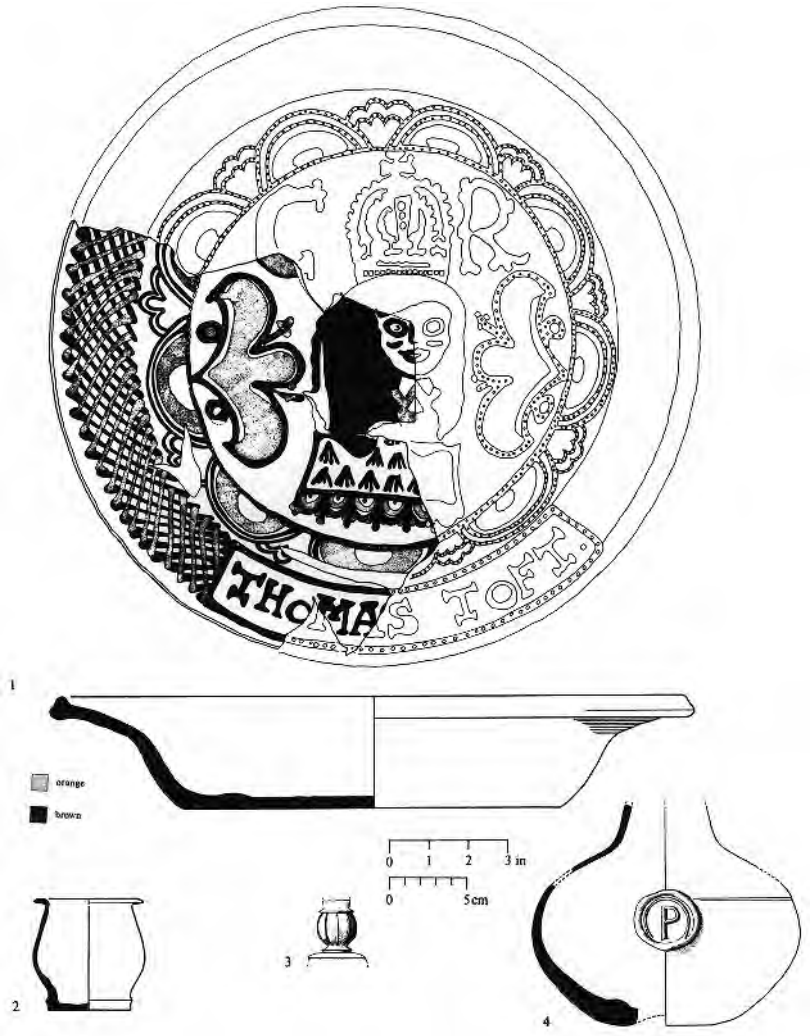

Figure 31 Assemblage from Area I garderobe F33 (1:4)

MADELEY COURT IN THE MODERN PERIOD

After 1702, and the collapse of the Brooke family, the estate was sold piecemeal and, in 1705, Madeley Court, together with 520 acres of the demesne, was sold to an absentee landlord (*VCH Salop*, **XI**, 37). The house then seems to have been leased to tenants for many years, including Abraham Darby I from 1709 until his death in 1717 (*VCH Salop*, **XI**, 39). It was sold again (in 1828) to James Foster, an established Stourbridge ironmaster, who began the extraction of the surrounding mineral deposits. The mine remained operational until the early years of the 20th century and an associated works, which incorporated three blast furnaces, was constructed a little distance from the house in 1843 (see pp. 66-70 below). After Foster's death, in 1858, his nephew, William Orme Foster, continued and expanded the mineral exploitation. The house continued to be tenanted until the latter part of the 19th century when it was occupied by Foster's mine manager. The Fosters sold Madeley Court and the farm, in instalments, to a sitting tenant in 1919 and 1936 and, in 1964, Dawley Development Corporation purchased the house and most of the land. The farm buildings were demolished shortly afterwards.

The 1849 Tithe Apportionment (prepared in 1847) records the brick-walled garden as an orchard and the field to its north is called Dairy House Meadow. Local historian, John Randall, located a brewery at the west end of the house in 1883 (Randall, 1883, 11).

Period 10: early 18th century

Evidence for early-18th-century alterations can be seen primarily within the east wing, which was adapted into a self-contained apartment with its own stair placed along the dividing wall (Figs. 5 and 32). The four rooms were panelled and given Coalbrookdale grates. All the panelling appears to have been re-used. That in the northern rooms is early Jacobean, with simple, sunken square panels with plain chamfers and an elaborate cornice above. Occasional sections of the Jacobean panelling seen in the other rooms were used here to infill.

In the finest room (Tipping, 1922, Pl. 187), the southern room at ground floor level, a number of the panels held paintings. The subject of the principal painting, over the marble chimneypiece, was a horse. With the installation of the panelling in this room the Period 8 doorway, in its west wall, was abandoned. The porch, in the east wall, had its exterior doorway blocked and was converted to a cupboard. Above this, the oriel space was turned into a water closet, the bowl and handle of which survive.

The windows of the east wing were modernised at this date by the reduction of their sills by three courses and the removal of their mullions (Fig. 29) and, at first floor level, the single window in the south elevation was replaced by two of the new windows. These have surviving contemporary shutters.

The pavilion

At the same time, a small square structure with a pyramidal roof was added to the south-east corner of the east wing (Figs. 18, 29 and 32). This had mullioned windows of the same form as the simpler openings of the 16th- and 17th-century phases of construction. A large doorway with a four-centred head (Fig. 18) in its east wall suggests that this may have functioned as an entrance lobby at ground floor level; above this it was probably a wardrobe. The pavilion was formerly panelled at both levels.

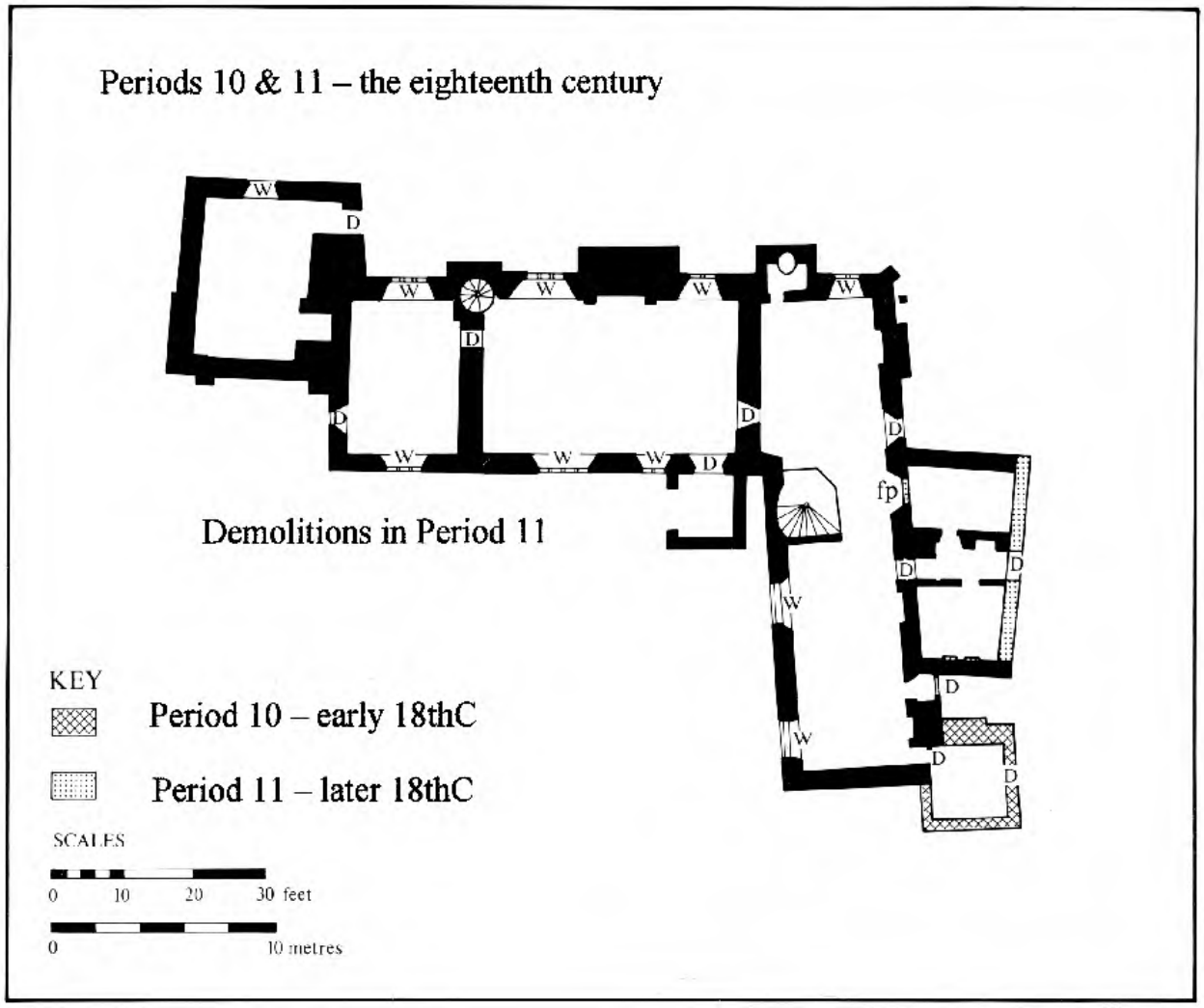

Figure 32 The building through the 18th century (1:100)

Structures 3 and 4 (S3 and S4): the excavated evidence (Fig. 4)

Pottery evidence indicates that the west wing was converted to stabling *c*.1720. In Area A Meeson encountered a series of postholes, along the east face of the wing's west wall, which he interpreted as divisions for stalls (Fig. 9). He also noted evidence that a wide entrance had been knocked through the east wall where, within the courtyard, he exposed a cobbled surface dating to this phase. A contemporary red clay path ran between the wings to the hall door.

An opening was also inserted into the west wall of S3 leading through to S4 (Fig. 4, and A42 on Fig. 9) where, around this time, the flagged floor had been taken up. The underlying surface was cut by a series of postholes and overlain by a number of amorphous mortar features, one of which is interpreted as the base for a trough.

Summary

The conversion of the east wing into high-status self-contained accommodation, and the approximately contemporary change of use of the west wing, are works clearly associated with the new owner's desire to attract tenants of a particular social level. However, these changes also clearly signal that this is the point at which the building and its immediate surroundings and out-buildings were being sub-divided for a variety of uses and a number of different tenants. If stabling was being provided for the house it was probably because the farm buildings were being leased separately, and stabling there was no longer available.

Period 11: later 18th century

West end of the house

Structures 3 and 4 were demolished, opening up the west side of the house and that area of the garden for commercial activity (Fig. 32). The pottery from their demolition levels was mid- to late-18th century in date. The bottom courses of the west wall of the west wing seem to have been retained, although rebuilt extensively in brick during the 19th and 20th centuries, presumably as a convenient boundary between the house and the low-level industry operating to the west of the house at this date.

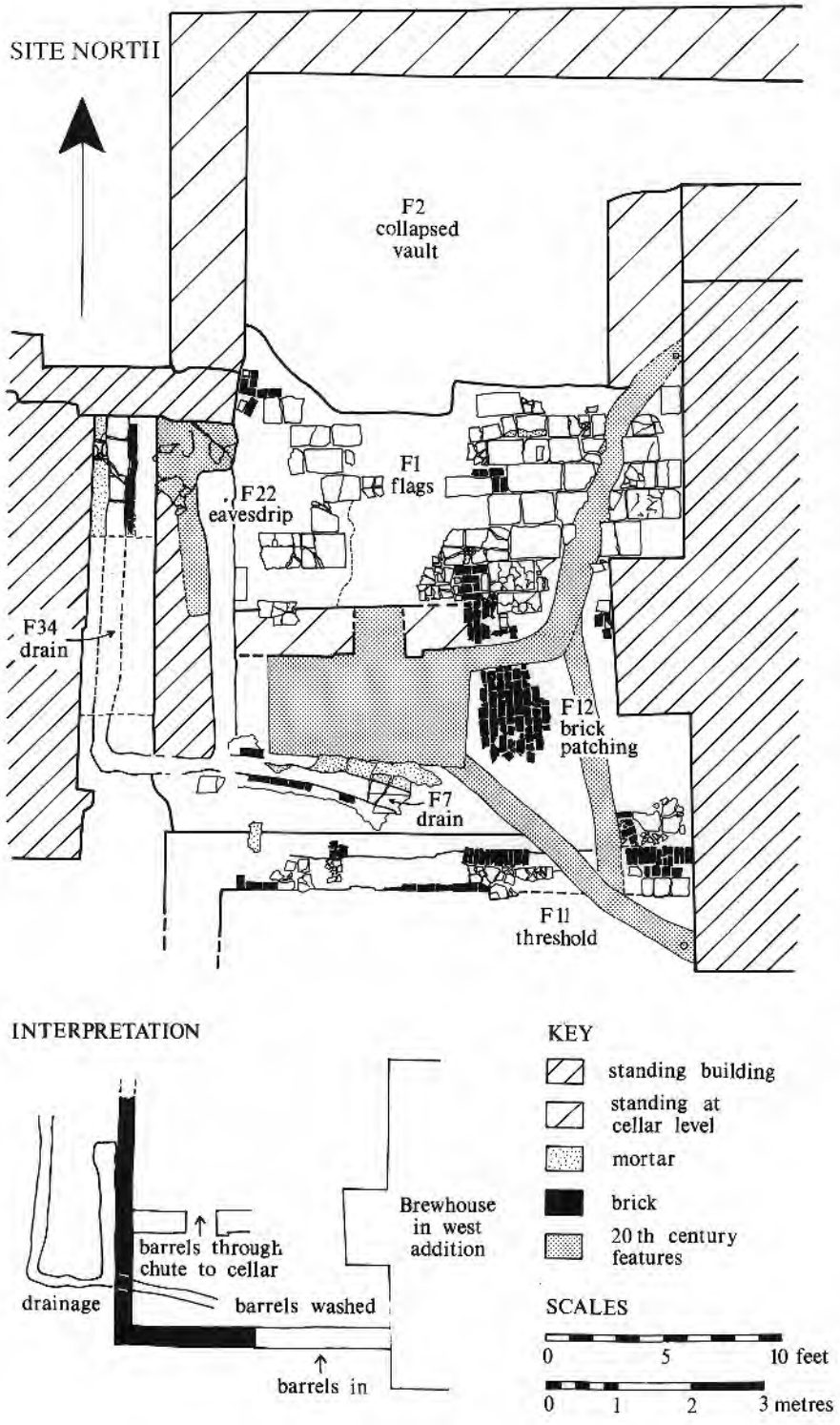

Figure 33 Plan of Period 11 brewery, annexe S9, and diagram of its function (1:100)

The beginning of the brewing operations, mentioned by Randall as being current in the western extension in 1883, can be dated to between 1750 and 1770 on the basis of pottery found in the construction levels of Structure 9. This was a small brick-built annexe to the western extension (Fig. 33). It was built over the barrel vault of the Structure 6 cellar, and used the reduced north wall of Structure 4 as a footing for its south wall. Within the south wall was a wide threshold (F11) and, just inside this, was a drain (F7) composed of brick and re-used flagstones. The covered drain passed under the west wall of Structure 9 (as indicated by eavesdrip F22), and then ran down the passage and through the garden wall. Just north of the drain a rectangular pit was dug along the south wall of the Structure 6 cellar, at the apex of the vault, and a hatch was knocked through into the cellar.

Structure 9 is interpreted as a cask-washing shed with a threshold wide enough for carts to be backed up to it. It is not clear whether wheeled traffic would have come through a breach in the south wall of the garden, or through a possible opening in what remained of the west wing's west wall at this date. Figure 33 suggests how this structure might have been used with the barrels being unloaded and washed near the entrance to the shed, and then dropped through the hatch into the Structure 6 cellar for storage. They could then be moved east into the cellar of the western extension directly below the brewery workings.

The east service range

The eastern two-thirds of this range was demolished, and the retained portion given a new gable wall, leaving a structure of two rooms at each level (Fig. 32). The new wall of the range (Fig. 18) had windows with flat lintels below segmental relieving arches with keystones. This small set of rooms seems to have formed the nucleus of habitable areas in the house from the end of the 18th century through to the middle of the 20th century. The attic above the southernmost of these rooms was utilised at this date. Access was created from the main attic north of the Period 6 chimneystack, and a two-light timber window was inserted between the two attics to light the new room. It was also given re-used oak plank flooring. The demolished part of the range was turned into a garden. The walls of the garden to the south of this area are principally composed of re-used masonry and are likely to be approximately contemporary with this large-scale episode of redevelopment.

Period 12: 19th century

East of the brewing operations the remainder of the house was turned over to dairying (the cellar below the east wing is arranged specifically for cheese production) and farm storage (in the hall and eastern extension and the cellars below them). The small stair inserted from the hall cellar to the eastern extension possibly dates from this time. The farmhouse living quarters were located in the remains of the eastern service range and, to a certain extent, in the east wing. Early-20th-century photographs, taken in the garden to the west of the western extension (Shropshire Archives: PH/M/1/7, Madeley Court *c*.1920, M. Wright)), show no trace of the brewing operations still current in 1883. By the time of the photographs this part of the garden seems to have been well established as a yard area so brewing might have ceased, and the opening in the north face of the western extension re-instated in the last decade of the 19th century.

A number of small outbuildings, probably of this date, were dispersed around the peripheries along the garden walls of the house and around the gatehouse (Plate IV). The evidence for these is mostly photographic and cartographic (Plate I). The early-19th-century painting (Plate III) shows something of the cluster of small structures that lay to the west of the gatehouse: a cottage with gabled dormers and, to its west, a small possible malthouse with air vents etc. in its gable. The remainder of the structures were probably for poultry, pigs etc., although the remains of a brick-built bakehouse situated to the north-west of the gatehouse were seen in a watching brief (photograph in archive).

Period 13: 20th century

The habitable areas of the east wing seem to have shrunk through time with the photographic record showing an increasing number of windows being blocked. By the 1950s, the last date at which the house was occupied, the inhabitants were reduced to living in the four rooms of the east service range, into which a small stair and some modern kitchen and bathroom fittings had been inserted.

The 1883 25" O.S. plan (Plate I) shows the extent to which the property was, already, broken up into a variety of units held by a number of different owners. The date of the photographs in the S. T. Walker Archive indicates

that some of the reinstatement of windows, particularly in the north elevation, was carried out in the 1960s by Dawley Development Corporation before Telford Development Corporation began work on a larger scale in the 1970s.

Summary

The overriding characteristic of the period, in this part of Shropshire, is industrialisation. By the 18th century, despite Madeley Court's early connexion with the innovations of the Brookes, the profits of industrialisation were going elsewhere and, soon, the estate had degenerated into a source of raw materials. The contemporary changes seen in Coalbrookdale are, perhaps, most evident at Madeley Court in the 18th–19th century brewery. The period from 1755 to the end of the 18th century was the period of greatest expansion in the iron trade, which resulted in continual population growth as demand for labour outpaced existing settlement (Trinder, 1973, 181). At the same time, the brewing of beer was shifting from publicans to common brewers (Dunn, 1986, 24), which is also an indication of the widespread intensification of industries of many kinds at this date.

With regard to the most recent developments at Madeley Court it is interesting to note that, after so many changes of use over the last five centuries, the function of the building has come full circle and, once again, it provides hospitality to the wealthy and privileged. The fragmentation of ownership has also been reversed, with the buildings (although not the estate) now restored to single ownership.

APPENDICES

THE DOCUMENTARY EVIDENCE

By CHRISTOPHER PHILLPOTTS

1: The Medieval Period

In *c*.729 a landholder called Sigward, described as a companion (*comes*) of the King of Mercia, sold three *manentes* or hides of land (about 360 acres) at *Magdalee* to Abbess Milburga of Wenlock Priory for a large sum of money. He had a charter for the land which he endorsed with a memorandum of Milburga's purchase and handed over to her. This charter is now lost, but the acquisition is noted in Milburga's narrative with a list of witnesses headed by King Ethelbald of Mercia and Bishop Wealhstod of Hereford, which appears to be genuine for this date (Finberg, 1961, 148 nos. 429, 203, 206, 212: Sawyer, 1968, no. 1802).

This is the first known written reference to Madeley and the beginning of its association with Wenlock Priory, whose property it remained until the 16th century. A monastery was founded at Wenlock before 690 on land bought from Merewald, Under-King of the Magonsaete, and his daughter, St. Milburga, was the first Abbess. A Danish raid destroyed the monastery in *c*.847, and Earl Leofric of Mercia refounded it around 1017–35. After the Norman Conquest Earl Roger of Shrewsbury transformed it into a Cluniac Priory (Morley, 1985, 8–9; Thorn, 1986, 3Cn).

In 1086 the manor of *Madelie* consisted of four hides of arable land, one of which was not taxed for the geld. Domesday Book gives the population as six villeins, four bordars and four slaves, probably all heads of households, and there was enough woodland to fatten 400 pigs (Thorn, 1986, 3C.4). The parish was to remain well wooded until the 18th century. There is no mention of a church but this does not necessarily mean that none existed.

Wenlock Priory lay within the diocese of Hereford, and Madeley lay within the royal forest of Mount Gilbert (The Wrekin) until 1301. In the 12th century the Prior held it as *Maddeleye* or *Prior's Madeley*. In the 15th century Madeley and the other Priory properties were consolidated into Wenlock Liberty (Eyton, 1856, **iii**, 319–20; Fletcher and Auden, 1907, 120–1; *VCH Salop*, **IX**, 35; Thorn, 1986, 3Xn, 3C.4n).

Unfortunately, there is little documentary evidence for the Madeley Court buildings and their surrounding landscape, because there is no extant cartulary for the Priory, and only miscellaneous deeds and surveys survive. The clearest information about Priory lands survives from the periods when they were in royal hands because of a vacancy in the sequence of priors or because of the alien status of the Priory as a member of the Cluny family. Royal escheators did not occupy the Priory lands during vacancies until the death of Prior Humbert in 1261. Under Prior Humbert, Wenlock Priory enjoyed perhaps its greatest period of prosperity, with the rebuilding of the Priory church making it the largest monastic church in the county, but his successors had problems with debts until about 1295 (*VCH Salop*, **II**, 41–3). After 1261 the Crown claimed the guardianship of the temporalities at every vacancy, and, in the 14th century, the Priory became embroiled in costly disputes with the Crown over its status. The Sub-Prior and monks bought off the claim with a fine in 1272, but the escheator held the lands during the vacancies of 1285 and 1320 (*VCH Salop*, **II**, 40 and n42). The lands were in the possession of the Crown as the property of an alien priory in 1324–5.[1] Royal escheators compiled extents of the temporalities of Wenlock, including Madeley, during the vacancy of 1370, and as an alien priory in 1379.[2]

The Priory expanded its holdings in the 13th century, and it has been suggested that the town of Madeley was one of the Priory's plantations of this period (*VCH Salop*, **II**, 41). The open fields of the original settlement of Madeley were probably accessed from two southward loops from the Wenlock-Shifnal road. The church stood on one of these, probably adjacent to the first farmsteads of the village (*VCH Salop*, **XI**, 27), and the cultivation strips of the open fields are likely to have lain immediately to the south and east of the churchyard. The Priory

held seven carucates of arable land at Madeley and Little Wenlock in 1291 (*VCH Salop*, **II**, 43). In 1370 and 1379 this was assessed as three carucates in Madeley, operated on a three-field system, one third of the land lying fallow at any one time. In 1383–4 the Priory was granting leases of cultivation strips in its demesne lands in these fields and also cottages in the village.[3]

The Priory developed Madeley in the 13th century by clearing more woodland in a series of *assarts*, extending the agricultural land. In January 1250 the Sheriff of Shropshire was ordered to demolish houses the Prior had built within the royal forest at Madeley without a licence, but, in November 1251, the Prior was allowed to retain them for a fine of £100. In 1262 he was permitted to enclose 60 acres of forest land in Shropshire for cultivation, including 8 acres at Madeley.[4] In 1283 he was allowed to enclose his wood there with a small dyke and a low hedge to make a park, which was then restocked with deer by gift of the King in 1290. The park was noted on the 1370 and 1379 extents; the underwood had recently been cut down in 1370. The park stretched to the north, west and south-west of Madeley Court. There was probably an increase in pastoral farming at this time (Eyton, 1856, **iii**, 320; Rowley, 1972, 179, 233; *VCH Salop*, **II**, 41; *VCH Salop*, **XI**, 22, 28, 46).

The Priory was granted the right to hold a weekly market and an annual fair at Madeley in July 1269.[5] It laid out a new town with regular burgage plots on High Street, to the east of the original settlement, in the late 13th century. The fields of Town Croft, Newtown Croft and Burgage Meadow indicate the positions of some of these. In the 1320s 25 tenants held 52 burgages in the 'town of the new market of Madeley'. It probably never expanded much beyond this until the 19th century. Madeley started to acquire its later industrial character when the mining of coal began by 1322, and the mining of ironstone by 1540 (Eyton, 1856, **iii**, 320; Rowley, 1972, 179, 233; *VCH Salop*, **II**, 41; *VCH Salop*, **XI**, 22,28, 46).

The buildings at Madeley Court originated as a monastic grange and were expanded with the addition of a hall, chambers and a chapel in the 13th century. In 1370 and 1379 the manor house was still held by the Priory in demesne, and there was also a garden, producing an income from its herbage and fruits. In 1370 there was a ruined dovecote, but there were no doves in it.

No lease of the house is known before the late 15th century, but it is likely that this followed a series of earlier leases. The commencement of leasing out may be associated with the phase of reconstruction in the early 15th century.

In 1498 the first known lease listed the buildings as a Tower, a Hall, a Parlour, a *Norcery*, a Chapel Chamber, Barns and Dovecotes; it required the tenants to maintain the walls, roofing and timber work under a penalty of £40, payable to the Prior and Convent.[6] A Court Barn and a Dovecote were also mentioned in the 1540s.[7] It was later claimed that, in 1498, the buildings were decayed and they are described as being 'sore in decay' in *c*.1505.[8]

Two fishponds mentioned in 1370 and 1379 were closely associated with the manor house; as was often the case they were positioned at the edge of the park. In 1498 three pools were mentioned. The ponds were retained by pool-dams, and fishing involved the periodic breaking of the dams. Every time the ponds were fished the tenants were required to give the best of each kind of fish to the Prior and Convent and, in addition, they had to feed the swans and cygnets which lived on the ponds and were reserved for the Prior's table.[9] It was usual to drain fishponds of this sort every few years in order to scour the mud from the bottoms, and they were constructed with by-pass channels so that they could be drained without breaking the dams. It was later claimed that the ponds were unscoured at the date of the lease of 1498.[10]

A water-mill let for 10 shillings *per annum* was mentioned in the extents of 1370 and 1379. This was presumably the mill in Coalbrookdale which was still let for this amount in 1539–40.[11] A different mill below the fishponds was let to John le French de Brokton in 1383–4, with the watercourse descending from the fishponds, and the adjacent meadow (probably Mill Leasow), at a rent of 12 chickens a year for life.[12] This appears to have been later leased with the manor house.[13]

The period saw the leasing of demesnes on a large scale, and by 1540 only the home farm at Much Wenlock remained in hand to provide food for the Priory itself (*VCH Salop*, **XI**, 37). The whole manor of Madeley was leased to Robert Moreton and Richard Houghton in May 1498, and to Hugh Leighton of Rodenhurst in August 1534. Meanwhile the manor house was let in July 1533 to the manorial bailiff, John Wilcok, in succession to his first wife's husband, Roger Longley, who had lived there for the previous 26 years. At this time it was referred to as the *Halplace*. Following the Dissolution in 1540 a dispute arose between Leighton and the son of Richard Houghton over which had the rightful lease of the manor. The case was brought before the Court of Augmentations, and Leighton and Wilcok appear to have established their possession.[14]

Wenlock Priory was dissolved in 1540 and its properties passed to the Crown. Wilcok continued in post at Madeley as the Crown's bailiff of the manor.[15] The last Prior, John Bailey, was allowed to live at Madeley Court by Hugh Leighton and was buried at the church in 1552 (Cranage, 1897, **iii**, 205).

Notes

1 PRO: SC6/11127/18.
2 BL: Additional MSS 6164 f192v-193v; 6165 f51–51v.
3 BL: Additional Charter 67032.
4 *Cal. Close Rolls*, *1247–1251,* 256; *Cal. Charter Rolls*, *1327–1341*, 488.
5 *Cal. Charter Rolls, 1257–1300*, 123.
6 PRO: E315/94 f13.
7 PRO: E321/1/ /51 m2.
8 PRO: E315/108 ff45, 51.
9 PRO: E315/94 ff12v-13.
10 PRO: E315/108 f51.
11 PRO: SC6/Hen8/3021 m5d.
12 BL: Additional Charter 67032.
13 PRO: E315/94 fl2v.
14 PRO: E315/94 ff12v-13; E315/108 ff 32–53; E318/5/175; E321/1/21; E321/1/51; LR/184 ff106, 120v; SC6/Hen8/3021 m5.
15 PRO: LR2/184 f106; SC6/Hen8/3021 m4d.

2: The Early Modern Period

After the Dissolution, the manor of Madeley was bought from the Crown in 1544 by Robert Brooke of Claverley in Shropshire, along with the advowson of the parish church.[1] The purchase price was calculated at 20 times the yearly income of the manor, plus the value of the woods and the advowson, to arrive at a figure of £946 3s. 8d.[2] Brooke later obtained a reduction of the sum because of over-valuation. It appears that he bought out the remainder of the leases of Leighton and Wilcok, and occupied Madeley Court as a residence.

Robert Brooke was a noted lawyer, elected Speaker of the House of Commons, made Chief Justice of Commons Pleas in 1554 under Queen Mary, and knighted in 1555 (*VCH Salop*, **XI**, 35). He died in 1558 and was buried in Claverley church under an ornate tomb-chest. Robert's widow, Dorothy, followed him at Madeley until *c*.1572, and their son, John Brooke, another lawyer, then inherited the property at the age of about 34. He died in 1598 and was succeeded by his son Sir Basil Brooke (died 1646), followed by his son Thomas (died 1675). The manor then passed to Thomas Brooke's grandson, Basil, until his death in 1699, and then to his cousin, Comberford Brooke. It was settled on trustees, in 1695, who were empowered to sell lands (*VCH Salop*, **XI**, 35–6). The entire Brooke family were committed Catholics.

It was apparently during the possession of John Brooke that the house at Madeley Court was substantially enlarged and in the time of his son, Sir Basil, that the garden was laid out. The ownership of the estate by John Brooke coincided with the intensification of coal production in Shropshire generally, and the associated expansion of the trade in fuel, and, to a lesser extent, the raw materials of industry such as ironstone up and down the River Severn. The demand for coal peaked at this date, before a 30–year slump at the beginning of the 17th century (Wanklyn, 1982, 3). Documentary references show that John Brooke was selling coal on a large scale in 1570, when a debt of £22 for coal owing to Brooke is mentioned in a Worcester trowman's probate inventory (Wanklyn, 1982, 3). Coals from Madeley were among the first to be shipped to Worcester. John Brooke is also recorded as employing coal miners on the estate from 1579 (*VCH Salop*, **XI**, 46). In 1586 stone was sold from a quarry in Madeley (probably the same quarry used for Madeley Court) for the construction of the house at Kyre Park in Worcestershire (*VCH Salop*, **XI**, 52).

John's son, Basil, was knighted in 1604 and was a leading Catholic courtier in the reigns of James I and Charles I, with some contacts in France. In 1620 he wrote a memorandum concerning the oaths of supremacy and allegiance, and their implications for Anglo-Spanish relations, addressed to members of the royal council.[3] In 1624 during the negotiations for the marriage of Prince Charles with Henrietta Maria of France, he corresponded with Monsieur de Laville-aux-Clercs, the King of France's secretary and counsellor, about the persecution of English Catholics, appealing for the French King's mediation.[4] In the same year the spiritual head of the English Catholics, William Bishop, Bishop of Chalcedon, died in Sir Basil Brooke's house near London. Sir Basil later negotiated, in 1627 and 1635, with his successor, Bishop Richard Smith, about the authority of the Catholic bishops, particularly their jurisdiction over lay Catholics (Bossy, 1975, 56–7, n22). He translated *Entertainments for Lent*, a treatise by a French Jesuit, and dedicated it to Queen Henrietta Maria.[5] In about 1630 Sir Basil was maintaining two priests at Madeley Court, one to serve the family and one for the surrounding countryside (Bossy, 1975, 260).

Sir Basil Brooke was heavily involved in iron-working and other industrial enterprises, and operated four mines in the manor of Madeley. In 1615 he was appointed one of the overseers of the royal ironworks in the

Forest of Dean, and he was also one of the farmers who operated them. Soon afterwards he was manufacturing steel in Madeley under a patent issued to Elliot and Meysey, using pig iron imported from the Forest of Dean, but the steel proved to be of poor quality and the patent was withdrawn in 1619.[6]

In 1628 Sir Basil, with Sir John Wintour and George Mynn, was granted the lease of the Forest of Dean ironworks and woods. He and George Mynn had a wire-drawing business by 1632. The lessees appear to have been charged substantial fines for cutting down trees to feed the iron furnaces. In 1636 they were negotiating with the Government over the amount of their fines and the renewal of the lease. In the course of his petitioning, Sir Basil claimed among his achievements in the manufacture of steel, wire and soap, and in the fishing business, that he had also successfully operated a royal mine in Ireland.[7] No new lease was obtained, and the three lessees subsequently fell out and engaged in litigation. The case between Sir Basil, Sir John Wintour and George Mynn was still proceeding in the House of Lords in 1643.[8]

In 1631 and 1635 Sir Basil was involved in a venture to make soap by a particular process, for which he and his associates were granted a 14–year monopoly.[9] In 1636 he obtained a royal warrant to dig for ore in the counties of Cumberland, Westmorland, Yorkshire and Lancashire. He was also the co-owner of a fishing boat of Yarmouth, which was captured at sea by the Dutch.[10] In 1638 he was entering a new partnership for the manufacture of bar-iron.[11]

Sir Basil Brooke of Madeley was a supporter of the Royalist cause. He was treasurer of the contributions made by English Catholics to the King's war effort in Scotland. He was taken prisoner at York on the order of Parliament in January 1642. He was later involved in a Royalist plot and imprisoned in the Tower of London in January 1644.[12] In 1645 Brooke's tenants were discouraged by the County Committee from investing in his mines, and his iron- and steel-workings were sequestrated by the Parliamentarians when they occupied central Shropshire. There is some suggestion that Madeley Court itself was occupied by Royalists and the County Committee in the 1640s (*VCH Salop*, **XI**, 38).

In the Civil War Madeley was garrisoned by the Royalists in February 1645, but they abandoned it after the fall of Shrewsbury later that month. In April the church was occupied by a troop of Parliamentarian soldiers. A hoard of early-17th-century coins found at Madeley in 1839 probably reflects the turbulence of these times (see p. 75 below). In July 1646 Sir Basil Brooke was named as one of the Catholics who had been in arms against Parliament, and whose estates were therefore to be confiscated, but he died shortly afterwards.[13] Part of his tomb monument is incorporated in a wall of the 18th century church at Madeley. The manor, which was assessed in 1651 as having had £10,000 of debt ten years previously, was inherited by his son, Thomas, who was petitioning the Court of Sequestrations for his case to be heard in March 1647 and June 1648.[14] Some of Sir Basil Brooke's land in Shropshire was still under confiscation in 1660.[15] Thomas forfeited his estates for treason against Parliament in 1652, but soon recovered them from a speculator in forfeited land (*VCH Salop*, **XI**, 35; Firth and Rait, 1911, **ii**, 592). There are no surviving records connecting him with industrial or mining operations, and he died in 1675.

The manor then came to his grandson, Basil, a minor at Thomas's death. The second Basil Brooke was the last lord of the manor to live at Madeley Court before the estate passed, first to cousins, and then out of the family altogether. The fortunes of the family began to wane with the Civil War and had run their course by the end of the century. Basil is described as spending great sums of money 'in digging and winning coal' and Wanklyn argues convincingly (1982, 4) that it was the expense involved in prospecting for coal around Madeley Court, where the deposits are deeper than those previously exploited in the river banks, that finally resulted in the breaking up of the estate.

In 1695 the indebted manor was placed in the hands of trustees, who were directed to maintain the coal and iron works, but were empowered to sell land. On Basil Brooke's death, without an heir in 1699, the estate passed to a cousin in Staffordshire, and in 1705 the trustees sold off Madeley Court and 520 acres surrounding it (*VCH Salop*, **XI**, 37).

There are some indications of the gardens and grounds of the house in the survey of Madeley Manor drawn up in advance of the proposed sale in May and June 1702.[16] Fields in the demesne lands included Upper Conygraye, Dove House Meadow, Windmill Leasowe, Upper Pool, Upper Pool Park and Lower Pool Park. There were also Walks totalling 11 acres, 2 rods, 16 perches. Some of these names survived to be recorded in the Tithe Apportionment Survey of 1849 (prepared in 1847). This indicated that the rabbit warren or Conygraye lay to the north of the house, the Dovecote to the east and the fishponds to the south.

Madeley Court was sold by the manor's trustees to Matthias Astley in 1705, and the house subsequently became a tenanted farmhouse. The Brooke family held the manor until 1727, when it was divided among a number of heirs. The manorial rights were reunited by the purchases of Richard Reynolds in 1780–1 (*VCH Salop*, **XI**, 35–6, 60). The parish of Madeley remained in the Liberty or Franchise of Wenlock, and formed part of the municipal borough of Wenlock until 1966 (Bagshaw, 1851; *VCH Salop*, **XI**, 21).

Notes

1 *LHP*, **xix** (1), 635, calendared from PRO: C66/744 m29; 18th century translation at BL: 15553 ff91–95.
2 PRO: E318/5/175.
3 BL: Additional MS 21203.
4 BL: Kings MSS 134 ff292–293, 448v-450v; 135 ff24v-26.
5 *Notes and Queries,* 3 series, **iv**, 1863, 81; *DNB*, **ii**, 1321.
6 *Notes and Queries,* 3 series, **iv**, 1863, 81; *DNB*, **ii**, 1321; *Cal. State Papers Dom., 1611–1618*, 288, 555; *1619–1623*, 18, 57; *1628–1629*, 161, 163; *VCH Salop*, **XI**, 48.
7 *Cal. State Papers Dom., 1631–1633*, 502; *1633–1634*, 484; *1635*, 250, 253, 262, 276, 308, 309; *1635–6*, 23.
8 *Notes and Queries,* 3 series, **iv**, 1863, 82; *Cal. State Papers Dom., 1636–1637*, 256; *1637–1638*, 53; *1640*, 72.
9 *Cal. State Papers Dom., 1635*, 434; *1635–1636*, 546.
10 *Cal. State Papers Dom., 1625–1649*, 533, 542.
11 *Cal. State Papers Dom., 1638*, 395.
12 *Notes and Queries*, 3 series, **iv**, 1863, 81; *DNB*, **ii**, 1321.
13 *DNB*, **ii**, 1321.
14 PRO: SP20/5 1 143.
15 PRO: SP28/218.
16 SA: 210/1.

THE WALLED GARDEN

By PAUL STAMPER

Immediately west of Madeley Court – or, more specifically, of its forecourt and lost west wing – is an early 17th-century walled garden. While effectively no documentary or archaeological evidence has been discovered relating to this, the surviving architectural components are sufficient to indicate that it was of some considerable sophistication, and perhaps splendour.

The garden is roughly square although slightly longer than wide, *c*.80m. east-west by 65m. north-south. It is brick-walled, using hand-made bricks 9½ × 4½ × 2½ inches. No particular bonding system is employed. At least to north and south it is raised off stone foundations, and to the north, where the ground falls away, it has external brick buttresses, well shown on a photograph of 1896 (SA: PH/M/1/7 – Frith Purchase). By the 1980s the garden walls were in disrepair and had lost their top courses. As subsequently rebuilt the north and south walls rise in several steps to a maximum height of almost 4m. at their west ends. They have been rebuilt with a triangularly-coped brick top, although it is possible that some fragments of triangular stone coping from the dump in the 19th-century cellar represent the original finish to the top of the wall.

At the west ends of the north and south walls, and contemporary with them, are ornate stone doorways (Pl. VI, the northern example). The use of classical gateways in gardens was introduced into England by Jones at Arundel House between 1615 and 1619 (Strong, 1979, 171). The northern doorway is the better preserved (that to the south was heavily restored in 1989), and comprises a square-headed door surround, with shallow fluting and a segmental pediment above. Set within the pediment is a plain, raised shield. Above the door head is an architrave supported on a pair of brackets. On stylistic and comparative grounds a date of *c*.1620–40 is suggested (e.g. Gotch, 1901, 83, Pl. 22). Set in to the east side of the outside of the doorway are two iron hinge pins, suggesting that the garden door opened outwards. Unfortunately, as is the case with the south doorway, the exterior decorative doorway surround has been removed, leaving a void or scar. To either side of the north doorway are shallow brick piers, perhaps elements of a porch-like structure. Both doorways are blocked with bricks of the same type as those used in the wall and bonded with lime mortar. Until the mid-20th century there was a small, undecorated doorway in the north wall to the west of the house. This was originally mirrored by one in the south wall, and a door in that position, constructed of wooden planks, can be seen on a photograph of the early part of the 20th century (SA: PH/M/1/7, neg. B2622).

It is impossible to identify definitely a function for the structure S4 on Fig. 4, the west-facing, single-storey structure in the north-east corner of the garden, the archaeological evidence for which is described above (see p. 44 above). It is also unclear whether, above its footings, it was stone- or brick-built. Nevertheless, its general form, especially the two ground-level openings and the internal fireplace, does offer some evidence that it was an orangery, or greenhouse. In such structures tender, tub-grown evergreens, such as orange or lemon trees, would be placed through the winter months to prevent frost damage. Orange trees were introduced to the British Isles in 1562 by Sir Francis Carew of Beddington (Surrey), and the construction of special structures to overwinter them presumably began soon after, although the rarity of their mention in sources until the earlier 17th century suggests that they may have been a rare and unusual feature within gardens for half a century or more after the orange tree's introduction. The first certain mention of an orangery found by Woodfield in his survey of garden buildings (1991, 131–2) was that designed by Isaac de Caus and under construction at Somerset House, London in 1611–12. In Shropshire the first certain reference comes only in 1698 in Celia Fiennes' description of the Abbey Gardens in Shrewsbury, although ten years earlier a 'glasshouse' was mentioned at the Newports' mansion at Eyton on Severn (Stamper, 1996, 39). If, therefore, the Brookes did have an orangery at Madeley Court in the early 17th century it was indeed innovative.

Plate VI Internal face of gateway in north wall of 17th-century garden, *c*.1900 (S. T. Walker Collection)

The form and function of structure S5 (on Fig. 4) is even more problematic, and it poses more questions than can be answered. Why, for instance was stone – in fact ashlar – employed, rather than the brick used for the garden walls? Does the projection mark the position of an external stair? Were the balusters found in the vicinity from the parapet around a flat roof? Was there a room within – some form of pavilion or summerhouse – or was it a solid mass of masonry supporting some form of viewing platform? It would certainly seem curious for there to be a platform at this point, asymmetrically placed to the likely garden plan and anyway offering a view little different to that from the house.

In the centre of the garden is the strikingly large stone polyhedral sundial discussed below by Dr. Somerville (pp. 61–65), roughly 4ft. square and originally gaily painted and set with a large number of gnomons which enabled the date, time and perhaps other reckonings as well to be read. In its scale and complexity this was indeed an exceptional instrument, of a type normally only encountered in royal gardens. Here at Madeley it must have been a thing of wonder, and known, at least by reputation, to all in the county who aspired to scientific knowledge.

In both episodes of excavation efforts were made to investigate the interior of the garden archaeologically, but cultivation in the 19th century and later seems to have removed all traces of earlier arrangements, including its original plan. However, at least the main elements thereof can be reconstructed with confidence. Firstly, this was clearly a privy, or private, garden, whose high walls not only precluded those outside from looking in, but also confined the view of those inside to within the compass of its four walls. As far as can be seen (setting aside the possibility that S5 incorporated a viewing platform on its roof), and in contrast to near-contemporary Shropshire gardens such as Shifnal Manor, Eyton on Severn, or Moreton Corbet (Stamper, *op. cit.*, 9–13), no provision was made at Madeley, through such structures as mounds, raised walks or tree houses (as at Dothill and Pitchford), to look not only down upon the garden, but also outward to the natural world beyond. However, the garden would, of course, have been visible from the west wing, and its position, together with the excavated evidence of 'a high quality of internal decoration', suggests that some of the finest apartments at Madeley Court

in the early 17th century were here, especially on its first floor. Such an arrangement would mirror those at Moreton Corbet and Condover Hall, to choose purely Shropshire examples, where formal gardens were overlooked from first-floor galleries.

The sundial's central position indicates that the compartment was divided into quarters by paths, by far the commonest arrangement in such gardens. Many examples appear in the 'estate paintings' made from an imagined elevated perspective which were so popular in the 17th century; a good example, comparable in scale and status, is at Durdans House, Epsom, Surrey, probably laid out in the 1630s (Strong, 2000, Pl. 170). A principal gateway, long missing, presumably lay at the east end of the main axial path down the garden, giving access to it from the forecourt. There was presumably also a path around the perimeter of the garden, incorporating what was probably the most important walk, between the two fine doorways at its west end. From this walk there was a view back to the house across the garden, the quarters laid out as symmetrical parterres with low box hedging around flower beds. Rising up in the centre of the garden was the brightly-painted sundial, probably carved from locally-quarried stone at about the time the garden was laid out. Sundials were popular garden features at this time, both as chronometers and as symbolic reminders of the passage of time in landscapes devoted to relaxation and contemplation (see Strong, 1979, 211; Henderson, 2005, 180–1; for Shropshire sundials, Stamper, *op. cit.*, 10–11), but Somerville's report makes clear what an exceptional example Madeley's was, in its scientific ingenuity and complexity, in its probable rarity, and in its sheer scale.

Among the unresolved questions raised by the garden is that of what the two doors at the west end of the garden led to. Both bear evidence that their outer cases were decorated, indicating that the owner and his guests passed to and fro through them from the main garden to walks or other compartments beyond. Among the adjuncts that might be expected are a bowling green, one or more orchards, a kitchen garden and, perhaps, a wilderness, planted with shrubs and cut through with straight paths.

If the garden's construction, complete with sundial, is to be placed in the 20 years after 1620 this is unequivocal evidence that it was commissioned by Basil Brooke. What is at present known of him suggests a man of wide interests, learning, and just the kind of contacts which would have made him aware of the latest ideas and fashions, including in garden design.

THE SUNDIAL

By ANDREW SOMERVILLE

This sundial is a cube of stone, with sides of about 4ft. (1.195 × 1.190 × 1.180m.), topped by a hemispherical dome 3ft. in diameter by 18in. high (920 × 460mm.), which is cut from a separate piece of stone and cemented to the main block. There is a hole on the top of the dome which would have held a vertical pin gnomon. The block is oriented true north-south. The north face is blank: no trace of inscription or carving could be seen. The upper face and dome are also devoid of inscription. The west, south and east faces (Plate VIIa, b and c, and Plate VIII) have hemispherical central hollows 26in. in diameter and 12½ in. deep (660 × 320mm.), surrounded by other hollows. The south side has four smaller hemispheres at the corners, though some of the corners, together with parts of these hollows, have been broken off. These hemispheres, together with the central hollow, have two fixing holes, one central and the other above it, which would have been used to mount triangular gnomons. This side also has escutcheons hollowed in the centre of each edge, two top and bottom and one on each side. These have a flat base and no fixing holes, and probably carried painted coats-of-arms.

The central hollows on the east and west faces have holes on their edges, diametrically opposed at an angle of 52–53°, in which bar gnomons would have been fixed at the angle of latitude (52° 40' for Madeley Court). They also have central holes which could have been used for pin gnomons to show the altitude and azimuth of the sun. These sides have other hollows around their edges in a variety of shapes: triangles, squares or hemi-cylinders with triangular or semi-circular decoration on their sides. Many of these also have fixing holes for the appropriate bar gnomons. The block stands on pillars 15in. (380mm.) high: a drawing in Gatty (1900) shows these resting on a raised circular base, but this is now (1988) totally overgrown. The underside of the block is badly cracked, and has been clamped at some time with iron bands set in lead, which have now rusted away. There are no lines, numbers or inscription visible on the dial, other than some superficial scratches in the central hollow on the south face, which resemble a network of declination and hour lines. However, as these are on the upper part of the hemisphere, where they could not have been functional, it is likely that they are recent graffiti.

This sundial appears to be the only one of its kind still existing: even within Scotland, where large stone dials with numerous hollows are more common than in any other European country (Somerville, 1978), there are no obvious parallels.

The sundial is assumed to be contemporary either with the mid-late 16th century house, or with its walled garden, which was probably enclosed *c*.1620–30. No documents seem to have survived from these periods; the earliest known depiction of the sundial, where it appears exactly as it does today, is a drawing of 1834 (Northants. R.O: Hartshorne Papers, **22**, 25), while the earliest written reference to the dial is in a 19th century *Archaeological Journal* article (Blunt, 1854), which gives only a factual description.

The only other English free-standing stone dials which can be dated to the 16th century with reasonable certainty are at Elmley Castle in Worcestershire, Marrington Hall in Shropshire and Iron Acton near Bristol, but these are all completely different in style, from each other as well as from the Madeley Court dial.

The art of making such multiple sundials is thought to have been brought to England in about 1517 by the German mathematician, Nicolaus Kratzer, who became 'astronomer and deviser of the King's horologes' to Henry VIII in 1519 (North, 1978). He is known to have made a number of stone multiple dials, none of which now survives, with the possible exception of the cube dial found at Acton Court in the 1980s, which carries the date 1520 and the initials 'NK' (Rodwell and Bell, 2004). The earliest printed books on sundials, such as Oronce Fine's *Automathesis* of 1532, have diagrams of multiple dials with domed tops like that at Madeley Court; in these the tip of the vertical pin gnomon would have cast its shadow on a set of declination lines around the north side of the dome, enabling the date as well as the time to be read. Later 16th and 17th century

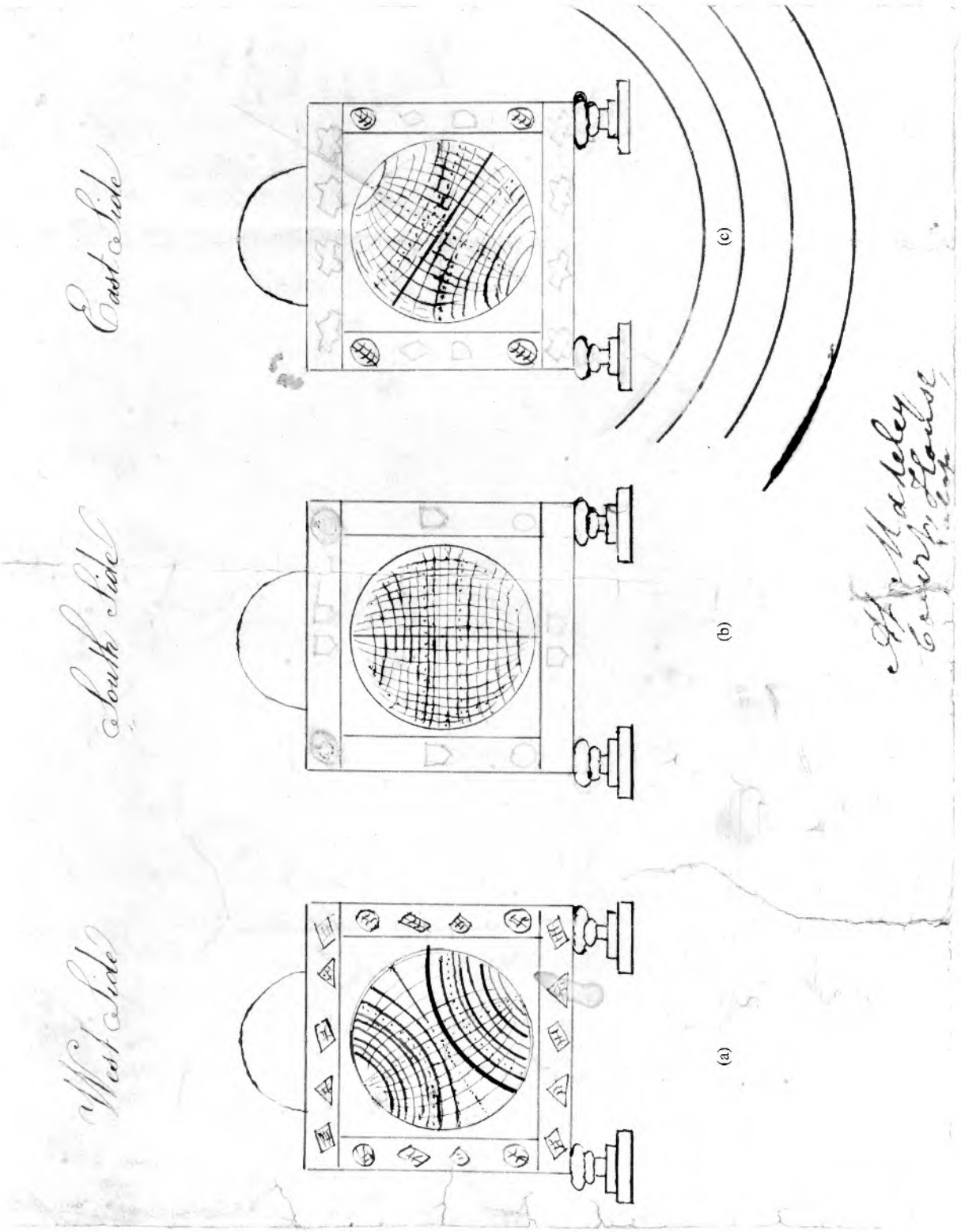

Plate VII The sundial (a) west side (b) south side (c) east side

Plate VIII The sundial, west side, 1986 (Cameron Moffett)

books give details of how to set out concave and convex dials though, as Kratzer himself incorporated hollows in some of his dials, the methods were clearly well known before they found their way into print.

In *The History of the King's Works 1485–1660* (HMSO, 1975, 1982) there are numerous references, taken from the Royal accounts, which show the existence of such large stone dials in the late 16th and early 17th centuries. Thus, at Hampton Court in 1629–30 Richard Chamberlayne, mason, erected a dial which seems to have been 3ft. (900mm.) high and wide, with a concave on top, 28in. (700mm.) in diameter, and eight other small concaves on the sides. In 1631–2 another dial was built by John Marr, mathematician, which had 'nine lardge Hemispherical Dyalles and eight large plane Dyalls upon a great stone of Portland cut into viij Canttes wch demonstrate divers and sundry conclusions to bee performed thereby with the Northern Constellations in the great dyall and twoe mappes in other twoe of them with divers Ornams…'. St. James's Palace also had a similar dial made by Marr in 1629–30. All of these were elaborately painted and gilded and protected by wooden 'houses', presumably when the Court was not in residence. Even larger dials were made for walls, one at Oatlands House, Surrey, being 24ft. (7.2m.) in diameter.

The most complete description of a sundial to have come down to us is of the great dial in the Privy Garden at Whitehall, published in 1624 by Edmund Gunter, a noted mathematician (Gunter, 1624), and the dial he

describes has a remarkable resemblance to the Madeley Court dial. It was approximately the same size: 'The base of it is a square of somewhat more than four foote and a halfe; the height three foote and ¾'. It also had numerous concave dials, including a large one on the top instead of a dome, though it had plane dials as well, and a number of ready reckoners to give, for example, the day of the week for festivals, and the time of the southing of the moon. From this the correction for using the dial at night by moon-shadow could be obtained, as well as the time of high tide at any port for which the 'port establishment' was known (see Somerville, 1986).

Such dials could give the hour, in any of the common systems then in use: equal hours from midday, sunrise or sunset (Babylonian or Italian hours) and the old unequal hours by which the daylight was divided into twelve 'hours' which varied in length according to the season. They could also indicate the time of sunrise and sunset, the length of the day, the date or sign of the zodiac which the sun was entering, the altitude and azimuth of the sun, and the local time of noon in other countries. There was also included a dial to show 'the proportion of shadows to their bodies' which could be used for calculating heights from the length of the shadow cast. Many of these dials could be used in the 'reverse' sense, i.e. the date when the sun rose at a certain time or at a certain azimuth could be found. While the Madeley Court dial is not as elaborate as this, it would, no doubt, have shown many of the same features.

Gunter also gives details of how his dial was painted: black hour lines, red declination lines, blue for Italian hours and yellow for Babylonian, with green for unequal or planetary hours. The background between the declination lines was to be white and, outside these lines, blue. The Madeley Court dial would certainly have been painted in a similar fashion. Many of the dials of the 16th and 17th centuries show no trace of incised lines today, even though they may be of a hard stone which has weathered well. This is undoubtedly because the lines and numbers were painted. Gatty (1900) says of the Madeley Court dial that 'the position of the moon in relation to the planets can also be ascertained', and another account claims that it has a series of holes which pass through the block and were used to determine the positions of the planets and moon. The source of this story has not been traced, but it smacks of the sort of legends which grew up round these complex dials whose use was not properly understood – similar tales are told in connexion with Scottish multiple dials. There are no signs of holes passing through the block at present; the only holes are those clearly intended for mounting gnomons. To sight the moon and the planets would require some sort of movable vane or volvelles, of which there are no traces.

Gunter says of the Whitehall Dial:

> 'The stone whereon the Dials are described, is of the same length, bredth, and depth, with that which stood in the same place before…it is also wrought with like the like Plaines and Concaves as the former, and so necessarily, the like lines to shewe the houre of the day. But the rest of the lines are much different…'

This earlier dial was repainted by George Gower in 1595–6 (*The History of the King's Works*, **IV**, 318), and it is mentioned by travellers in 1584 and 1620. It may even have been designed by Kratzer himself (see Strong, 1979, 35 and 38). As it is so similar in form to the Madeley Court dial, it is evident that, as far as the scientific content is concerned, the latter could have been made at any time from 1520 onwards. The decorative use, however, of small dials in triangular and other geometrical forms (not mentioned in connection with the Royal dials) recalls the symbolism of early Jacobean gardens. Although the sculpture provides insufficient evidence to date the dial precisely, its four-square solidity has a 'feel' which is more Jacobean than Elizabethan, and such evidence as exists from the accounts quoted in *The History of the King's Works* suggests that the fashion for such large stone dials lasted from perhaps 1570 to the Civil War: there is no mention of them before or after that period.

These multiple dials would have been less practical as timekeepers than the large wall-mounted dials commonly used for regulating clocks at this period. No doubt they had their uses as decoration and as 'conversation pieces' but, given the intellectual atmosphere of the time, which made great use of symbols, often associated with magical practices, it is likely that they also had a deeper significance. Symbolism may have been important in relation to the Scottish dials (Somerville, 1987), where there could have been local factors at work; whether the same arguments apply in England is less certain because few dials of their sort survive here, but Strong (*op. cit.*, 123) says of the Jacobean garden at Wilton, made by the Earl of Pembroke between 1601 and 1620, that it was described by a contemporary as geometrical and emblematic, with references to circles, triangles, quadrangles, orbs and ovals, in which it was possible to read 'both divine and moral remembrances'. Circles, triangles and quadrangles are the shapes found on the Madeley Court dial. These were also associated with the 'art' of Raymond Lull, which became a cult among philosophers in the 16th and 17th centuries (Yates, 1966).

Strong states that 'Between 1600 and 1620 there was evidently an immense fashion for the large-scale geometric garden, often laid out with deliberate symbolic intent' (Strong, *op. cit.* 124). It may be that the walled

garden at Madeley Court was of this type and date, with the sundial as its centre-piece. The dating of the north-west gate in the garden wall (*c*.1620–40) would suggest that, if the two were contemporary, then the sundial must be a product of the very end of the period in which these gardens were popular. By 1630 the fashion had changed to water gardens and the garden at Wilton was remodelled as such in 1632–5 by the hydraulic engineer Salomon de Caus, using statues by Nicholas Stone. In any case, the dial is unlikely to be later than 1640, when the various episodes of construction undertaken by the Brookes came to an end.

Nicholas Stone (1586–1647) took down the earlier Whitehall dial in 1622 and rebuilt it to Gunter's design, although, according to Stone's great-nephew Charles Stokes, 'the famous Mr Marr erected the Lines' (Walpole Soc., 1919). He also noted at the same time, around 1669, that 'the fine Diall now stands Ruin'd in the privy Garden at Whitehall'. Stone became master mason to Charles I in 1632 and was a sculptor noted for statues and monumental effigies, examples of which survive all over the country today (Fryer, 1912). He left a notebook and account book in which he gave details of his work year by year, together with the amounts which he was paid. He received £46 for the Whitehall dial in 1622 and, in the same year, he made two others, one for 'my Lord Brook in Holborn' (probably Fulke Greville of Warwick), for which he was paid only £8 10s., so that it was presumably less elaborate than the Whitehall dial. He does not mention working in Shropshire, apart from the production of a tomb effigy at Acton Burnell, but it is at least possible that the Madeley Court sundial might have been sculpted, if not by him, at least by one of his pupils, who copied the Whitehall dial, incorporating his own modifications.

THE MADELEY COURT COLLIERY

By IVOR BROWN

After the break-up of the manorial estate, in 1705, all minerals within a 500 yard radius of the house were sold. The minerals included coal, ironstone, fireclay, brickclay and sand, but they remained unworked until taken over by James Foster, a prominent Dudley ironmaster. He purchased the property on 25 March 1828, ostensibly to live there, but began exploitation of its assets in 1840. He died, unmarried, in 1858, and the estate passed to his nephew, William Orme Foster. Anecdotal evidence suggests that James Foster intended to protect the house itself at the centre of his mineral 'take', but his nephew apparently felt that the underlying coal would be of 'more value than the damage he will do to the building' (Coal Commission Report, 1871), and a rapid process of undermining began on the principle that a swift total extraction would cause less damage than protracted partial extraction. W. O. Foster died in 1889 and was followed by his son, William Henry Foster.

The Colliery Operations

Madeley Court was a 'colliery' in a true Shropshire sense – one mine with one mine manager, but with a number of operational pits, usually self-contained, each producing coal and/or ironstone under the control of a contractor or chartermaster. Madeley Court had a total of seven pits with a total of seventeen shafts.

The two ironstone seams worked at the Court Pits seem to have been the principal reason for the operations. These were the Pennystone Seam and the Crawstone Seam, of which the former was by far the more productive. These workings were largely 'gas-free', except near the geological faults which passed through the area.

At first the products of the mines were transported, via the adjoining canal, to Foster's furnaces at Wombridge. However, after complaining to the canal company about their high charges and the low power of the inclined-plane engines at Stirchley, he decided to transfer his furnaces to the Madeley site where they became part of the 'Court Works' (Plate IX). They were moved in 1843 and continued in blast until 1902, before being dismantled in 1904.

In about 1860 the Coalport Branch Railway Line was constructed through the mining area, on an embankment almost at the level of the top of the tips, but there was no rail connexion to this from the Court Works as these were already connected to the Madeley-Lightmoor Branch of the Shrewsbury and Birmingham Railway, opened in 1854 with a station and siding on the northern boundary of the site.

By 1851 500 people were employed at the site, but it is not known how many were involved in mining operations and how many were employed at the adjoining Works, which had its own manager. In 1894, well past the 'boom years' there were still 252 miners employed at the remaining Court Pits.

Inevitably the mine suffered its share of serious incidents and fatalities. An explosion killed two men in 1846, and, in 1864, the beam of one of the engines broke falling down a shaft, which it blocked completely. Fortunately the workers were able to escape by the second shaft of the pit. In 1888 a miner was seriously injured while carrying some explosive powder – a boy threw a piece of lighted fuse at him causing the powder to ignite. As late as 1911 Ben Bennett, working as a pumper in the Water Shaft, fell down the shaft and was drowned. His body had to be brought up by means of a hook. These are examples only, for it is known that over 20 miners died in accidents here.

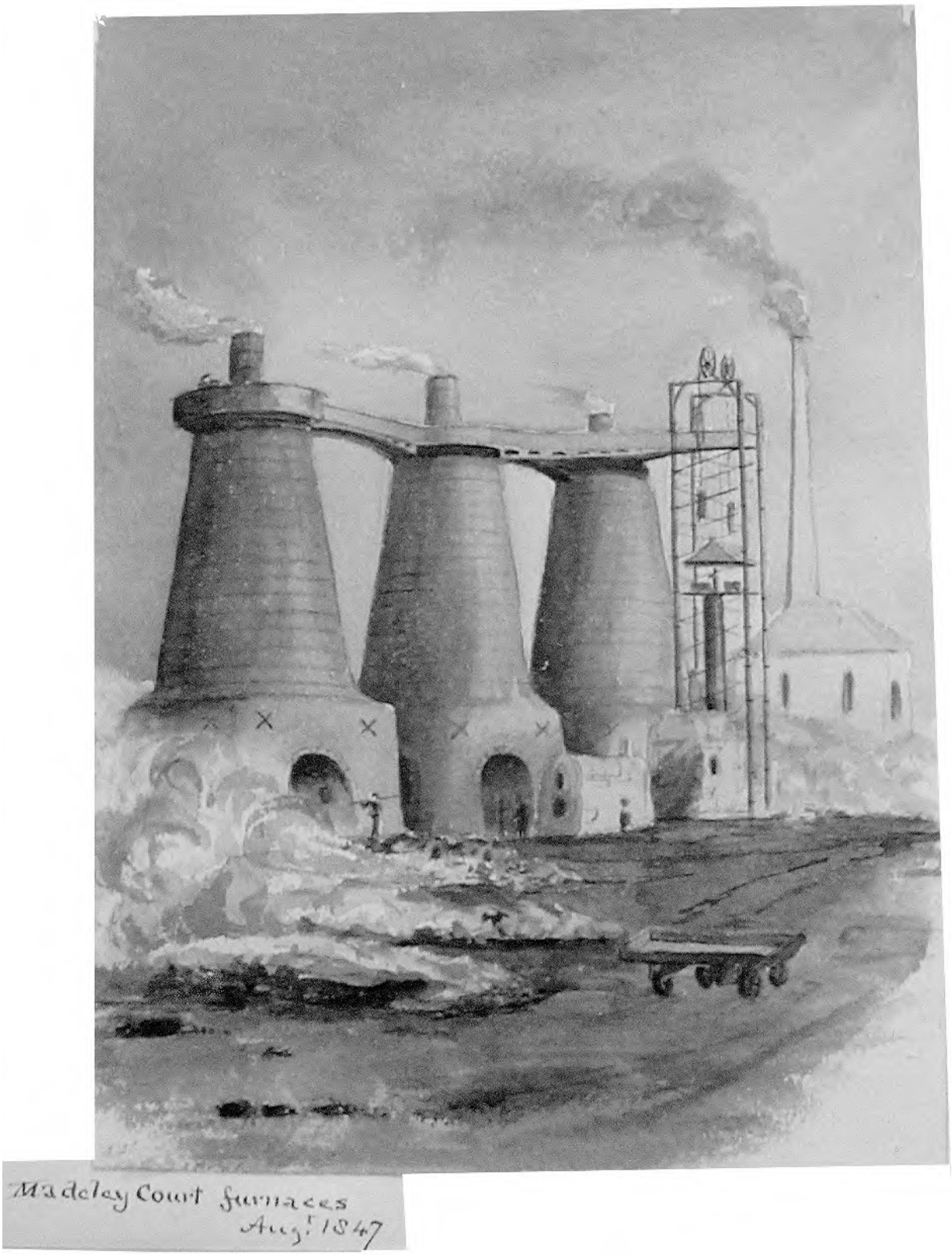

Plate IX The Madeley Court furnaces, 1847 painting by Warrington Smythe (Ironbridge Gorge Museum Trust: 1992.9786)

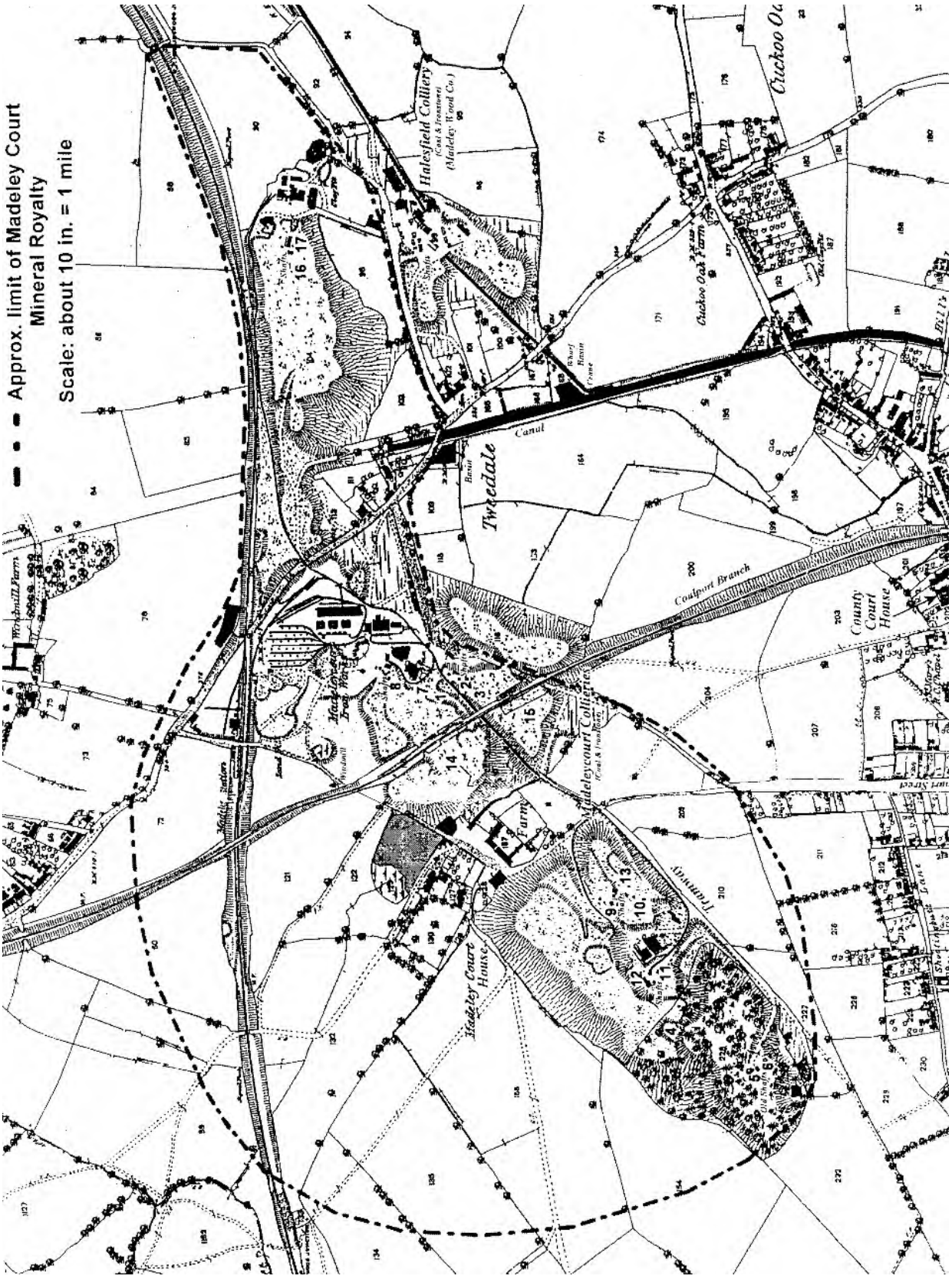

Plate X The Madeley Court Mineral Royalty (K. Lake and I. Brown)

The Shafts (Plate X)

Seventeen shafts were sunk between 1840 and the 1870s, and they were numbered consecutively and chronologically, although the actual dates of sinking are not known for most (Plate X). The shafts were worked in pairs (except No. 1, the Water Shaft, and No. 4, a trial). Ironstone mining seems to have ceased about 1905, and coal-working was officially abandoned in 1911, although many shafts had ceased to be worked long before this.

No.1 – Water Shaft
(SJ 698 005)
This was used solely for raising water. There was a steam engine on this site.

Nos. 2 and 3 – Platform or Gypsy Lane or Bailey's Pit
(SJ 6982 0513)
These shafts produced both ironstone and coal. The stone was taken from the shaft over the bridge to the adjoining mound by horse and cart. It was sorted by women pickers, loaded into iron boxes and carried on the head by girls to be built into ranks. Each rank was made up of walls of large stone *c*.3ft. high which were filled with small stone. After a rank had weathered for several months another rank would be added – this process would continue up to four ranks in height when the girls had to use timber planks to reach the top. When sufficiently weathered the stone was calcined (burned to remove impurities) near to the furnaces. There was a steam winding engine at this site.

No. 4
(SJ 6932 0480)
This was probably a trial shaft.

Nos. 5 and 6 – Holmes' and Dainties' Pit
(SJ 660 472)
These shafts had closed by 1882. There was a steam engine at this site.

Nos. 7 and 8 – Furnace Pit (the shafts closest to the Blast Furnace)
(SJ 6980 0521)
These were worked by Bowen and Buckley. The No. 7 shaft was 706ft. deep by 8ft. diameter, and No. 8 was 709ft. deep by 8ft. diameter, furnace ventilated. There was a steam engine at this site. Sixteen men worked underground, and twenty-two on the surface working Clod Coal and ironstone as late as 1905. By 1910 fourteen were employed underground and sixteen on the surface. These were the last shafts worked.

Nos. 9 and 10 –Hopley's Pit
(SJ 6955 0486)
Both shafts were 696ft. deep by 8ft. diameter. No 10 was abandoned in 1894 and No. 9 in 1903. The steam engines for these and Shafts No. 11 and 12 were back to back, with vertical cylinders and two arms for starting and stopping.

Nos. 11 and 12 – Guy's Pit
(SJ 6950 0492)
Both were 503ft. deep and No. 11 was 7½ ft. diameter while No. 12 was 8ft. No 12 was almost certainly sunk in 1872. No. 11 was abandoned in 1903.

Nos. 13, 14 and 15
(Positions uncertain)
These were probably near the standard gauge railway.

Nos. 16 and 17 – Guest's or Foster's Pit
(SJ 7010 0582)
These were the easternmost shafts and were used for both coal and ironstone. Both were 867ft. deep and 8ft. diameter. They were very close to shafts operated by the Madeley Wood Co., and an agreement was made in 1893 to share the cost of de-watering. By about 1903 the Madeley Wood Co. took over these two and continued to use them for drainage purposes.

Surface Equipment

In 1882 the surface equipment for the entire colliery consisted of one ‘old’ and one more recent water engine and seven winding engines. All were powered by steam. A number of horse-drawn tramways connected the operations.

Surface Remains

The dominant features remaining from the mining activity are the ‘pit mounts’ or waste heaps whose current tree-cover is partly the result of deliberate plantation and part natural regeneration. They are typical of ironstone working, and their extent can still be established. The shafts and engine hollows were used as tips for domestic waste and black sand from the moulding shop at the nearby works. Most of the shafts were still visible until the 1970s when capping was undertaken by Telford Development Corporation, although occasional brickwork is still visible at some of them. The furnace slag from the pre-1900 operations seems to have been taken over a bridge across the Madeley-Dawley road and can be seen on the Halesfield side of that road. From here it was quarried, in the 1940s, for road use. Part of the mound-area is now used as an artificial ski-run and another, near the site of the old blast furnaces, is an industrial estate which, itself, is a successor to the Court Works which operated from the closure of the mines (*c*.1910) until 1980.

The routes of the old Gypsy Lane, Court Lane and sections of the tramways can still be followed, and the former Coalport Branch Line is now the Silkin Way, the railway having ceased to carry passenger traffic in 1952 and goods in the 1960s. Two bridges still survive over Gypsy Lane.

A public house called The Three Furnaces remains to this day, although the current pub sign (June 2007) gives no inkling of the origin of the name. It depicts Shadrach, Meshach and Abednego being consigned to the fiery furnace (Daniel 3: 1–30).

THE MADELEY COURT PLAQUE

By PETER O'DONOGHUE

Searches have been carried out in a variety of different classes of record held by the College of Arms in the hope of shedding light on the identity of the Arms found in the form of a plaque dating from the mid-sixteenth century or later (Plate XI).

The following entries appear to be most relevant to these Arms:

1. At the Visitation of Shropshire undertaken by the heralds in 1623 a pedigree of the Brooke family of Church Stretton was recorded. It is headed by Thomas Brooke, and ends with the children of Edward Brooke of Church Stretton, who signed the entry. No Arms were recorded here. [Coll. Arm. Ms. C20/215.]
2. At the Visitation of Shropshire of 1663 a further pedigree of this family was recorded. It is headed by Edward Brooke of Church Stretton who died in May 1659; it ends with the children of his son, Walter Brooke of Church Stretton. The Arms of the family are recorded here as being: Quarterly 1 & 4 *Chequy*

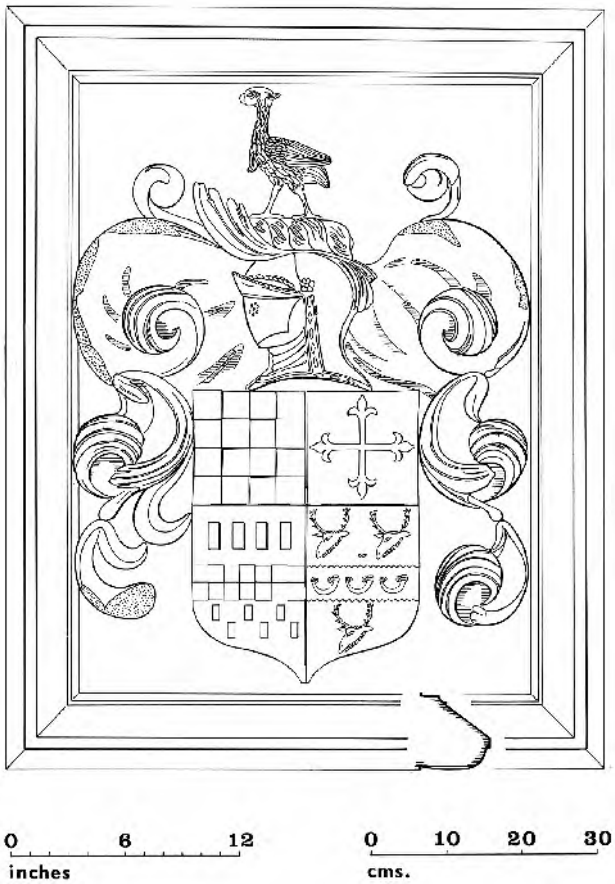

Plate XI The Madeley Court plaque (R. Meeson)

Argent and Sable; 2 *Argent a Cross flory Sable*; 3 *Gules a Fess countercompony Argent and Azure between ten Billets four, three, two and one Argent*. The Crest is *On a Mount Vert a Brock passant proper charged with a Crescent for difference*. [Coll. Arm. Ms. C35/70.]

3. At this same Visitation of 1663 a six generation pedigree of the Brooke family of Madeley was also recorded. It is headed by Sir Robert Brooke, knight, Lord Chief Justice of the Common Pleas, who married the daughter of Waring. It descends via his grandson, Sir Basil Brooke of Madeley, who died on 31 December 1646. The entry ends with the children of John Brooke and of Elizabeth, his wife, the daughter of Edward Guildford. [Coll. Arm. Ms. C35/44.]
4. One of the unofficial collections of manuscripts held by the College of Arms in its archive includes some papers and pedigrees contemporary with the Visitation of Shropshire of 1623. Here is a pedigree of the Brooke family which shows the connection between the Church Stretton branch, and the Madeley branch. It also mentions the marriages to certain heiresses.

Searches have been made in the records of grants and confirmations of Arms from the sixteenth and seventeenth centuries:

5. A confirmation of Arms was granted to Sir Robert Broke of Cleverley, Shropshire, now Lord Justice of the Common Pleas dated 2 July 2 & 3 Phillip and Mary [1556]. The Arms confirmed here bear only a tangential relation to those of the Madeley branch: they are Quarterly 1 & 4 *Chequy Argent and Sable on a Chief Or a Brock Passant proper*; 2 & 3 *Argent a Cross flory Sable*. The Crest is *A Brock proper standing in a bush of ferns Vert*. [Coll. Arm. Ms. 2H5/128.]
6. Elsewhere in the records of grants, however, we find an entry for Robert Broke of Madeley, Shropshire, dated 1587. Here the Arms are more familiar: Quarterly 1 *Chequy Argent and Sable*; 2 *Argent a Cross flory Sable*; 3 *Gules a Fess countercompony Or and Azure between ten Billets four, three, two and one Argent*; 4 *Gules on a Chevron engrailed Argent between three Lozenges Vair three Cross croslets Sable*. The Crest is *On a Wreath A Heron Or*. [Coll. Arm. Ms. Misc. Grants 1/113b.]
7. Another entry is labelled John Broke of Madeley and gives the Arms as at 6 above, designating the quarters 1: Broke; 2: Banester; 3: Ley of Langley; 4 Warring. [Coll. Arm. Ms. F13/19b *Cook's Grants*.]
8. It will be noticed that the Arms of Waring, or Warring, mentioned above do not accord with those in the fourth quarter of the Arms at Madeley Court. A published reference work called the *Ordinary of British Armorials* by John W. Papworth and Alfred W. Morant (London, 1874) confirms the identification of this quarter as representing Waring, however, giving the blazon *Gules on a Fess engrailed Or between three Buck's heads caboshed Argent as many Buglehorns sans strings Sable*.

Conclusion

The Arms in question represent those of the Brooke family of Madeley Court, Shropshire. The Crest of a heron differs from that used by the junior branch of the family, at Church Stretton. The situation is complicated by the confirmation of Arms made in 1556 (no. 5 above) where the Arms are different. It seems to be the case that between 1556 and 1587 the Arms and Crest used by this family were altered to those found at Madeley.

The achievement includes the following quarterings: the second quarter is identified at no. 7 above as that of Banester, brought in, we must suppose, by the marriage of Richard Brooke of Cloreley to the daughter of Banester of Hadnall. The third quarter is that of Ley, brought in by the marriage of Richard Brooke to Margery, daughter of John Lee of Stanton and Langley. The fourth is that of Waring, brought in by the marriage of Sir Robert Brooke to Anne, daughter and heir of Nicholas or Francis Waring.

The inclusion of the latter quartering would indicate that these Arms are those of a descendant of that marriage. Detailed research has not been conducted into the Waring Arms, and when they changed from the chevron to the fess.

THE MADELEY COURT STONE HEADS

By SHELAGH LEWIS

A group of stone heads from Madeley Court (Plate XII) was recorded, some years ago, by Dr. Paul Stamper. The circumstances of the find are not known, neither is it known whether the heads were discovered as a group or individually. The heads are now in private ownership (Henig, 2004, 61, and Plate 50). Two further stone heads are visible on either side of a second floor window at the front of the building.

Head 1 (upper left in Plate XII)
H. 0.24m.; W. 0.15m.
Carved in the round of local sandstone. The head is somewhat ovoid with a slit mouth, triangular nose, and eyes surrounded by deep grooves.
Henig: No.188.

Plate XII The Madeley Court stone heads (P. Stamper)

Head 2 (upper right in Plate XII)
H. 0.13m.; W. 0.13m.
Carved in the round of local sandstone. The head is damaged and worn. Part of the lower right of the face is missing. Rounded with deeply bored eyes and an upturned mouth with a small 'cigarette hole' bored on the right of the mouth. On top of the head are protuberances – possibly ears or embryo horns. The head has a feline appearance.
Henig: No.189.

Head 3 (lower right in Plate XII)
Carved in the round of local sandstone. The head is somewhat ovoid with an open mouth, triangular nose, and eyes surrounded by deep grooves with borings for the pupils. The head bears a clearly delineated crown above the brows. It has an ecclesiastical appearance and is, almost certainly, of medieval (probably 15th century) date.
Henig: No.190.

A 17TH-CENTURY COIN HOARD FROM THE MADELEY COURT AREA

By SHELAGH LEWIS

The following account was published in the *Salopian Journal* for 18 December 1839:

> *Discovery of Coins*
> *A hedge having been removed in a field near Madeley Wood, in this county, while a man and a lad were ploughing, the former discovered a leaden pipe of rather wide bore, and from which, on being taken up, several gold coins dropped out. The one end of the pipe appeared to have been hammered to secure the contents, which were taken possession of by the man, who, having promised to give the boy somewhat to say nothing about the treasure, and neglecting to do so, the boy subsequently mentioned the matter, which became known to the proprietor of the land, who sent to the man, and he delivered up about fifty of the coins, but many more it is supposed had been previously disposed of. The coins appear to belong to the reigns of Elizabeth and James the First.*

In his *History of Madeley* (1880, 14) John Randall elaborated on this account, specifying the findspot as 'one of the fields adjoining the Court House called the Slang', and stating that the find consisted of 'a large number of gold coins, chiefly of Queen Elizabeth's reign, and of the modern value of between three and four hundred pounds'.

The Slang was owned by James Foster of Madeley Court but rented out to tenants.

The hoard is known to numismatists and is listed in Brown and Dolley's *Coin Hoards of Great Britain…1500–1967* (ref: EO8).[1] Unfortunately there do not seem to be any surviving coins with a known Madeley provenance.

Note

1 Information from Dr. Barrie Cook, Curator of Medieval and Early Modern Coinage, Department of Coins and Medals, The British Museum.

PART II

AN EARLY SEVENTEENTH-CENTURY MALTINGS AT MADELEY COURT BARN, TELFORD

EXCAVATIONS 1991–2

PART II LIST OF FIGURES

PART II LIST OF PLATES
(By Fred Aldsworth, unless otherwise stated)

NOTE ON THE CONTRIBUTORS TO PART II

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Fred Aldsworth is former Principal Archaeologist with The Conservation Practice, having previously worked as a field investigator with the Archaeology Division of the Ordnance Survey and as County Archaeologist for West Sussex.

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Kate Clark worked with Ironbridge Gorge Museum Trust, The Council for British Archaeology, English Heritage and the Heritage Lottery Fund. She is now an independent consultant, specialising in heritage management and conservation planning.

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Martin Harrison-Putnam is a former student of the Ironbridge Institute.

Pamela Spriggs
Pamela Spriggs was employed at the Yorkshire Regional Laboratory of the National Coal Board.

Michael Worthington
Michael Worthington was previously employed by The Ironbridge Gorge Museum Trust and now concentrates on dendrochronology.

PART II
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Bob Meeson, formerly County Archaeologist for Staffordshire;
Shelley White, Ironbridge Gorge Museum Archaeology Unit;
John Yates, English Heritage.

PART II
Summary

Building recording and excavations, undertaken prior to the conversion of the so-called barn attached to the former monastic grange and medieval manor house at Madeley Court, Telford, in 1991–2, demonstrated that the structure was originally constructed as a purpose-built maltings, at the very beginning of the 17th century, on a T-shaped plan. Dendrochronological dating of one of the primary timbers suggests a date of construction after 1595 and, most likely, in the period 1606–1636. Shortly afterwards it was extended in two stages as an early example of a large-scale commercial enterprise.

Although some ferrous debris was discovered it was not possible to demonstrate that the building was used for iron working, but it was owned by Sir Basil Brooke, a prominent industrialist, from 1598 until about 1640 and he is known to have carried out early experiments in steel manufacture in the period 1615–1635.

No evidence was found to suggest that the building was ever used as a watermill although it has been referred to as a mill in the past.

The maltings appear to have continued in use into the first half of the 19th century, but this function seems to have ceased before 1847. By 1882 a steam engine had been installed and the structure had been converted for use as an agricultural barn. The deck of a former plateway weighbridge from the Coalbrookdale Coalfield had been re-used as the base for the steam engine.

Background

The medieval manor house of Madeley Court passed from Wenlock Priory into private hands after the Dissolution and then descended through a number of owners and occupiers until 1964, when it was purchased by Dawley Development Corporation.

It later passed to Telford Development Corporation who, in the 1970s, with financial assistance from the Department of the Environment, restored the former gate-house and began work on the house, but this work was abandoned incomplete. In 1987 it was acquired for conversion to a country house hotel and restaurant which was opened in 1989. A condition of grant aid by English Heritage was that the derelict early 17th-century outbuilding, then known as 'the mill', be repaired.

For a report on the results of archaeological excavations and building recording undertaken in 1978–9 and 1987 on the main building, the gate-house and the 17th-century garden see pp. 1–75.

In September 1991 applications were made for Planning Permission and Listed Building Consent for the construction of an extension to the hotel and for the conversion of 'the mill' to a function suite. With the prior agreement of the Wrekin District Council, the precarious remains of the roof were carefully dismantled in July 1991, and the internal debris was then cleared, all the works being under archaeological supervision, and with all re-usable material being set aside for potential re-use. A preliminary evaluation was undertaken in September 1991 by the Ironbridge Institute and a full excavation was completed in March 1992 by the Ironbridge Gorge Museum Archaeology Unit. A detailed record of the standing remains was made prior to conversion by the Conservation Practice, and this information is supplemented in the following report by photographs and a drawing kindly provided by Bob Meeson M.A., F.S.A., M.I.F.A., who was able to examine parts of the building in the early 1970s prior to partial collapse of the roof.

Following an historical introduction, there are brief descriptions of the standing building as it survived in 1991, and of the extent of the excavations. There then follows a detailed account of the structural sequence of the building as revealed both by the standing building and by the results of the excavations. A full account of the excavations, including a complete list of finds, has been deposited in the library of the Ironbridge Institute. There then follow four specialist reports as appendices – the first is on the dendrochronological analysis of two of the primary timbers; the second deals with the analysis of coal samples; the third is a general account of the malting process; and the fourth is a discussion of the plateway weighbridge found during the excavations.

ABBREVIATIONS

Antiq. Horol.	*Antiquarian Horology*
Ant. Jnl.	*Antiquaries Journal*
Arch. Jnl.	*Archaeological Journal*
Arch. Hist.	*Architectural History*
BL	British Library, London
DNB	*Dictionary of National Biography*
IGMT	Ironbridge Gorge Museum Trust
LPH	*Letters and Paper, Foreign and Domestic, Henry VIII*
Med. Arch.	*Medieval Archaeology*
Mont. Coll.	*Montgomeryshire Collections*
NBR	*National Buildings Record*
NMR	*National Monuments Record*
Notes and Queries	**3rd series**, **iv**, 1863, Sir Basil Brooke, by C. H. and Thomson Cooper
Proc. Soc. Antiq. Scot.	*Proceedings of the Society of Antiquaries of Scotland*
PRO	Public Record Office, London
SA	Shropshire Archives
SMR	*Sites and Monuments Recor*d
Soc. Antiq.	Society of Antiquaries
STW	S. T. Walker Collection
Trans. Shrops. Archaeol. Soc.	Transactions of the Shropshire Archaeological and Historical Society
Trans. South Staffs. Arch. & Hist. Soc.	Transactions of the South Staffordshire Archaeological and Historical Society
V.A.	*Vernacular Architecture*
VCH Salop, **II**	The Victoria County History of Shropshire, vol. ii (1973)
VCH Salop, **XI**	The Victoria County History of Shropshire, vol. xi (1985)
VCH Staffs, **III**	The Victoria County History of Staffordshire, vol. iii (1970)

BIBLIOGRAPHY (PART I)

Airs, M., 1984, 'Lawrence Shipway, freemason', *Arch. Hist.*, **27**, 368–373.

Alcock, N. W. and Moran, M., 1984, 'Low open-truss beams (mantel beams): problems of function and distribution', *V. A.*, **XV**, 47–55.

Allen, T. G., 1994, 'A Medieval Grange of Abingdon Abbey at Dean Court Farm, Cumnor, Oxon', *Oxoniensia*, **LVIV**, 219–447.

Bagshaw, 1851, *History, Gazeteer and Directory of Shropshire*.

Baker, N. J., Lawson, J. B., Maxwell, R., & Smith, J. T., 1993, 'Further Work on Pride Hill, Shrewsbury', *Trans. Shrops. Archaeol. Soc.*, **LXVIII**, 1–64.

Baker, N. J., Morriss, R. K., and Stamper, P., 2006, 'Shrewsbury Market Place and Hall', *Arch. Jnl.*, **163**, 180–232.

Barley, M., 1963, *The House and Home*.

Barley, M., 1986, *Houses and History*.

Beresford, G., 1974, 'The medieval manor of Penhallam, Jacobstow, Cornwall', *Med. Arch.*, **XVIII**, 90–145.

Biddle, M., 1975, 'Excavations at Winchester, 1971', *Ant. Jnl.*, **LV**, pt. 2.

Blair, J., 1993, 'Hall and chamber: English domestic planning 1000–1250' in Meirion-Jones and Jones (eds.).

Blunt, J., 1854, *Arch. Jnl.*, **11**, 413.

Bossy, J., 1975, *The English Catholic Community 1570–1850*.

Brown, I. J., 1999, *The East Shropshire Coalfields*.

Burghley, 1576, 'The uses of Tetraedron transformatum garnished with dyalls', BL: Lands. MS 724 (belonged to Lord Burghley).

Coope, R., 1986, 'The 'Long Gallery': its origins, development, use and decoration' in *Arch. Hist.*, **29**, 43–84.

Cooper, N., 1987, Madeley Court, Shropshire (internal report for the RCHME. No page numbers)

Coppack, G., 1990, *English Heritage Book of Abbeys and Priories*.

Cranage, D. H. S., 1901, *An Architectural Account of the Churches of Shropshire,* **i**.

Dunn, M., 1986, *Local Brew – Traditional Breweries and their Ales*.

Eyton, R. W., 1856, Antiquities of Shropshire, **iii**.

Faulkner, P. A., 1958, 'Domestic planning from the twelfth to fourteenth centuries', *Arch. Jnl.*, **115**, 150–83.

Ferris, I., 1986, 'A survey of Hamstall Hall, Staffordshire'. *Trans. South Staffs. Archaeol. & Hist. Soc.*, **26**, 44–82.

Finberg, H. P. R., 1961, *Early Charters of the West Midlands*.

Firth, C. H. and Rait, R. S. (eds.), 1911, *Acts and Ordinances of the Interregnum 1642–1660*.

Fletcher, W. G. D. and Auden, H. M. (eds.), 1907, *Shropshire Lay Subsidy Roll of 1 Edward II, 1327*.

Fox, A., 1959, 'A monastic homestead on Dean Moor, S. Devon' *Med. Arch.*, **II**, 141–57.

Fryer, A. C., 1912, 'Monumental Effigies sculptured by Nicholas Stone', *Arch. Jnl.*, **69**, 229–75.

Gatty, A., 1900, *The Book of Sundials* (ed. Eden & Lloyd).

Girouard, M., 1978, *Life in the English Country House*.

Girouard, M., 1983, *Robert Smythson and the English Country House*.

Grazebrook, G. and Rylands, J. P. (eds.), 1889, *The Visitation of Shropshire 1623*.

Grenville, J., 1997, *Medieval Housing*.

Gotch, J. A., 1901, *Early Renaissance Architecture in England…1500–1625*, 83, pl. 22.

Gunter, E., 1624, *The Description and use of his Majesties Dials in Whitehall Garden*.

Hannam, U. and Greenslade, M. W., 1970, 'The Abbey of Burton', in *VCH Staffs*, **III**, 199–213.

Henig, M., 2004, *Roman Sculpture from the North West Midlands*.

Henderson, P., 2005, *The Tudor House and Garden: Architecture and Landscape in the Sixteenth and Early Seventeenth Centuries*.

(H. M. S. O., 1975, 1982), *The History of the King's Works*, 1485–1660 (part I), **III** (1975), 1485–1660 (part II), **IV** (1982).

Hoskins, W. G., 1953, 'The Rebuilding of Rural England, 1570–1640', *Past and Present*, **IV**, 44–59.

Hurst, J. G., 1962, 'The kitchen area of Northolt Manor, Middlesex', *Med. Arch.*, **V**, 1961, 211–299.

Impey, E., 1993, 'Seigneurial domestic architecture in Normandy, 1050–1350' in Meirion-Jones and Jones (eds.).

Lawson, J. B., 1983–4, 'Harnage slates and other roofing materials in Shrewsbury', *Trans. Shrops. Archaeol. Soc.*, **LXIV**, 116–118.

Lloyd, J. D. K., 1965–6, 'The architect of the Herbert tomb, Montgomery', *Mont. Coll.*, **LIX.**

Lloyd, N., 1931, *A History of the English House*.

Mar, Jo. C., 1631, 'Description of the Stone Dyals at Hampton Court in the time of King Charles I', BL: MS 17 A V.

Martin, D., 1990, 'Three Moated Sites in north-east Sussex. Part 2: Hawksden and Bodiam', *Sussex Archaeol. Collections*, **CXXVIII**, 89–116.
Martin, D., 1998, 'Detached kitchens in eastern Sussex'. *V. A.*, **XXCIII**, 1997, 85–91.
Meeson, R., 1979, Madeley Court, Telford, Interim Report, 1978–9, Telford Development Corporation.
Meeson, R., 1983, 'The timber frame of the hall at Tamworth Castle, Staffordshire and its context'. *Arch. Jnl.*, **145**, 329–40.
Meirion-Jones, G. and Jones, M., 1993, *Manorial and domestic buildings in England and Northern France*, Society of Antiquaries of London, Occasional paper 15.
Mercer, E., 1954, 'The Houses of the Gentry', *Past and Present*, **V**, 11–32.
Moran, M., 1997, 'Great Oxenbold, Monkhopton, Shropshire (SO594920)', *Trans. Shrops. Archaeol. Soc.*, **LXXII**, 9–25.
Morley, B. M., 1985, *Wenlock Priory*.
Morriss, R. K. and Shoesmith, R., 1989, *Apley Castle, Shropshire – An Interim Report*, Hereford Archaeology Series, **49**.
Morriss, R. K. and Stamper, P., 1996, *A Structural Survey and Documentary History of The Market House, Shrewsbury*, Shropshire County Archaeology Service, Report No. 81.
North, J. D., 1978, 'Nicholaus Kratzer – the King's Astronomer', *Studia Copernicana*, **16**, 204–42.
O'Riordan, C., 1985, 'Sequestration and Social Upheaval: Madeley, Shropshire and the English Revolution', *West Midland Studies*, **18**, 21–31.
Pevsner, N., 1958, *The Buildings of England: Shropshire*.
Platt, C., 1969, *The Monastic Grange in Medieval England*.
Rahtz, P. A., 1969, Excavations at King John's Hunting Lodge, Writtle, Essex: *Med.Arch*. Monograph 3.
Rahtz, P. A., 1979, *The Saxon and Medieval Palaces at Cheddar*, British Archaeological Reports, Brit. Ser. 65.
Randall, J., 1883, *The Old Court House (or Manor House) Madeley*.
Rodwell, K. and Bell R., 2004, *Acton Court: The Evolution of an Early Tudor* Courtier's House, 103–5, 260–1.
Rowley, T., 1972, *The Shropshire Landscape*.
Sawyer, P. H., 1968, *Anglo-Saxon Charters: An Annotated List and Bibliography*, Offices of the Royal Historical Society.
Smith, L., 1991, 'Sydenhams Moat: a 13th-century moated manor house in the Warwickshire Arden', *Trans. Birmingham & Warks. Archaeol. Soc.*, **XCVI**, 1989–90, 27–68.
Somerville, A. R., 1986, 'The sundials of John Bonar, Schoolmaster of Ayr', *Antiq. Horol.*, **16**, 233–42.
Somerville, A. R., 1987, 'The Ancient Sundials of Scotland', *Proc. Soc. Antiq. Scot.*, **117**, 233–64.
Stamper, P., 1996, *Historic Parks and Gardens in England*.
Strong, R., 1979, *The Renaissance Garden in England*.
Thompson, M., 1995, *The Medieval Hall: The Basis of Secular Domestic Life, 600–1600 AD*.
Thorn, F. and C. (eds.), 1986, *Domesday Book, Shropshire*.
Tipping, H. A., 1922, *English Homes, Period III, vol. 1, Late Tudor and Early Stuart 1558–1649,* 154–160.
Trinder, B., 1973, *The Industrial Revolution in Shropshire*.
Trinder, B., 1982, *The Making of the Industrial Landscape*.
Turner, T. H., 1851, *Some Account of Domestic Architecture in England from the Conquest to the end of the Thirteenth Century*.
Walpole Society 1919, *The Notebook and Account Book of Nicholas Stone*, **7**.
Wanklyn, M. D. G., 1982, 'Industrial Development in the Ironbridge Gorge before Abraham Darby', *West Midlands Studies*, **15**, 3–7.
White, G. S. J., 1986, 'An Early Renaissance Stone Polyhedral Sundial', *Antiq. Horol.*, **16**, 139–44.
Wood, M., 1950, 'Thirteenth-century domestic architecture in England', *Arch. Jnl.*, **105**, supplement.
Wood, M., 1965, *The English Medieval House*.
Wood, M., 1974, *Norman domestic architecture*, Royal Archaeological Institute.
Woodfield, P., 1991, 'Early garden buildings in England' in A E Brown (ed.), *Garden Archaeology* (CBA Research Report **78**, 1991), 123–37.
Yates, F., 1966, *The Art of Memory*.

PART II

HISTORICAL INTRODUCTION

By FRED ALDSWORTH

The barn, which is the subject of this report, stands adjacent to Madeley Court Hotel, formerly a monastic grange, a manor house and a country house. The history of the site is contained within Part I of this volume. It is not intended to repeat that information here except when it applies specifically to the ownership of the barn or to activities which were, or may have been, associated with it.

The manor of Madeley was in the possession of Wenlock Priory until 1540. In 1544 the manor was purchased by Robert Brooke, a lawyer and Speaker of the House of Commons. His eldest son, John, inherited the manor in 1572 and he is thought to have extended the buildings, laid out the forecourt and constructed the gate-house (*VCH Salop*, **XI**, 38). Basil Brooke, who inherited the manor in 1598, was an industrialist and a lessee of ironworks in the Forest of Dean. He is also known to have been involved in the local iron industry, and it has been suggested that he may have carried out experiments in steel manufacture at Madeley and, possibly, even in the barn at Madeley Court. The difficulty in identifying precisely where he was working, from documentary sources, lies in the fact that both Ironbridge and Coalbrookdale formed part of the manor of Madeley and references to operations in 'Madeley' could equally refer to either of the other two places.

Sir Basil Brooke, who was lord of the manor of Madeley from 1598 until he died in 1646, first became involved in the manufacture of iron in the Forest of Dean. In about 1614 he acquired an interest in a steel cementation patent; he became an overseer from 1615–19; and later lessee of the Crown's ironworks in the period 1628–35 (*VCH Salop*, **XI**, 48). The patent referred to appears to be that taken out by William Ellyott and Mathias Meysey in 1614, whereby they were granted, for twenty-one years, the sole right to convert iron into steel in a reverberatory furnace, and this was confirmed two years later (Schubert, 1957, 323). In 1620 Brooke took over the patent and, in 1635, he claimed to have 'settled the new invention of making steel on the Realm' (Schubert 1957, 324). Schubert's view was that, although the date and the place of the steelworks erected by Sir Basil Brooke were unknown, it seems to have been somewhere in the region of the Forest of Dean. However, using evidence from the Committee of Compoundings, Malcolm Wanklyn has since shown that there were a steelworks, finery, chafery forge and two furnaces at Coalbrookdale in 1645 (Wanklyn, 1973, 6), and Arthur Raistrick had previously pointed out that Brooke's blast furnace in Coalbrookdale was taken over by Abraham Darby and carries the date '1638' (Raistrick, 1953, 30). The furnace referred to by Raistrick is actually the one forming part of the Ironbridge Gorge Museum, now known as either The Darby Furnace or, more correctly, as The Upper Furnace, Coalbrookdale. During recent restoration it has been found that the date 1638 had, in fact, been painted on, probably earlier last century, over an original date of 1658. Accompanying initials include the letters B, E and W and, although Basil Brooke died in 1646, they are thought to refer to the Brooke family (pers. comm. Wendy Horton). G. C. Baugh also suggested that Brooke was making steel in Madeley at works 'said to be in Madeley Wood in 1645' (*VCH Salop*, **XI**, 48).

A lease to Abraham Darby and Richard Ford, dated 7 June 1734, included references to 'Old Furnace and the New Furnace with the appurts. Situate in Coalbrookdale…and all those three iron forges or iron smithies commonly called the Great Forge, the Upper Forge and the Plate Forge, with a house or building commonly called the Steel House but lately converted in a Malthouse' (Raistrick, 1953, 286). It seems to be this reference that has recently been applied in the context of the barn at Madeley Court, but it is self-evident that the 'Steel House but lately converted in a Malthouse' was within the Manor of Madeley but at Coalbrookdale and *not* at Madeley Court.

The Manor of Madeley and the ironworks were forfeited during the Civil War, but were regained by the Brooke family soon after. In 1774 they sold part of the estate to Abraham Darby III, but, by 1780–81, the whole estate was in the hands of the Quaker iron master, Richard Reynolds. It was subsequently broken up.

The following owners and occupants of Madeley Court and its lands have been traced:

Date	Owner	Tenant
<1540	Wenlock Priory	John Wylcocks (1530s) John Bayley (last Prior d.1553)
1544	Robert Brooke	
1572	John Brooke	
1598	Basil Brooke	
1640s	Probably occupied by Royalists during the Civil War	
c.1645	Basil Brooke	
1699	Comberford Brooke	
1705	Matthias Astley	Abraham Darby I William Purton (farmer) Thomas Dorsett Robert Trigger
	Mary Astley	
1826	Richard Dyott (husband of Mary Astley)	
1828	James Foster	
1847		Francis & John Yates and William Dyas – house sublet to Charles Jones
1853	William Orme Foster	
c.1895–1909		House occupied by Charles Worth Pearce – land tenanted by Joseph Barnet
1919	Joseph Barnet purchased and occupied house and Court Farm	
1936	Joseph Barnet purchased remainder of land	
1964	Dawley Development Corporation purchased the house and most of the land from Barnet's son.	

There is no early cartographic evidence for buildings on the site but the first edition of the Ordnance Survey map, for which the survey was prepared at a scale of 2.5 inches to the mile in 1817 and which was published at 1 inch to the mile in 1833, shows two small groups of buildings on either side of a road and track, with a windmill to the north-east. These represent an earlier arrangement of the buildings shown on the Madeley Tithe Map of 1847. The earlier map also shows a number of streams feeding into a principal watercourse, running through Madeley, and known as the Washbrook. In 1828 James Foster purchased both Court Farm and Windmill Farm and these appear to be the two groups of buildings surveyed in 1817 and 1847. Foster was an industrialist who already operated furnaces and mines in the Black Country and at Stourbridge, as well as locally at Wombridge and Calcutts. He also had forges at Eardington and Hampton Loade. In 1840, Foster began to exploit the mineral resources at Madeley and, in the period 1845–47, he moved his furnaces from Wombridge to Madeley Court. In the latter half of the nineteenth century there were up to seventeen pits operating in the Madeley Court Colliery but working had ceased on the site by 1911 (see pp. 66–70).

The Madeley Tithe Map and Apportionment, prepared in 1847, give the detailed arrangement of buildings and other features in the area as well as information about ownership and occupation (Fig. 1). The building now identified as a former maltings is shown as a rectangular structure (Plot 190), with outshots at the north end of the west side. In the Apportionment it is included under the entry for Plot 189 which is described as 'road, old mill & waste about Madeley Court', owned by James Foster and occupied by Francis and John Yates and William Dyas. James Foster's mining operations had already begun to encroach on the fields to the west and to the north of Madeley Court by the time the Tithe Map was prepared, and the first edition of the Ordnance Survey twenty-five inch plan, surveyed in 1882 and published in 1883 (this volume, p. 3, Pl. I), shows an extensive Madeley Court Colliery, for coal and ironstone, to the south-west, and Madeley Court Ironworks and workings to the north-east. The former maltings is shown as a rectangular building but it is not named or described.

The attribution of the term 'mill' to the surviving building seems to stem from three sources – the Madeley Tithe Map and Apportionment of 1847; from John Randall who refers to it as such in both his *History of Madeley* (Randall, 1880) and his *The Old Court House of Madeley* (Randall, 1883); and from the *Victoria County History* (*VCH Salop*, **XI**, 45). In his earlier publication Randall notes '…the oldest building of all in the parish is the old Mill by the Court House. It is mentioned in Doomsday, and looking at the thickness and hardness of some of the beams, they seem calculated to have lasted as long as they have done; and even they seem to have done duty in some former building. The old wheel is gone, and the one which succeeded it, and

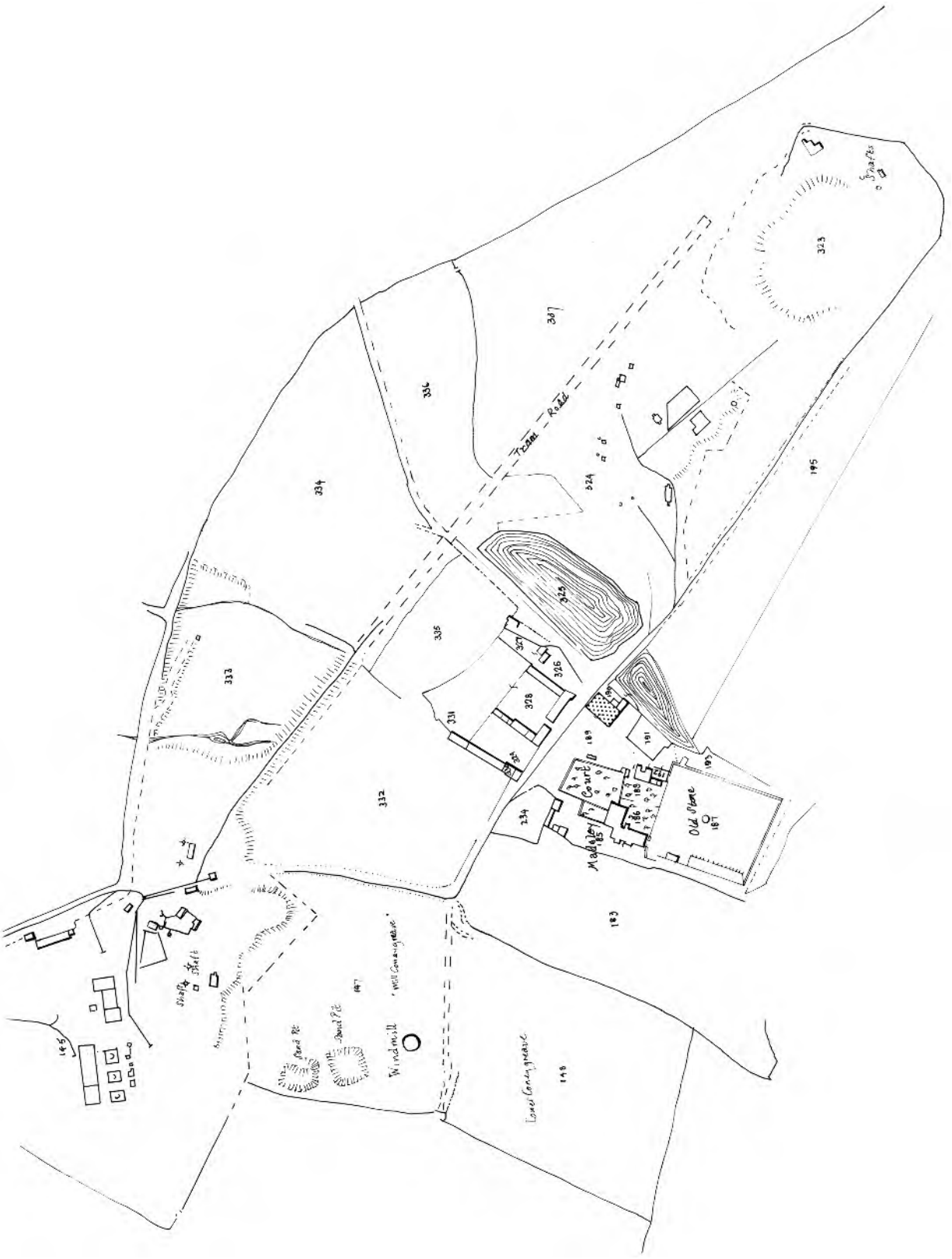

Figure 1 Madeley Court barn: redrawn extract from the Madeley Tithe Map, prepared in 1847.

the pool, originally a fish pond which supplied water power has gone too; it was when we remember it on the upper side the old granary or barn' (Randall, 1880, 331–32). In his later publication he writes of '…[the manor House…] seated in a little green valley watered by a stream which fed its vivaries and turned the manor Mill, it presented a picture of past ages…' and '…the large building now converted into stables outside the court-yard' (Randall, 1883, 5). He also says of the same building '…the water mill, the outside patchwork of walls of which still stand, where tradition alleges there was a draw-bridge to cross the moat' (Randall, 1883, 82).

There were watermills on the Washbrook stream from the 13th century (*VCH Salop*, **XI**, 45). A valuation of the Manor of Madeley made in 1379 included a '…water-mill at the Court or Manor House 'fermed' for 10s. per annum' and, at a valuation taken in 1291, the same mill is thought to be mentioned (Randall, 1880, 9). A mill on the manorial estate was mentioned in 1593 and one was repaired in 1649 or 1650, and there were said to be other watermills downstream (*VCH Salop*, **XI**, 45).

An alternative, or perhaps later, use of the surviving building, this time as a maltings, is possibly suggested in the occupations of the people associated with it. According to the Madeley Tithe Map and Apportionment, the tenants of the building in 1847 were Francis and John Yates and William Dyas. Using local trade directories, which exist for the area from 1822–23, it is possible to identify not only these three individuals, but also a large number of other people who were listed as maltsters. As with some of the other sources, however, it is not always clear precisely where they were operating, as addresses are usually given simply as Ironbridge or Madeley, and Madeley Court is never given. Confusion can also arise where there may have been several people of the same name or where entries were originally inaccurate or incomplete.

Francis and John Yates are first listed as maltsters of Ironbridge in Pigot & Co's *Directory* of 1828, but they do not appear in the earlier edition of 1822–3. They occur again in the 1836 edition of Pigot as maltsters of Ironbridge. In Robson's *Directory*, of 1840, a Francis Yates is listed as a boot and shoemaker of Madeley Green, and a John Yates is listed as agent to Sir Joseph Halley of Madeley Hall. Assuming that they are the same people referred to, this would seem to be the earliest reference to Francis and John Yates in connexion with Madeley, and it would seem reasonable to assume that their connexion with the barn at Madeley Court, implied on the 1847 Tithe Map, commenced about this time. However, they continued to be listed as maltsters of Ironbridge in Pigot & Co's *Directory* of 1842, and in Slater's *Directory* of 1850, and they were never listed as maltsters in Madeley. Presumably their principal address was in Ironbridge, and it is this that is given in directories rather than maltings or other businesses they may have had elsewhere. They do not appear in Harrison, Harrod & Co's *Directory* of 1861 or in Kelly's *Directory* of 1863, and must therefore have ceased operations in the period 1850–61.

The surname Dyas does not appear as a maltster in Pigot's *Directories* of 1822–3 and 1828. The name Charles Dyas occurs as that of a maltster of Madeley in Pigot & Co's *Directory* of 1836, and a William Dyas occurs as a butcher of Madeley in Robson's *Directory* of 1840. Charles Dyas is listed as a maltster of Madeley, both in Pigot's *Directory* of 1842 and in Harrod & Co's *Directory* of 1861, and as a butcher, grocer, farmer and maltster in Kelly's *Directory* of 1863. On the basis of this evidence alone, it would appear that it was Charles Dyas, perhaps a relative of William, who was a maltster of Madeley in the period 1842–1850, during which time the Tithe Map was prepared, giving William Dyas as a tenant of the barn at Madeley Court, and William is not listed as a maltster until 1861–63.

It is probably significant that the barn at Madeley Court is referred to as 'Old Mill' on the Tithe Map of 1847, suggesting that any other function that it might previously have held, for example as a maltings, had been replaced by that date. While it can be shown, from documentary sources, that the three individuals who were tenants of the building in 1847 had some connexion with the local malting industry, there is no evidence to demonstrate, without an element of doubt, that they ran a maltings in this particular building.

There is documentary evidence, therefore, to suggest that the present building might have been located on the site of, or indeed might incorporate the remains of, a medieval or later watermill. At the beginning of the 17th century it might have been used in association with early experiments in the manufacture of steel and, in the first half of the 19th century, if not earlier, it might have been used as a maltings. In the second half of the 19th century it was used as a barn and then stables.

THE STANDING BUILDING

The Standing Building – Description

As it survived in 1991 the building comprised a rectangular, masonry shell measuring externally 20.05m. east-west by 14.42m. north-south above the offset plinth course. It was constructed of a mixture of brick and local sandstone, the main north wing being of brick with stone quoins, window and door dressings and plinth; the south-west wing was of brick with stone quoins and plinth but with window dressings of brick; and the south-east wing was constructed entirely of stone (Figs. 2–6 and Plates I-IV). The building had clearly been altered and repaired on several occasions and, most recently, a number of openings had been blocked with bricks and breeze blocks. Part of the tiled roof, including four trusses, survived *in situ* while other sections had collapsed into the building and were badly rotted.

The interior space was divided into four compartments, a long, rectangular room extending east-west and taking up the entire north half of the building, while the southern half was divided into three rooms of roughly similar proportions. Previous interpretations had suggested that an original U-shaped building had subsequently been converted to a rectangular structure by the insertion of a room in the courtyard, but it soon became clear that this was not the case. An original T-shaped building, entirely of brick with stone dressings and offset plinth course, had, shortly after erection, been extended in two stages by the addition, at the south-west corner, of a mostly brick extension and, at the south-east corner, by an extension built of stone. The evidence of the surviving timber-framed roof and the excavation entirely supported this view. Although it was not possible to distinguish which of the two extensions was the first, they are very close in style and date to the original building. No evidence was found to support the suggestions either that the building was on the site of an earlier structure or that it incorporated the remains, *in situ* or re-used, of another one.

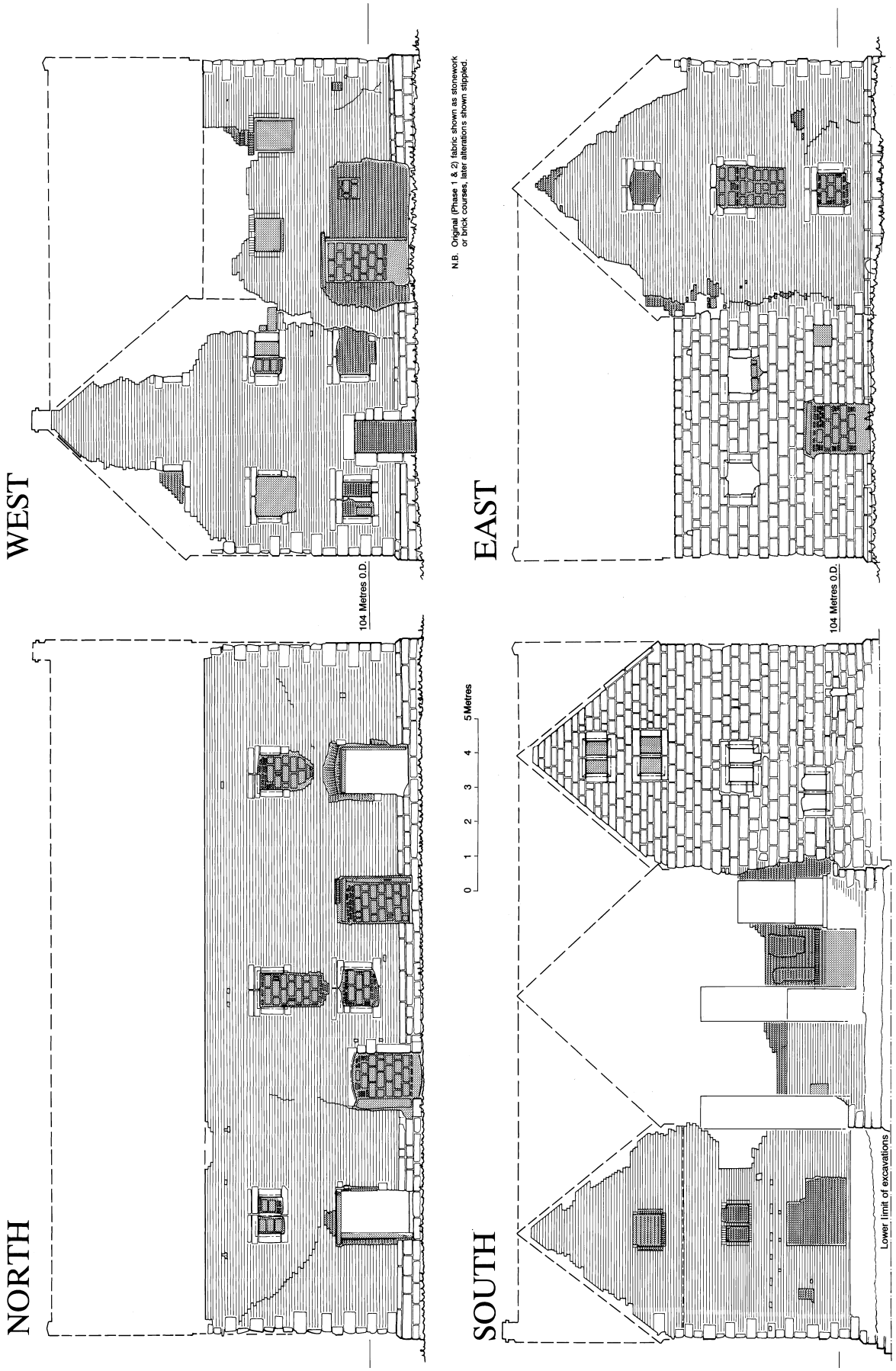

Figure 2 Madeley Court barn: external elevations in 1991.

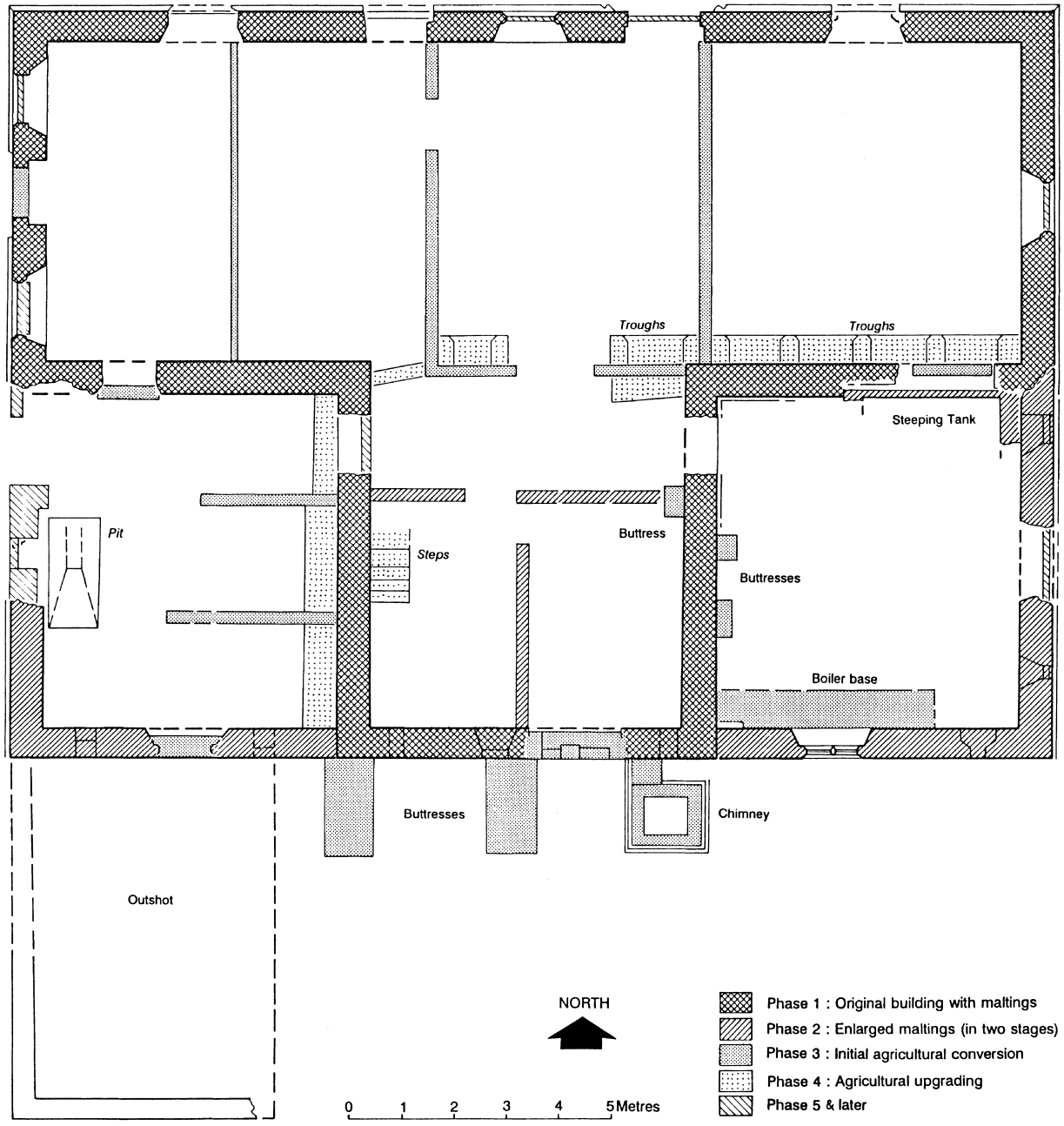

Figure 3 Madeley Court barn: ground floor plan in 1991.

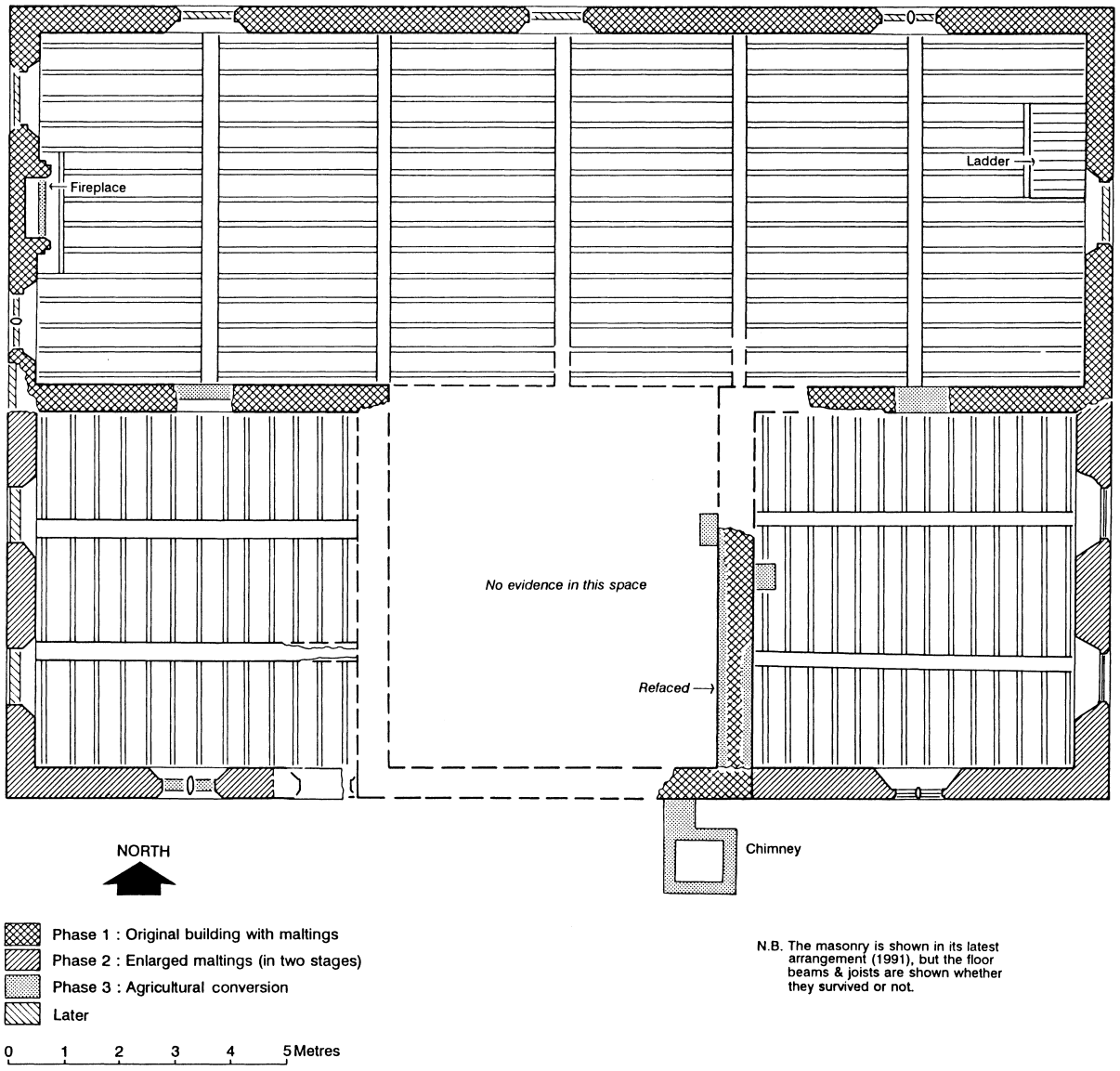

Figure 4 Madeley Court barn: first floor plan in 1991.

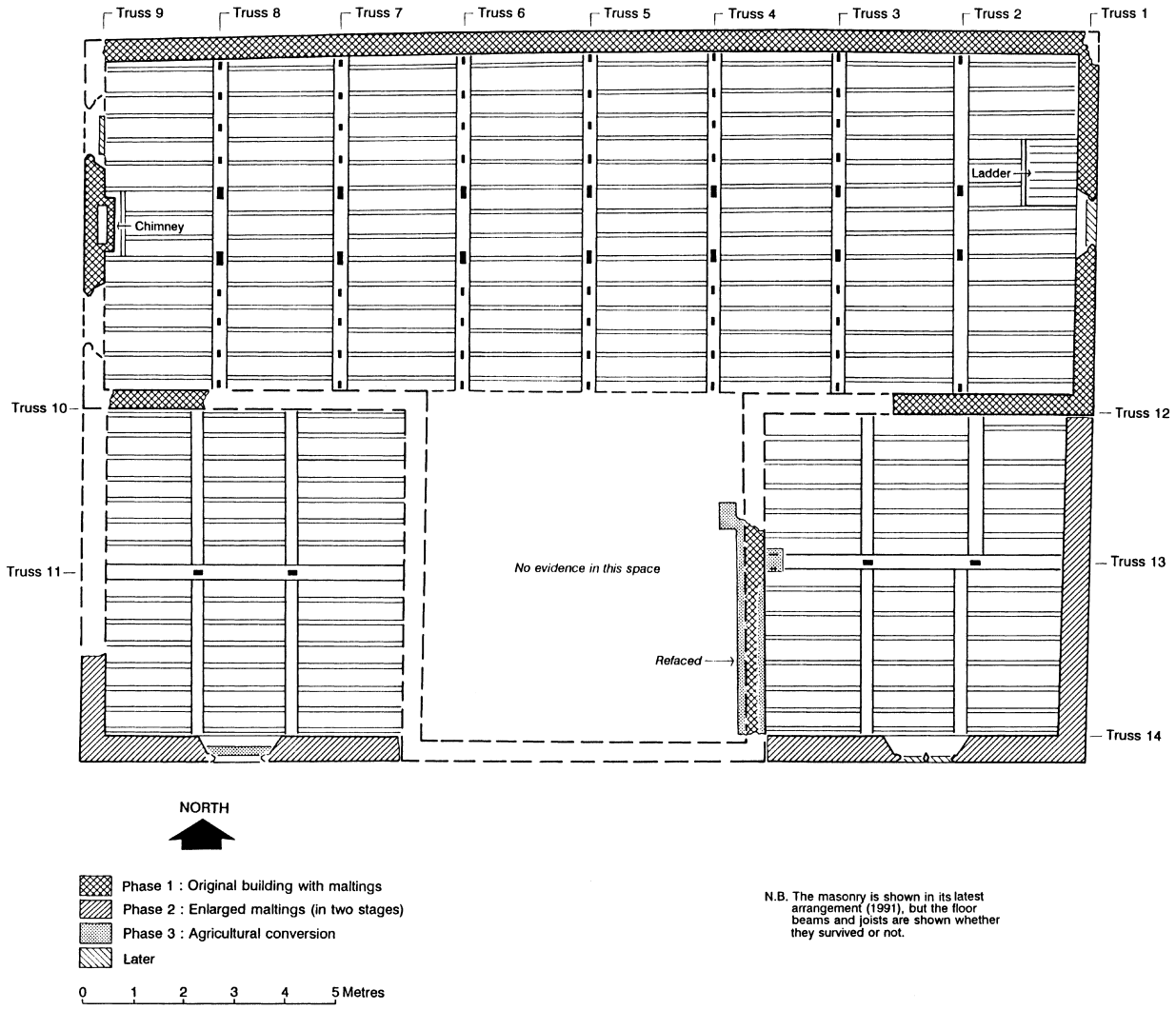

Figure 5 Madeley Court barn: second floor plan in 1991.

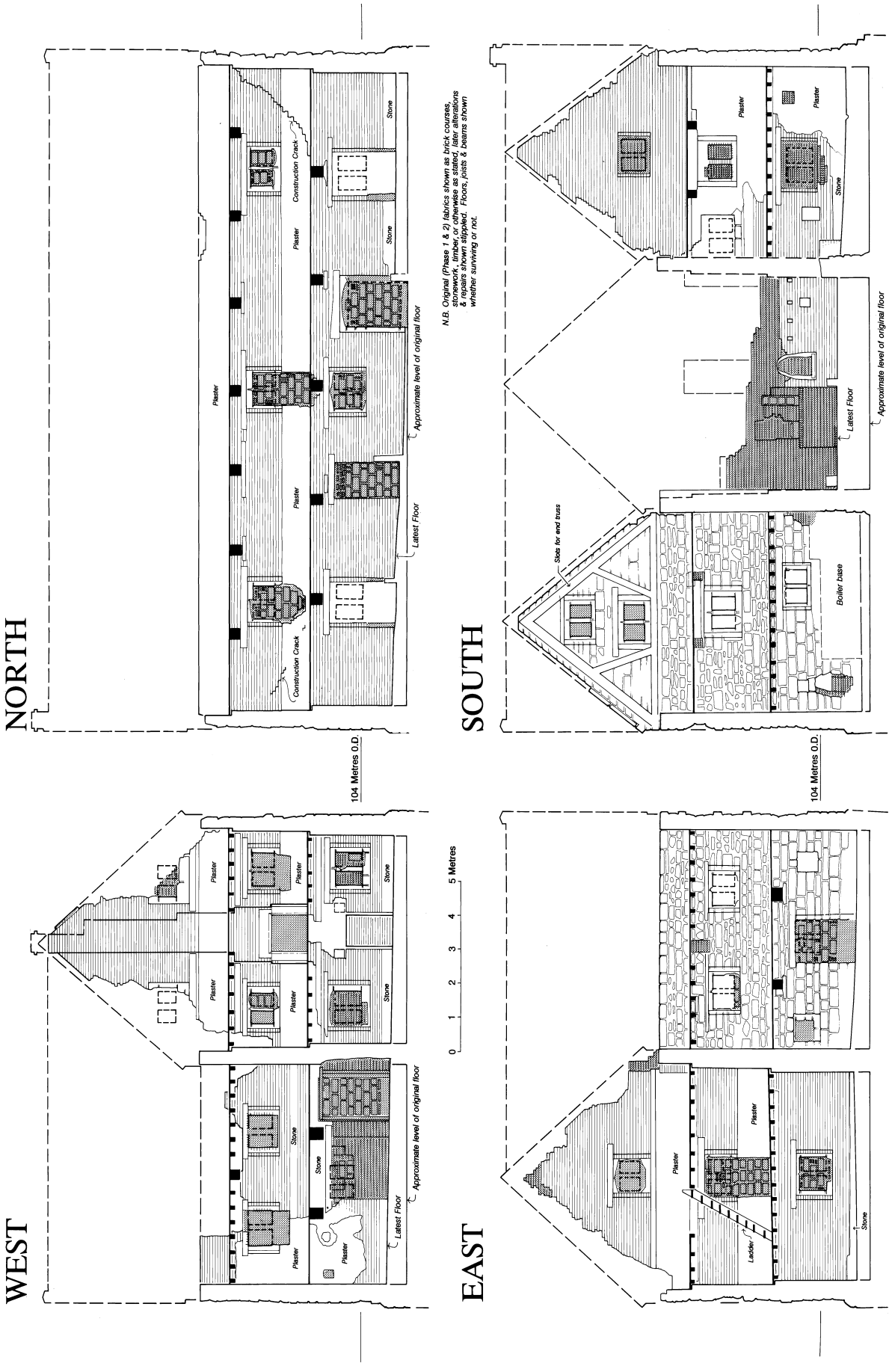

Figure 6 Madeley Court barn: internal elevations in 1991.

Plate I Madeley Court barn: north elevation in 1991.

Plate II Madeley Court barn: north part of west elevation in 1991.

Plate IV Madeley Court barn: interior of north-west gable end after removal of roof.

Plate III Madeley Court barn: interior of north-east gable end after removal of roof.

THE EXCAVATION

The Excavation Trenches – Location

Prior to major building work an archaeological evaluation was undertaken to ascertain the extent of surviving archaeology, the location and nature of the primary floors, and any information about the construction of the building which could help in renovating the structure. It was intended only to evaluate the site and not to remove any deposits of major significance to the history of the building.

Initially, three trenches were opened (Fig. 7: Trenches 1, 2 and 3). Trench 1 was excavated north-south through the centre of the building. Trench 2 was in the north-east corner of the south-east extension and Trench 3 was in the south-west corner of the south-west extension. Subsequently Trenches 1 and 2 were extended to cover the entire extent of the rooms or spaces in which they were located and, later still, the excavation was taken down to primary floor levels, where these survived, throughout the building (Plate V).

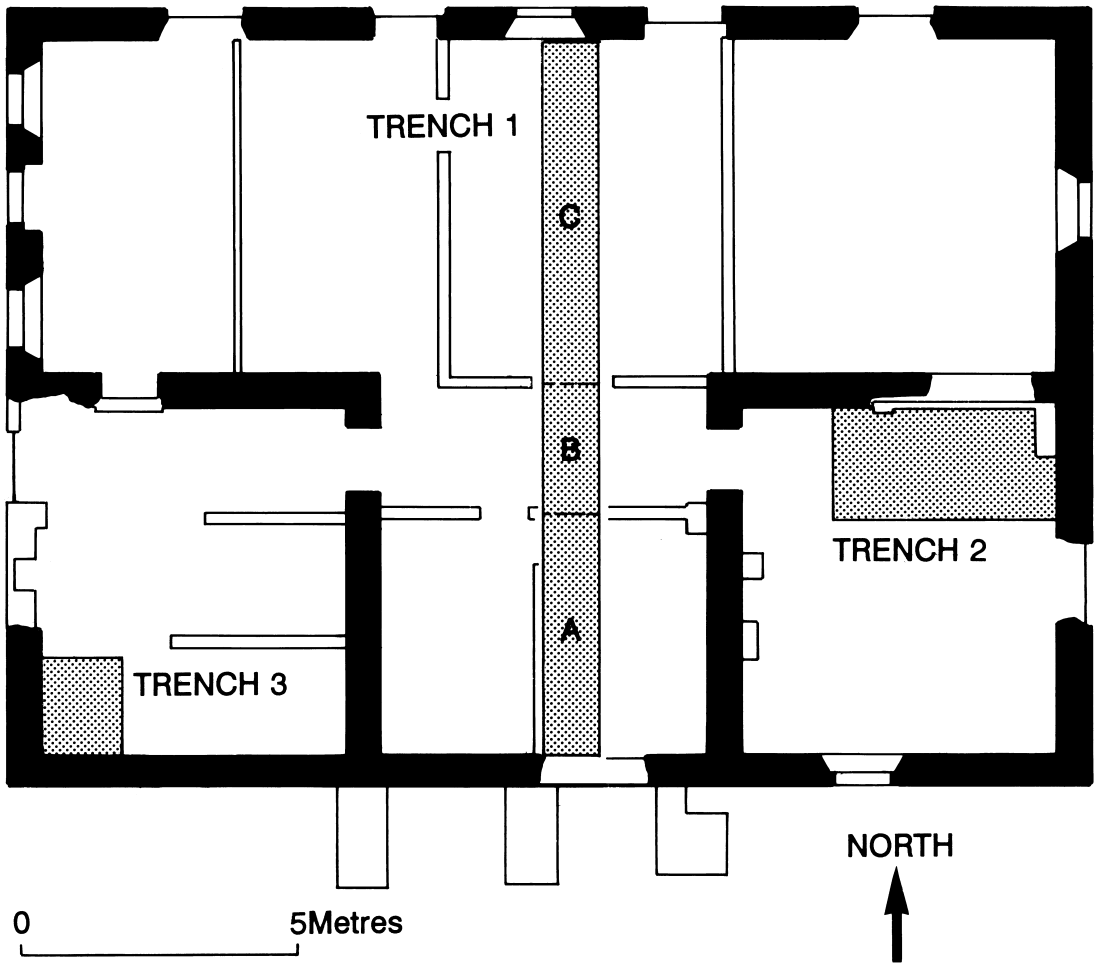

Figure 7 Madeley Court barn: trench location plan.

Plate V Madeley Court barn: Trench 1 after completion of trial excavation.

THE STRUCTURAL SEQUENCE

Below the primary floors of the present structure there were several patches of burning, and evidence for ferrous waste of some type, which may date to an earlier use of the site before the maltings was erected at the beginning of the 17th century.

As a result of the examination of the standing remains and the excavation, five principal phases in the evolution of the building were discerned:

- Phase 1 is allocated to the construction of the T-shaped building and its primary use as a maltings,
- Phase 2 covers the extension of the building in two stages and its extended use as a maltings,
- Phase 3 represents the conversion of the building to agricultural use as a barn with a steam engine in the rear,
- Phase 4 refers to a period of agricultural upgrading,
- Phase 5 deals with later alterations and repairs.

Phase1: The First Maltings

The earliest masonry structure on the site was a T-shaped building with three floors. Its main east-west wing on the north side measured 20.05m. long externally and about 7.35m. wide above the offset plinth. Centrally placed on the south side of this was a smaller wing measuring about 7.40m. east-west externally by 6.95m. north-south, but there was no masonry division between the two spaces. It was built entirely of brick, with sandstone quoins, window and door dressings and plinth (Figs. 2, 3 8 and 9 and Plate I).

On the north elevation there was a single doorway towards the east end. This originally carried a flat, stone lintel, later re-cut as a chamfered curve. There were also three windows at both ground and first floor level, to match those on Madeley Court and the gate-house, each protected by a floating cornice of stone with surrounds to take lead glazing as well as stone mullions and iron bars. In the west elevation there was a single door, with a flat lintel, and two windows at each of the ground, first and second floor levels. The gables had been altered but are likely to have been capped originally with stone

Diagonal cracks at either end of the north elevation, with accompanying differences in mortar mix, changes of brick colour and of coursing, indicate that the masonry was first taken up to first floor level along the north elevation and up to just below second floor level at each gable end. This allowed the first floor beams to be built into the brickwork which was then carried up to the second floor and then to the eaves and gable levels.

Substantial parts of the building had been demolished or re-faced on the south side, and it is difficult to determine the layout of the openings in this area. There appear to have been no original openings at either end of the south wall of the north wing; the east wall of the south wing had been substantially re-faced to the extent that the original fabric could not be examined; and the south and west walls barely survived above ground level. It is assumed that the form of the south gable matched those at either end of the north wing.

At ground floor level there was little evidence to indicate that the walls had been plastered internally, to match the contemporary plaster floor found in the excavations, and there was no surviving evidence to show that the interior space in the north wing had been sub-divided originally (Fig. 6). A tiled floor of handmade orange/red tiles was found in the south part of the building (Plate VI), and these included three re-used medieval floor tiles, with wooden stamp design, which probably date to the 14th century (Fig. 10 and Plate VII). Within the floor there was a rectangular brick feature, measuring about 1.6m. by 1.25m. externally with signs of burning in the centre. This is interpreted as the remains of the hearth at the base of a malting kiln (Fig. 8).

The west end of the south wall of the south wing contained a row of four beam pockets, with their tops about 2.4m. above original floor level. These probably supported the superstructure of the original malting kiln found

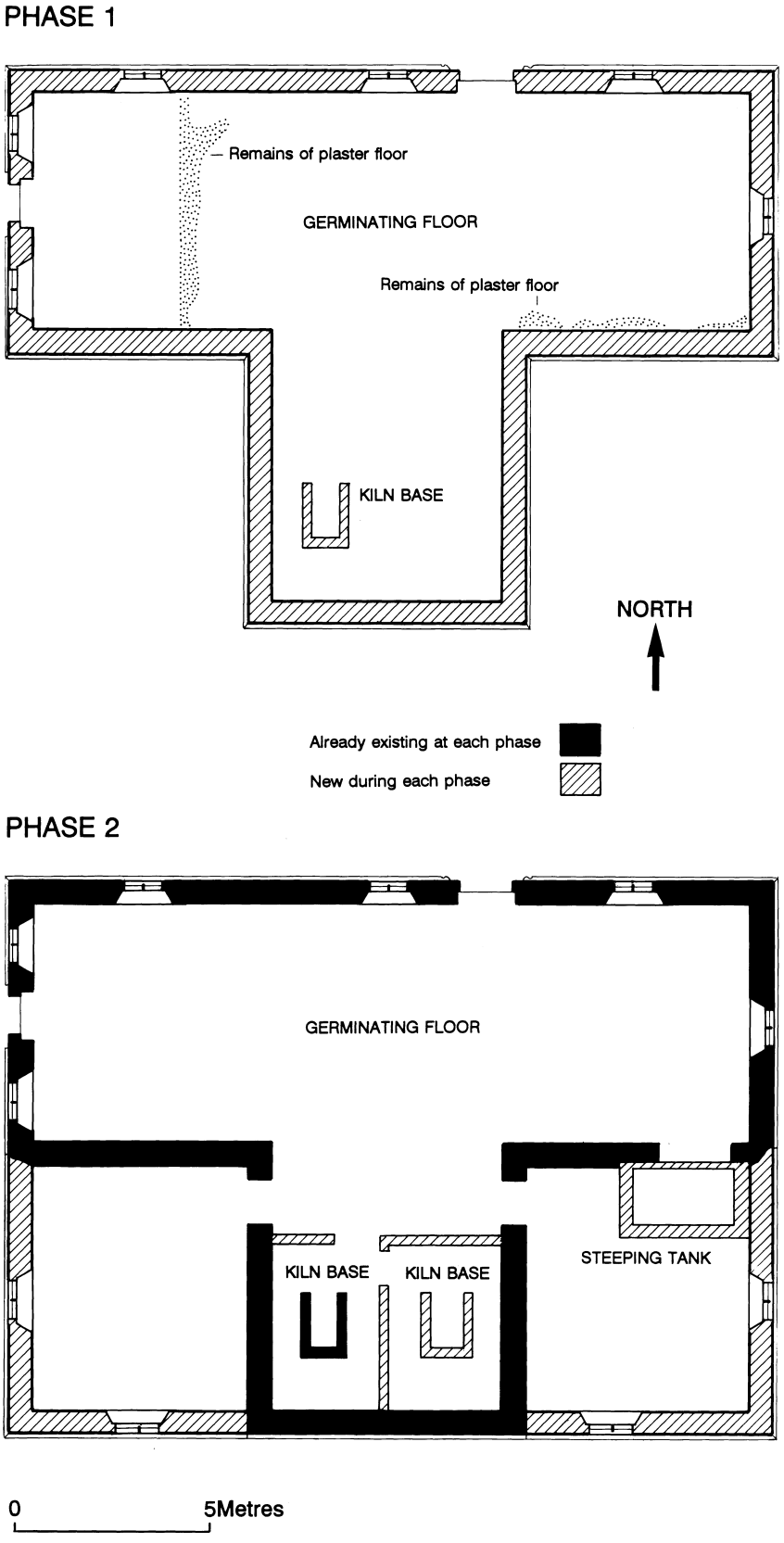

Figure 8 Madeley Court barn: ground floor plan, Phases 1 and 2.

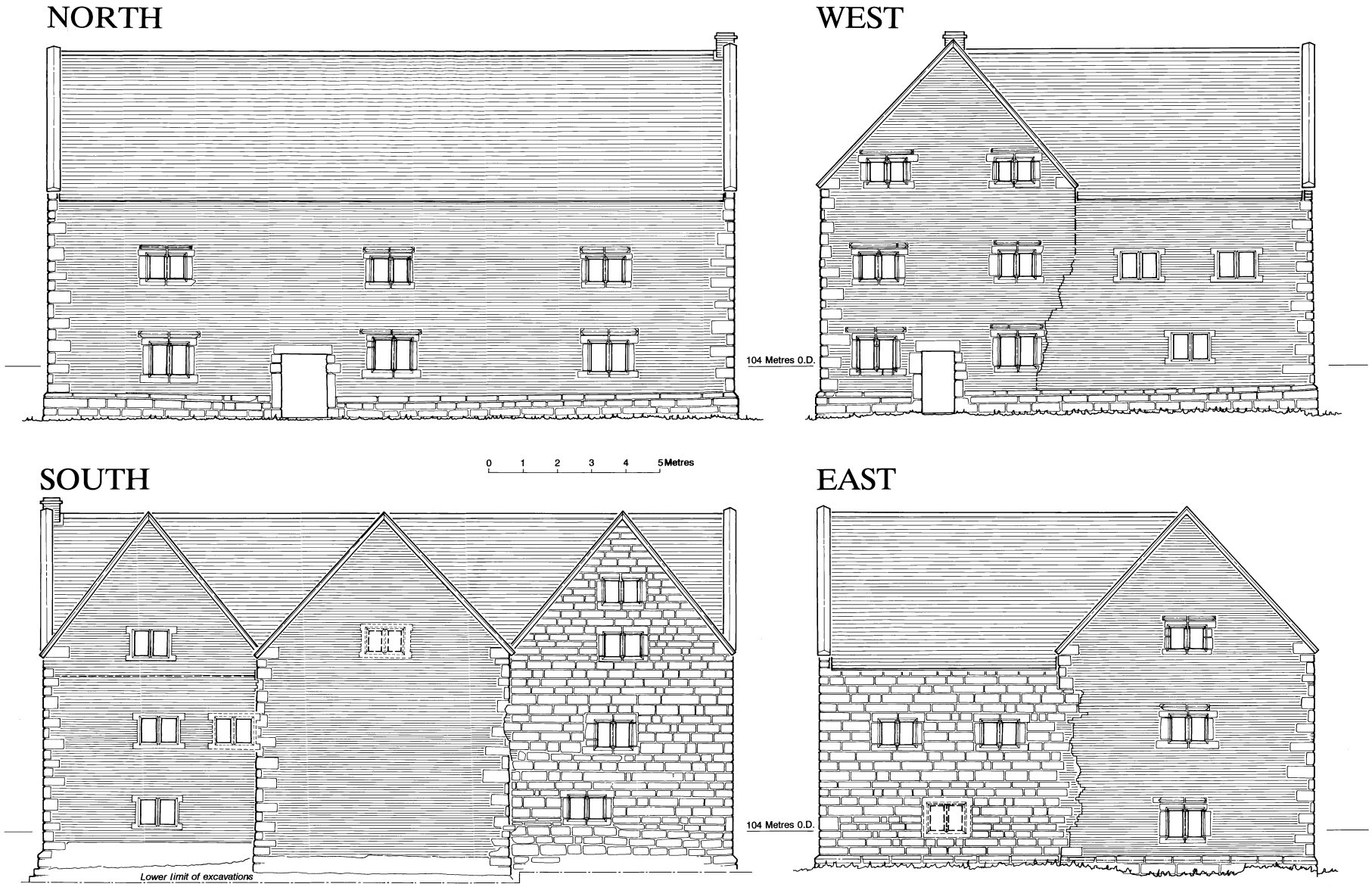

Figure 9 Madeley Court barn: external elevations, Phases 1 and 2 reconstruction.

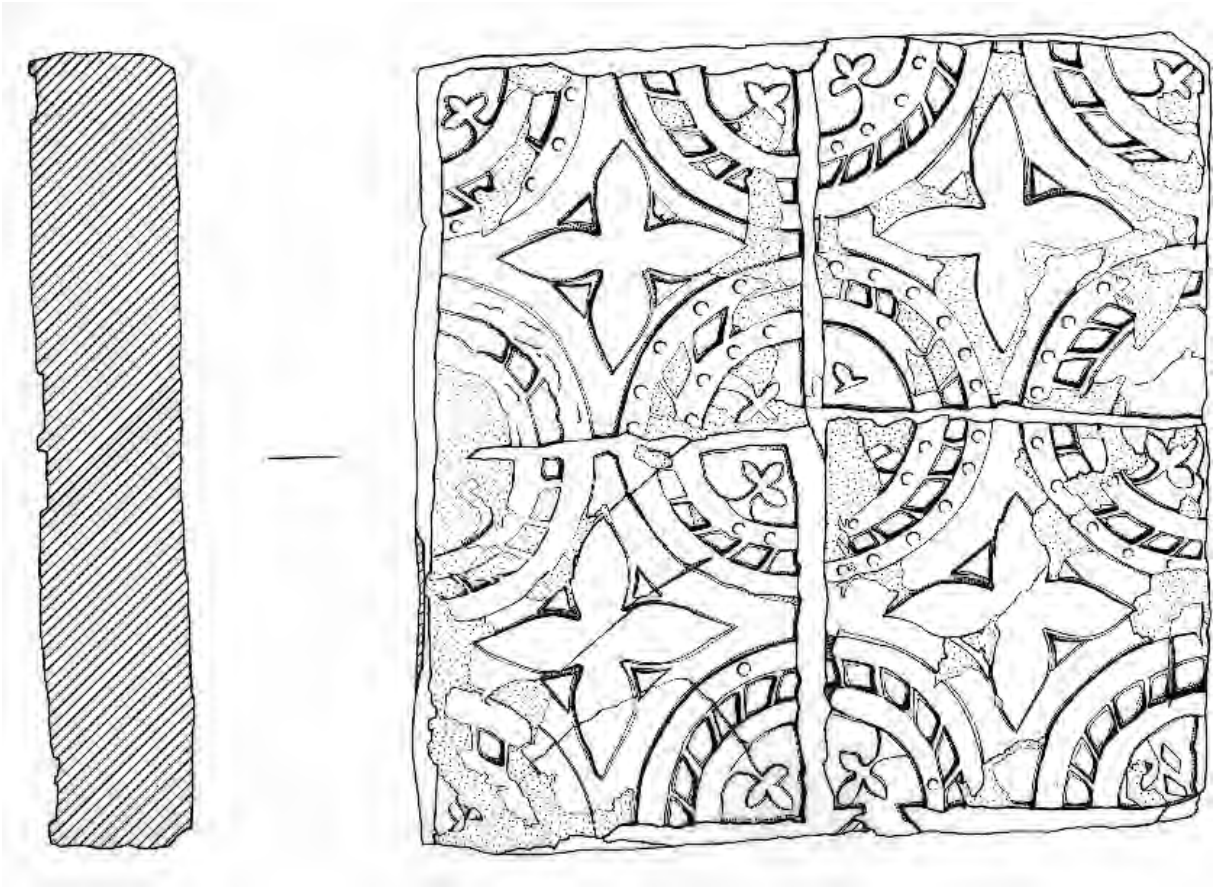

Figure 10 Madeley Court barn: drawing of one of three decorated tiles found in primary floor (Shelley White).

during excavation (Fig. 6). There was no surviving evidence to show how access was gained from ground to first floor level, but a simple ladder, like that at the east end at first floor level, would have sufficed.

At first floor level the walls of the north wing were plastered internally up to about 750mm., with no evidence for an internal division, and there was a fireplace with stone surround at the west end (Plates III and IV).

At second floor, or attic, level the walls of the north wing were also plastered, this time up to eaves level at a height of about 950mm. (Plate IX), but here the space was subdivided into eight compartments, each about 2.5m. wide, by nine trusses (Trusses 1–9). The six compartments nearest the west end were lined with vertical members as if they had been intended for storage.

Of the original roof structure over the north wing, two intermediate trusses were recovered *in situ* and almost intact (Trusses 2 and 8, Figs. 11 and 12 and Plates VIII and IX); pieces of the two end trusses (Trusses 1 and 9) were recovered *in situ*, while fragments of a fifth truss (Truss 7) had fallen into the shell of the building, but were recovered. In addition, pieces of wall plate, upper and lower purlins, upper purlin braces and ridge pieces were also recovered. The roof was substantially intact in the early 1970s and Meeson's drawing (Fig. 13) and photographs (Plates X-XII) add substantially to the information about the form of the second, or attic, floor and roof.

Setting aside the end trusses, which were built into the gables, there appear to have been three forms of truss used on the roof. All seven included interrupted tie beams to allow posts to descend from a horizontal 'collar' down to the floor beams to provide a passage along the centre of what was essentially a roof or attic space used for storage. Truss 2 lacked both the vertical members between the interrupted tie beam and floor and the diagonal braces in the central passage. Trusses 5 and 7 had the vertical members but also lacked the braces, whilst Trusses 3, 4, 6 and 8 included both the vertical members and the braces. Although there appears to have been no consecutive numbering sequence for the trusses, two groups of carpenter's joint numbers were recorded on this part of the roof (Trusses 2, 7 and 8) and a third system was used on the phase 2 extension on the south-east side (Fig. 14). On Trusses 2 and 7 Roman numerals from I-VI were cut with a sharp chisel about 19mm. (¾ inch) high, while on Truss 8 a different, perhaps more traditional, series from 1–8 was 'gouged' out about 25mm. (1 inch) high, possibly with a race knife (see example in Plate XII). Truss 8 also incorporated three re-used timbers with old mortices and peg holes. The central passage through the roof space had been lined with

Plate VI Madeley Court barn: primary tiled floor in Trench 1, Part A.

Plate VII Madeley Court barn: one of the decorated tiles re-used in primary floor.

rails at hand and just above floor level, morticed into the upright posts. The interrupted tie beams were secured to the wall plates with a traditional lapped dovetail joint (Plate X), whilst sections of wall plate were joined with simple bridled scarf joints.

To summarise, in its primary phase of construction, the building offered large uninterrupted floor spaces at both ground and first floor levels, with ground level access at the west end and towards the east end of the north wall. There was a fireplace at the west end at first floor level but, apart from this, no other evidence was found for heating in the north wing and no evidence that the building accommodated a living area. The fireplace might have served as a maltster's bothy but no evidence was found to indicate that this was separated off from the germinating floor. The second, or attic, floor level was divided into storage areas, containing at least twelve bins, presumably for loose grain or sacks. The ground floor was found by excavation to have been plastered, as were the lower parts of the walls at first floor level, and it is possible that the ground floor walls were also plastered originally.

The smaller space on the south side, which was not separated off by a dividing wall, was found by excavation to contain the base of a malting kiln, set in a tiled floor, and the walls contained evidence of having formerly carried the superstructure above it. No evidence for an external door was found at ground level in this room so access must have been through the north wing.

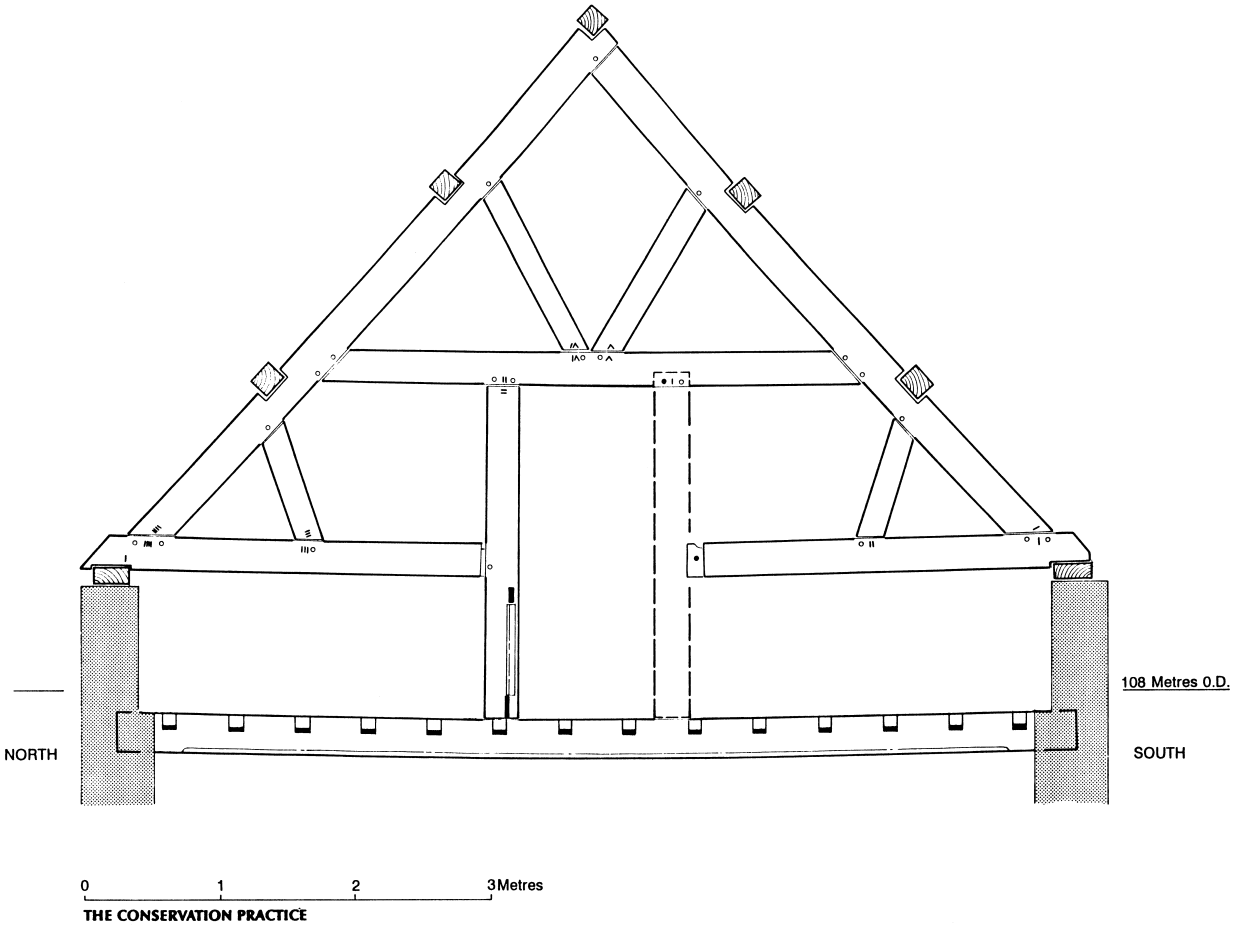

Figure 11 Madeley Court barn: Truss 2.

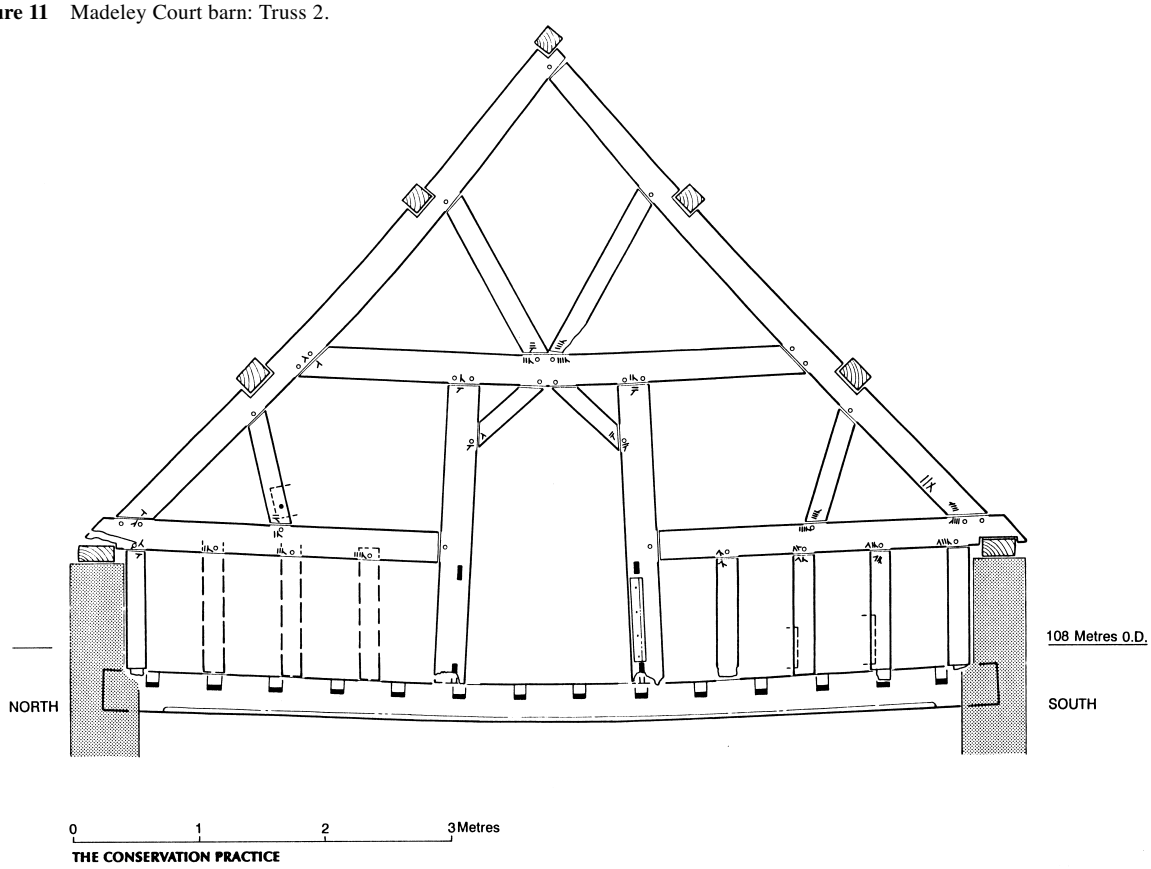

Figure 12 Madeley Court barn: Truss 8.

Plate VIII Madeley Court barn: Truss 2 prior to removal.

Plate IX Madeley Court barn: Truss 8 prior to removal.

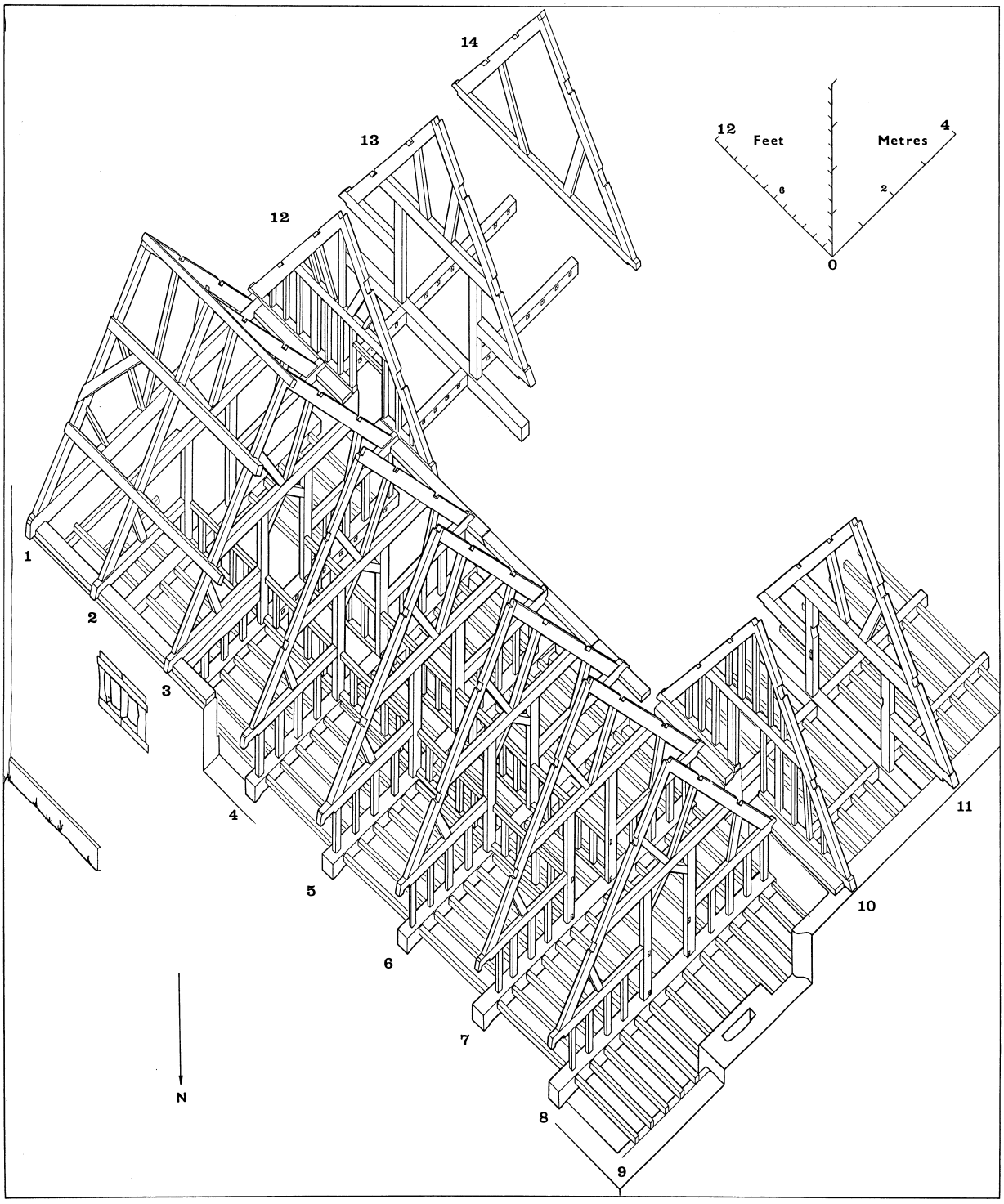

Figure 13 Madeley Court barn: roof structure in 1970s, prior to collapse (Bob Meeson).

The evidence from the standing building supports the results of the excavation in suggesting that it was a purpose-built maltings, with a kiln in the south side, germinating floors at ground and first floor levels in the north side and grain storage at second (attic) floor level.

Evidence from the style of architecture employed suggests that it was probably erected at the beginning of the 17th century when the property had recently been acquired by Sir Basil Brooke. A date after 1595, and probably in the date range 1606–1636, for the felling of the tree used for the manufacture of a first-floor beam (see p. 119 below) confirms that the building was most likely erected in the period 1610–1620.

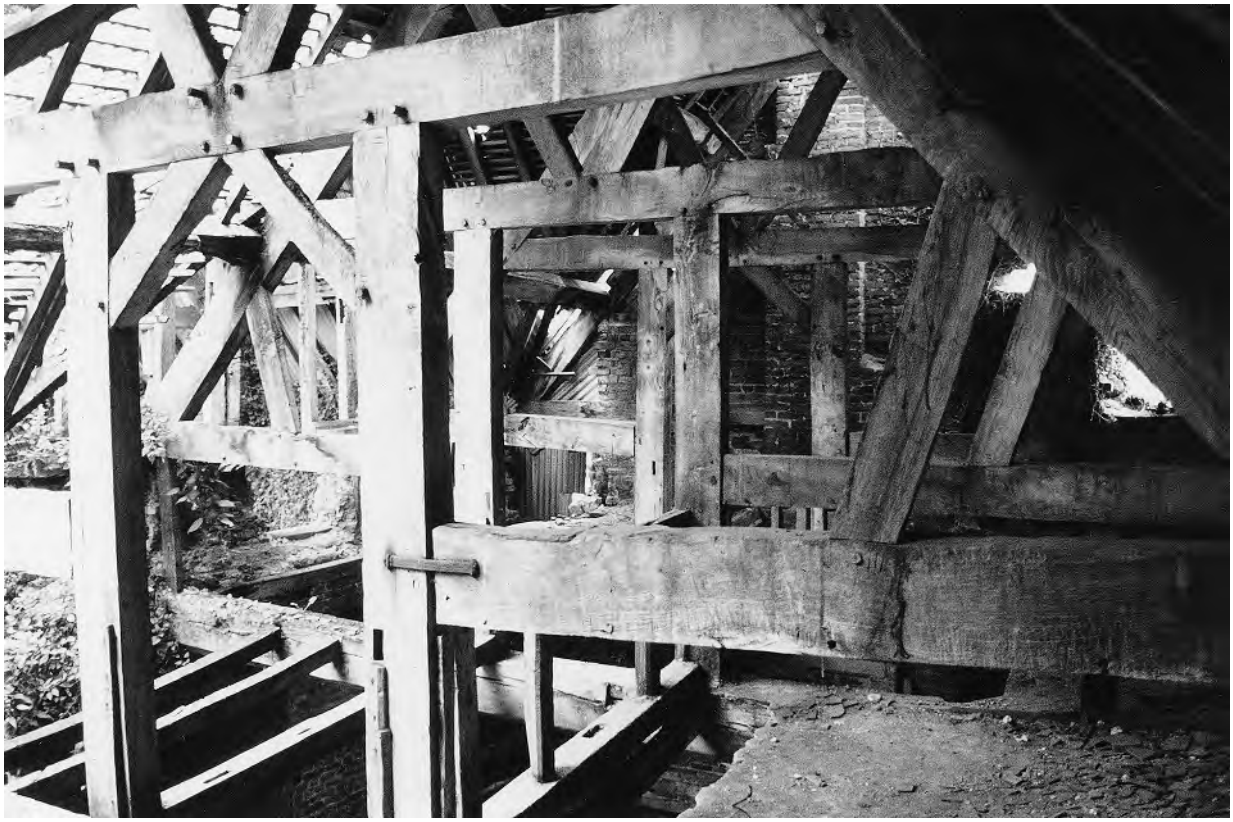

Plate X Madeley Court barn: part of roof frame of north wing looking west prior to collapse (Bob Meeson).

Phase 2: The Extended Maltings

The next period of construction followed shortly after the first and comprised additions at the south-west and south-east corners, but it is not possible to determine, either on archaeological or structural grounds, which of the two additions came first.

The addition at the south-west corner measured 6.95m. north-south by 6.10m. east-west (externally) above the offset plinth course (Figs. 2–6, 8 and 9). At the east end of the south wall its stone foundations were seen clearly to abut the stone footings of the Phase 1 structure. At the north end of the west wall the structural relationship was not seen at footing level but, although partly obscured by later alterations above ground level, it appears that, above plinth level, the south-west quoin of the Phase 1 building was removed for the insertion of the extension.

The footings, offset plinth course and quoin were built entirely of stone, and a single surviving stone at the foot of the west slope of the south gable suggested that the gable originally had a stone coping. The remainder of the external elevations were of brick. On the west elevation there was a single window in the centre at ground level and a pair above, while, in the south elevation, there were windows in the centre at ground, first and second floor levels and, possibly, another at the east end of the wall at first floor level. All these windows had been altered to a greater or lesser extent at a later date but, originally, they comprised cut brick surrounds and brick mullions that had been plastered over to resemble stonework from a distance. However, they lacked the floating cornice of the Phase 1 structure.

Internally the addition comprised three floors at ground, first and second (or attic) level. The ground floor level elevations were plastered, over brick and stone, and the plaster extended into the window reveals. There appears to have been no external access into this addition, and it must be concluded that it was entered from the Phase 1 building through either one or both of the inserted openings to the north and east.

At first floor level, again, the walls were plastered over brick and stone and the plaster extended into the window reveals. At the east end of the south wall were the remains of an opening, which might originally have been a window, but whose close proximity to the east wall cannot be explained, unless that wall had already been demolished by this time. A doorway with plastered jambs had been inserted into the pre-existing north wall, but the east wall did not survive at this level. Two large oak floor beams supported thirteen sets of floor joists.

Plate XI Madeley Court barn: part of roof frame of north wing looking south-east prior to collapse (Bob Meeson).

At second, or attic, floor level there was no trace of plaster on the walls that survived. There was a single window in the south gable. The floor had been carried on a main east-west beam, which also formed the tie beam of Truss 11 (Plate XIII), with girders and fourteen sets of joists. There were no remains of the truss set into the south gable, nor of that in the centre of the room, but some fragments of that which formed the north end of the roof were recovered (Truss 10, Plate XIV). This had been positioned immediately next to the wall-plate of the Phase 1 building, but was of insufficient length to span the full width of the space. It must have been made and inserted to accommodate the pre-existing roof over the original south wing. The tie beam had been cut to provide access into the space at a later date.

The addition at the south-east corner measured externally 7.02m. north-south by 6.50m. east-west above the offset plinth course (Figs. 2–6, 8 and 9 and Plates XV and XVI). At the west end of the south wall its stone foundations were clearly seen to abut the stone footings of the Phase 1 structure. At the north end of the east wall the structural relationship was not seen at footing level, but the offset plinth course and parts of the stone quoin of the Phase 1 structure survived, and the later addition was seen either to abut against the remains, or to have been bonded in with the brickwork where the original stone quoin had been removed. With the exception of a few brick courses, which were used to bond in with the earlier brickwork, the addition was built entirely of stone. There was a single window at ground level in the east wall, later opened out to form a door, and a pair of windows at first floor level. In the south wall there was a single window at both ground and first floor level and

Plate XII Madeley Court barn: detail of roof frame of north wing prior to collapse showing truss and wall-plate assembly with a carpenter's number on principal rafter.

two in the second, or attic, floor level, set one above the other. The windows were all of similar design with stone surrounds and mullions, holes for iron rods and slots for glazing, but they lacked the floating cornices of the Phase 1 building. The coping of the south gable was of stone.

Internally there were floors at ground, first and second, or attic, floor level. At ground floor level there were windows in the centre of the east wall and another, for some unknown reason, offset from the centre in the south wall. The walls appear not to have been plastered and, since there was no door from the outside, it is assumed that the only access was through the opening broken through the north end of the west wall.

The insertion of the steeping tank in the south-east extension probably occurred at this stage. It was constructed of brick and measured internally 2.68m. (8ft. 9½ inches) by 1.56m. (5ft. 1½ inches) and was about 0.78m. (2ft. 7 inches) deep. It was floored with bricks and malthouse tiles, with a sub-floor drain and outlet (Fig.15 and Plates XVII and XVIII). The Phase 1 brick and stone wall was partially removed to accommodate the insertion of the tank in the north wall, to which access could be gained from the north, *via* a plastered chute, to permit loading.

The remains of several other perforated, buff-coloured, machine-made malthouse tiles were found incorporated into later agricultural flooring.

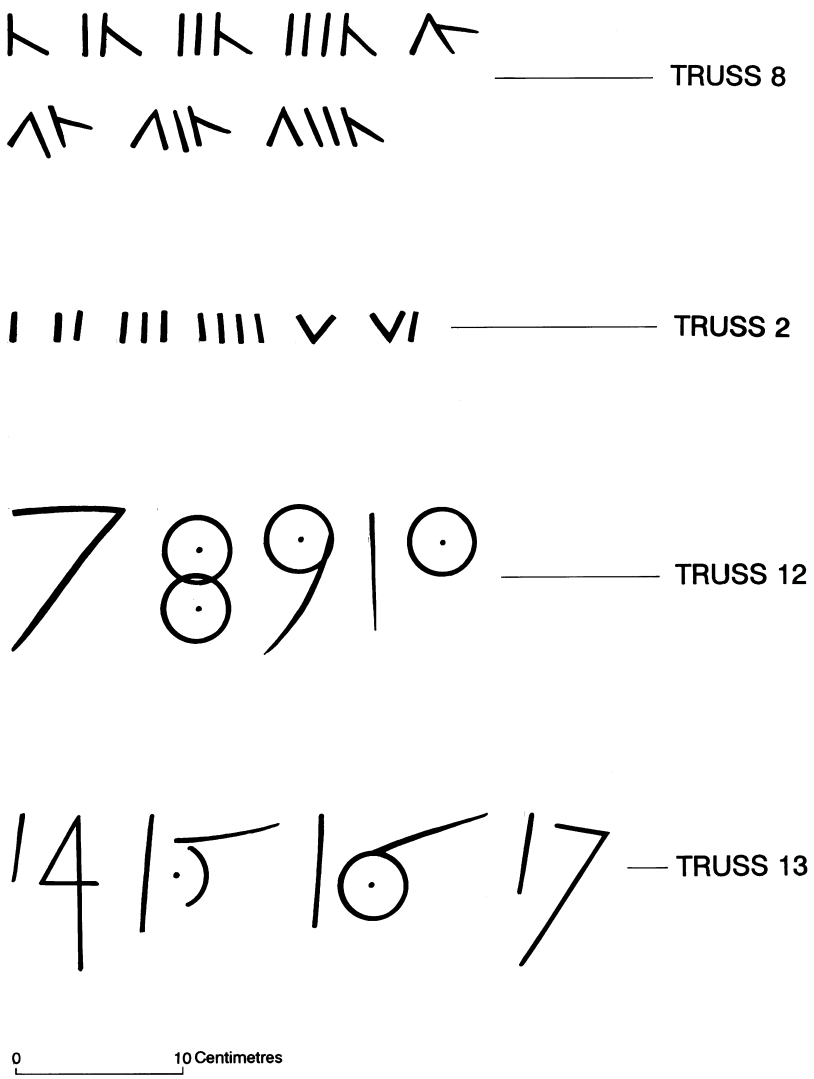

Figure 14 Madeley Court barn: Carpenter's marks.

At first floor level there was a single window in the south wall and a pair in the east wall. There was no evidence of internal plastering and the only entrance into the space seems to have been through the inserted doorway in the north wall. The floor had been supported on two main east-west beams and fourteen sets of joists.

At second, or attic, floor level there were two windows in the south gable. There was no trace of plastering and the only access into the space seems to have been at the north end, where the brickwork and tie beam of Truss 12 were cut back to accommodate a doorway, but this may not be an original feature. The floor had been supported by a main beam, which also formed the tie beam of Truss 13, two pairs of girders and twelve sets of joists.

Of the roof structure, the truss built into the south gable did not survive, but the remains of two others were salvaged partly intact (Trusses 12 and 13). Truss 12 formed the north end of the roof and was located alongside the Phase 1 wall-plate (Fig. 13). It was originally an open truss with tie beam, but was not sufficiently long to span the full width of the space and seems to have been made and inserted to fit around the pre-existing roof over the south wing. The tie beam had subsequently been severed to provide access into the space at a later date and, probably at the same time, the truss was filled with studs, which were notched and nailed in place, and the spaces in-filled with laths and plaster. Truss 13 had the familiar interrupted tie beam, with vertical posts for a walkway and raking braces (Fig. 13). Both Trusses 12 and 13 contained some re-used timbers, with disused notches and mortices. They also carried distinctive sets of carpenter's numbers in the same series, Truss 12 from 7 to 10 and Truss 13 from 14 to 17, about 70mm. high, which were scribed with a race knife and included circles based on a centre point (Fig. 14).

Plate XIII Madeley Court barn: roof and attic floor frame of south-west wing, including Truss 11, prior to collapse (Bob Meeson).

The remains of two rectangular bases, each measuring 1.6m. by 1.25m., and both interpreted as malting kilns, were found in the centre of the south wing, which had been partitioned by the insertion of brick walls into three spaces and provided with new floors (Fig. 8). The kiln bases both comprised rows of bricks set into a floor of quarry tiles and plastered areas, with their centres infilled with brick and rubble mortar (Fig. 16).

To summarise, in its second phase, the building was extended to provide two extra spaces or rooms at ground, first and second, or attic, floor levels. There were no external doorways into the two additions at ground floor level so, on all three floors, access was available from the original structure only through inserted openings. The addition on the south-east side was found to contain a steeping tank, while, in the original kiln space on the south side, a second kiln had been added.

The evidence of the standing building supports the results of the excavation in suggesting that the additions represented an enlargement of the maltings with additional floor space, a second kiln and a purpose-built steeping tank within the building. The suggestion in the excavation report that it might have been a stable seems unlikely as no evidence of an external door has been found, but the evidence is not conclusive.

Documentary evidence suggests that malting ceased in the building before 1847. It is known that there was a brewery in the west end of Madeley Court from the later 18th century (see pp. 50–51 above), which would probably have been served by the commercial maltings. The brewery was still operating in 1883 but it had been removed by the end of the 19th century. A 19th century drawing by J. Holmes Smith shows a small building, immediately adjoining the gatehouse on its west side, which appears to include ventilation bricks in its south

Plate XIV Madeley Court barn: Truss 10 in 1991.

Plate XV Madeley Court barn: south part of east elevation in 1991.

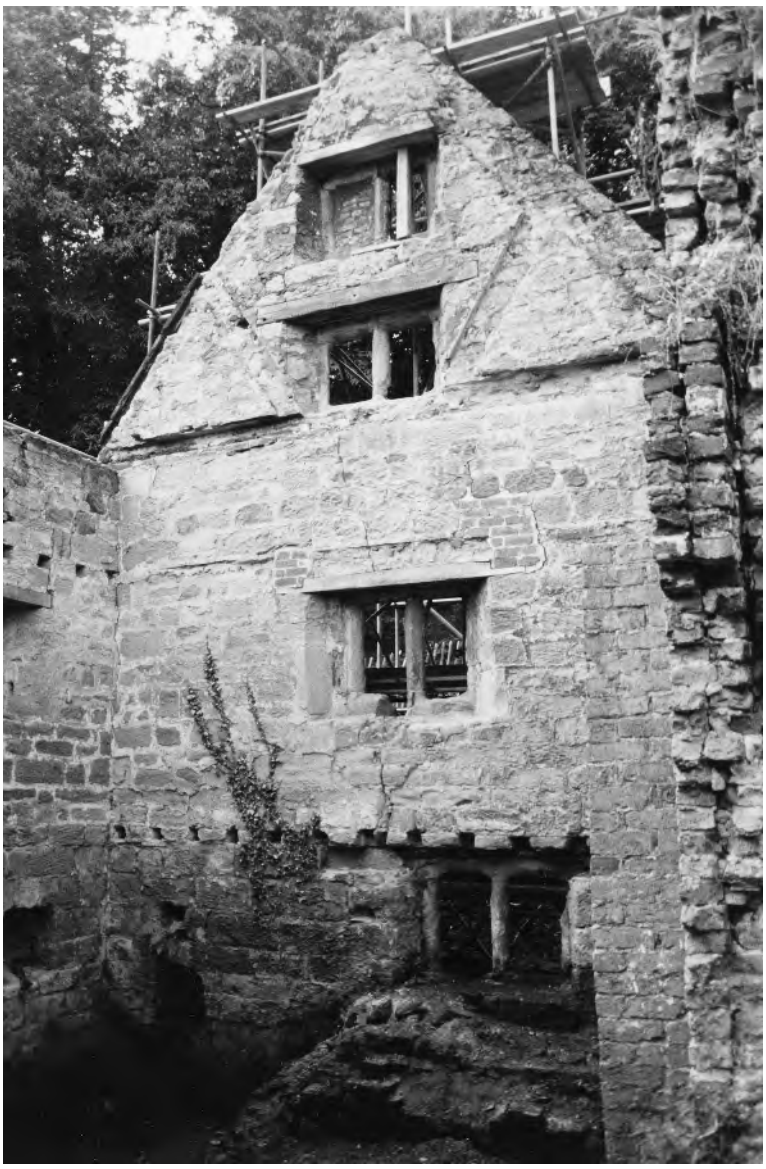

Plate XVI Madeley Court barn: interior of south-east gable end in 1991 after removal of roof.

gable (see p. 5, Plate III above). It seems to be shown on the Madeley Tithe Map and Apportionment, where it is described as a house and yard, owned by James Foster and occupied by Thomas Rowlands (Fig. 1, Plot No. 192), and it appears on the Ordnance Survey plan of 1882, but it is not described. In view of the inclusion of ventilation bricks in the gable, it has been suggested that, perhaps, it might have been a small maltings (Cameron Moffett pers. comm.), and it would seem to make sense that a small maltings might have been built close to the house after the larger maltings in the barn had ceased to operate.

No evidence is available to indicate precisely why the large-scale maltings operation came to an end, but large numbers of maltsters are included in the local directories in the mid-19th century, particularly in Ironbridge, and it could be that improved river transport and competition were the principal reasons.

Phase 3: Agricultural conversion circa 1847

The principal changes made to the standing fabric, in order to convert it for agricultural use, were the blocking up of several doors and windows as well as the opening which previously gave access to the steeping tank from the north wing. At the same time a series of internal divisions was built, and at least four new doorways were inserted in the external shell to give access into four stabling spaces created in the north wing and the space at the south-east corner, where the steeping tank had been partially demolished. The floors in the north wing and

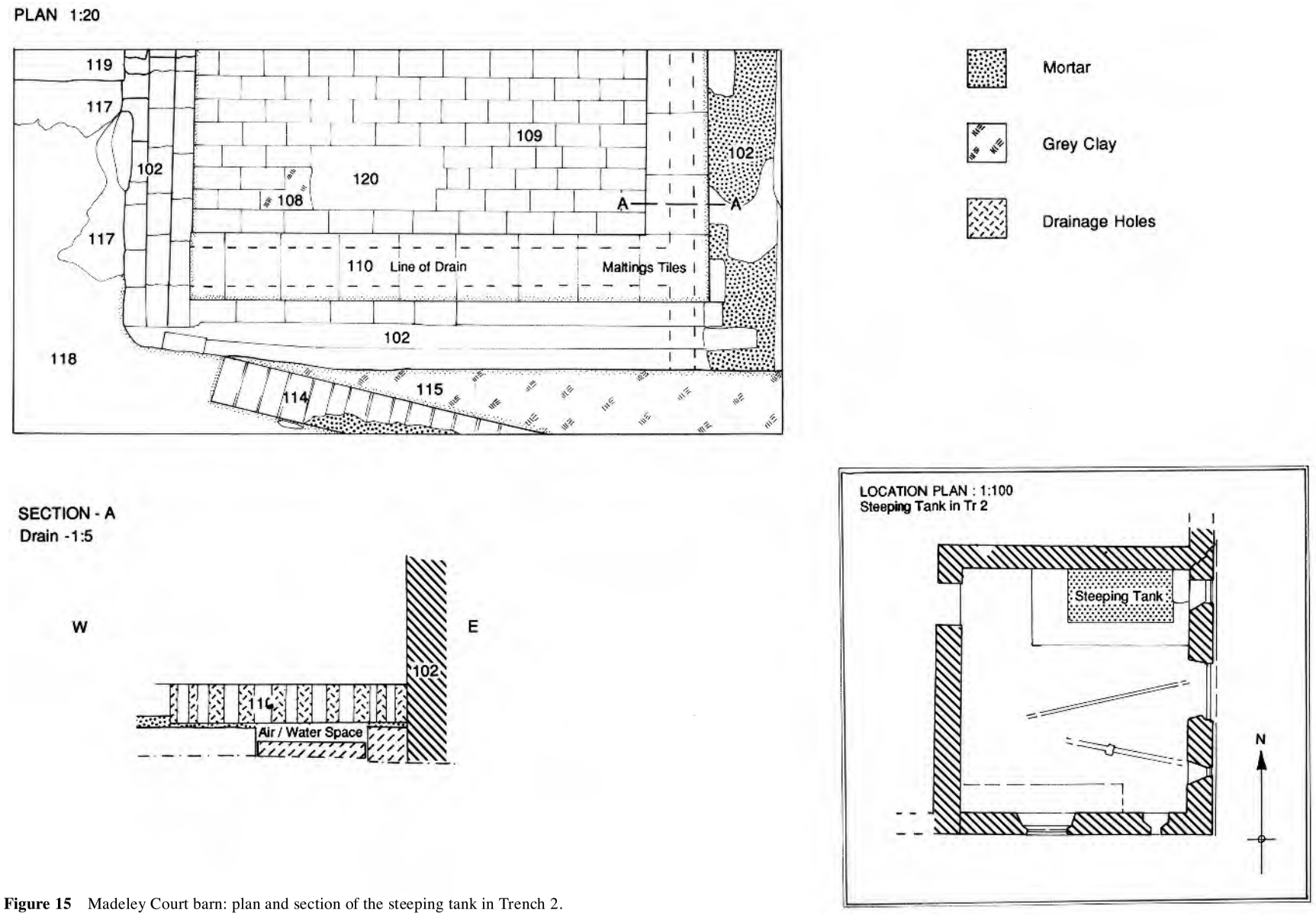

Figure 15 Madeley Court barn: plan and section of the steeping tank in Trench 2.

Plate XVII Madeley Court barn: detail of steeping tank during excavation.

Plate XVIII Madeley Court barn: general view of south-east extension during excavation. The steeping tank is bottom right and the boiler base to left.

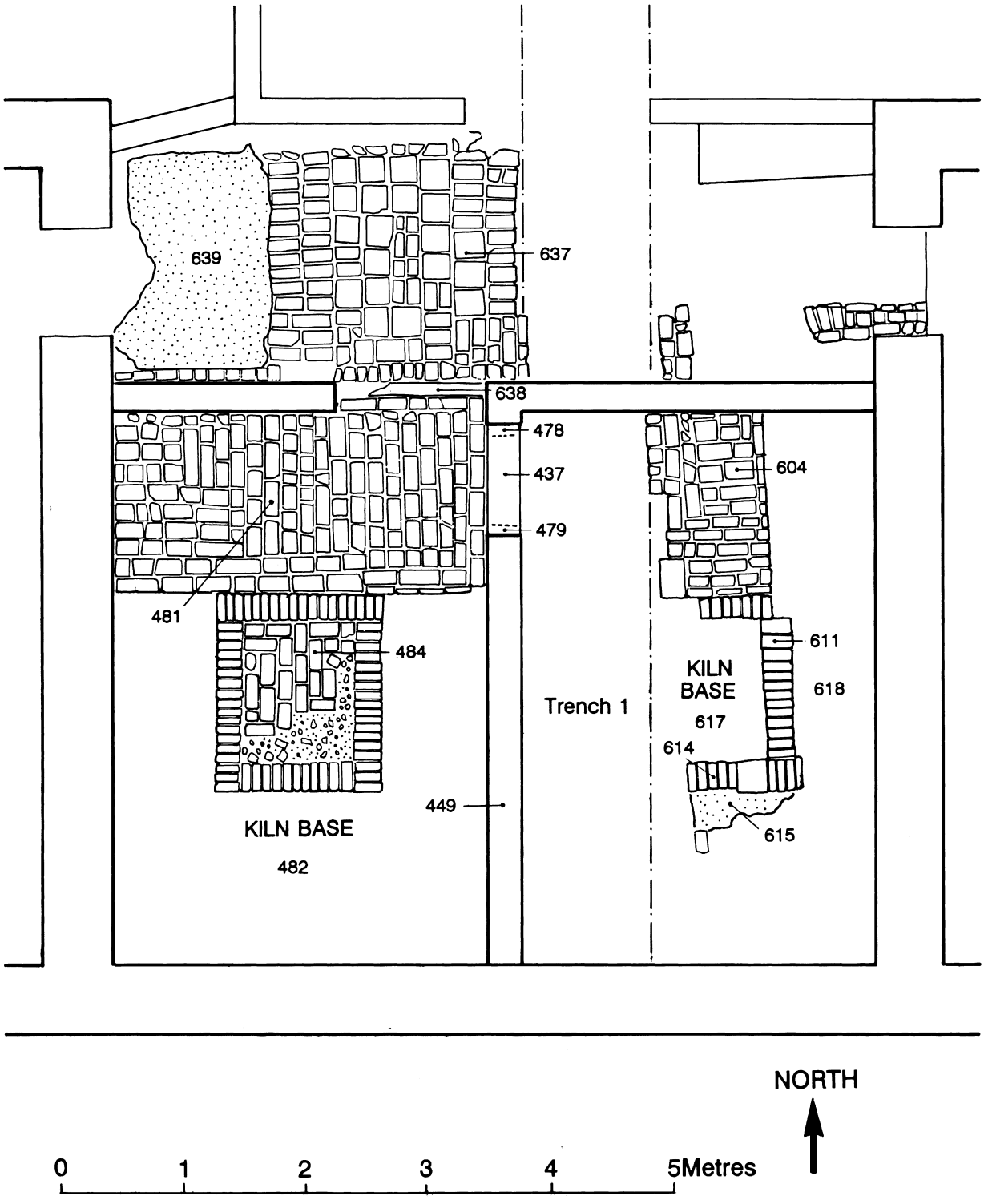

Figure 16 Madeley Court barn: plan of the enlarged maltings in Trench 1.

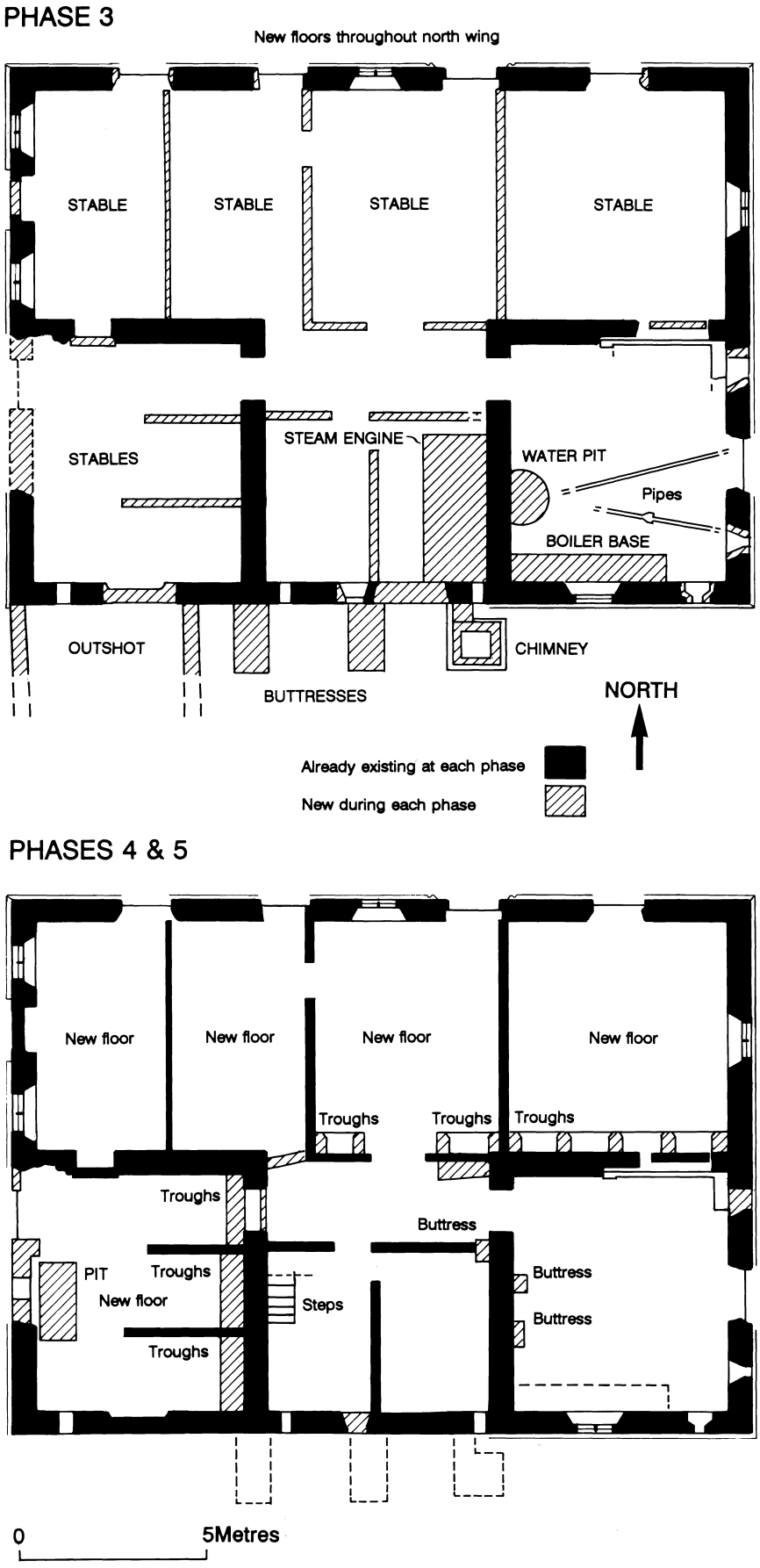

Figure 17 Madeley Court barn: ground floor plan, Phases 3, 4 and 5.

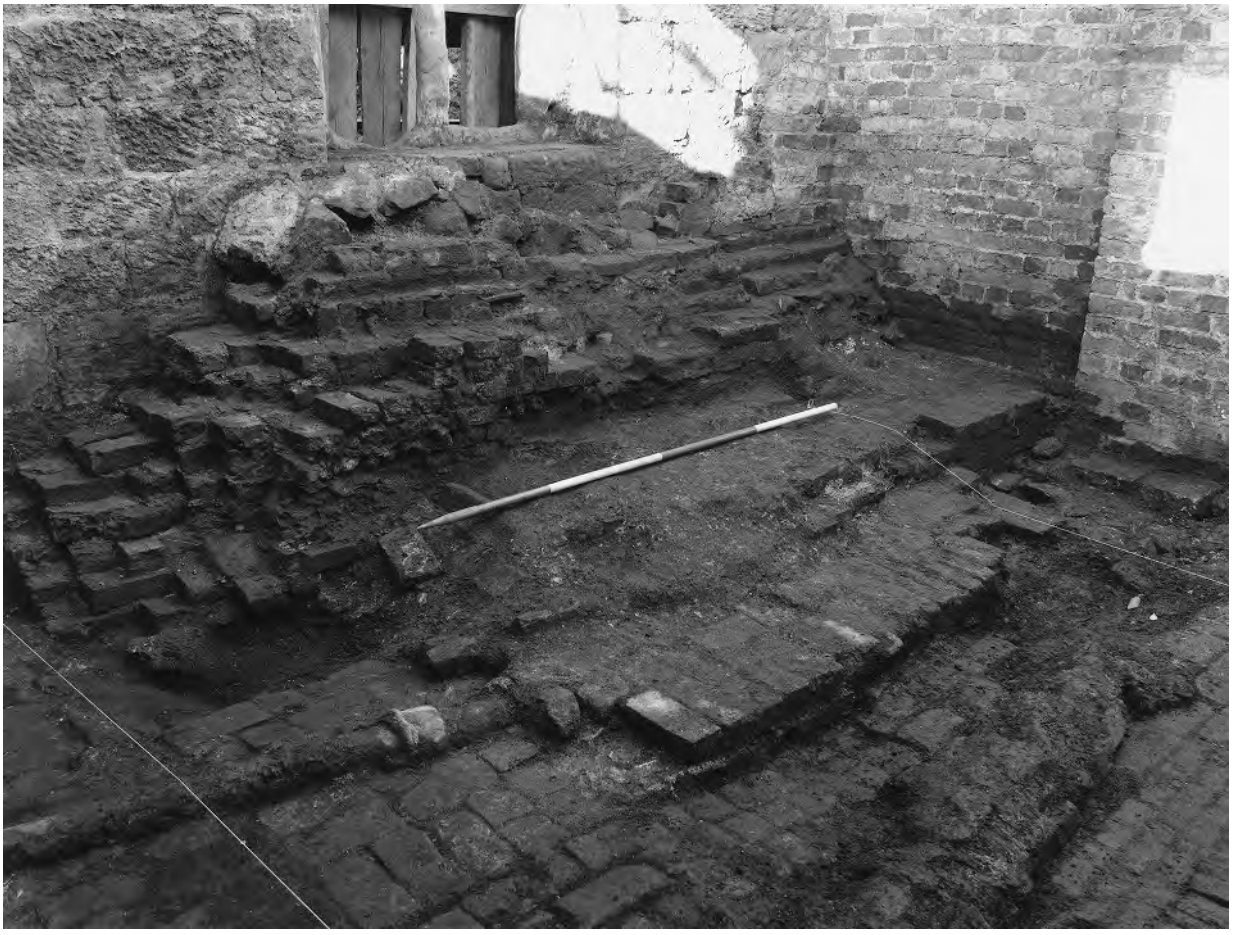

Plate XIX Madeley Court barn: the boiler base.

in the south-west extension were re-laid (Plate XIX). The south-west addition may, at this stage, also have been provided with an external door and then used as stables (Fig. 17).

In the south-east extension the remains of a partially-demolished rectangular plinth and hearth is interpreted as the base for a boiler, fed from a coal hole at the east end of the south wall, and a wooden stave-lined pit fed by two iron water pipes (Plate XX). At this stage the first floor is likely to have been removed and the west wall repaired.

The biggest change took place in the central of the three spaces on the south side. The malting kilns were demolished and the floor was patched with brick ends. Part of the south wall was demolished and then rebuilt for the insertion of a small steam engine (Plates XXI and XXII), which was mounted on a disused plateway weighbridge (Plate XXIII and see pp. 122–4 below). A chimney and two buttresses were added to the south side, probably at this stage, and the east wall was re-faced. Where they were retained, the upper floors were presumably used for storage and alterations, and repairs to the trusses and gables can probably be attributed to this period.

To summarise, in its third phase the building was converted for agricultural use. The north wing was divided into four parts by the insertion of walls, and excavations have demonstrated that brick floors and timber stalling were introduced to provide four stabling units, each with its own external door. The south-west addition might also have been used for stabling, while the remaining space on the south side accommodated a boiler and steam engine for an, as yet undetermined but presumably agricultural, purpose.

Malting appears to have been abandoned in the building before 1847 and, since it was mounted on a disused plateway weighbridge, the engine is likely to have been installed after the abandonment of the series of plateways created around the site after 1841. The Madeley Tithe Map, produced in 1847, shows a network of pits linked by minor railways, presumably plateways, and a ‘tram road’. By the time the survey was undertaken for the first edition of the Ordnance Survey plan in 1882 the area was crossed by a series of railway lines, presumably of standard gauge, and plateways. These seem to have served the Madeley Court Colliery and the Iron Works. The chimney serving the engine appears to be shown on the 1882 plan, so the most likely date bracket for the insertion of the engine would seem to be between 1847 and 1882.

Plate XX Madeley Court barn: part of one of the lower agricultural floors.

Plate XXI Madeley Court barn: brick engine base.

Plate XXII Madeley Court barn: brick engine base looking south.

Plate XXIII Madeley Court barn: re-used plateway weighbridge.

It might reasonably be assumed that the plateways were removed when the railways were introduced, but this was, apparently, not the case, as both systems were used in the area as late as the Second World War. The earliest standard gauge railway line in the vicinity of Madeley Court was the GWR's Madeley Junction to Coalbrookdale line, which was opened in June 1854 (Christiansen, 1973, 155, 285). This ran east-west about 320 m. north of Madeley Court and included Madeley Court Station. Running diagonally across this and passing about 220m. north-east of the barn was the LNWR's Hadley Junction to Coalport line, opened in 1861 (Christiansen, 1973, 155, 158).

Assuming that the secondary use of the plateway weighbridge occurred as the direct result of the abandonment of a section of plateway following construction of one of these two standard gauge railway lines, then this phase of conversion is likely to date to either the period 1854–1882 or to the period 1861–1882.

During the lowering of the ground level around the building, the foundations of an extension were found at the south side of the south-west corner of the building, and there were rafter pockets in the brickwork on the south gable at first floor level which indicated the former existence of a timber roof. The remains comprised two courses of stone foundation, 800mm. and 550mm. wide, supporting several courses of brick wall, 400mm. thick, and measured approximately 7.30m. long by about 5.00m. wide externally (Fig. 3). Within its south-west angle there were remains of a brick floor with its upper surface at about 103.3m.O.D. To the east of the building was an old ground surface, at the same level as the floor, over brown clay, and both this and the remains of the building were buried under about 3m. of blue-grey clay. This structure is shown on the Madeley Tithe Map of 1847, but not on the Ordnance Survey plan of 1882, by which time quantities of clay had been extracted from the nearby coal and ironstone works, and deposited to the immediate south-west of the barn. It is safe to conclude, therefore, that the extension was erected before 1847 and demolished before 1882.

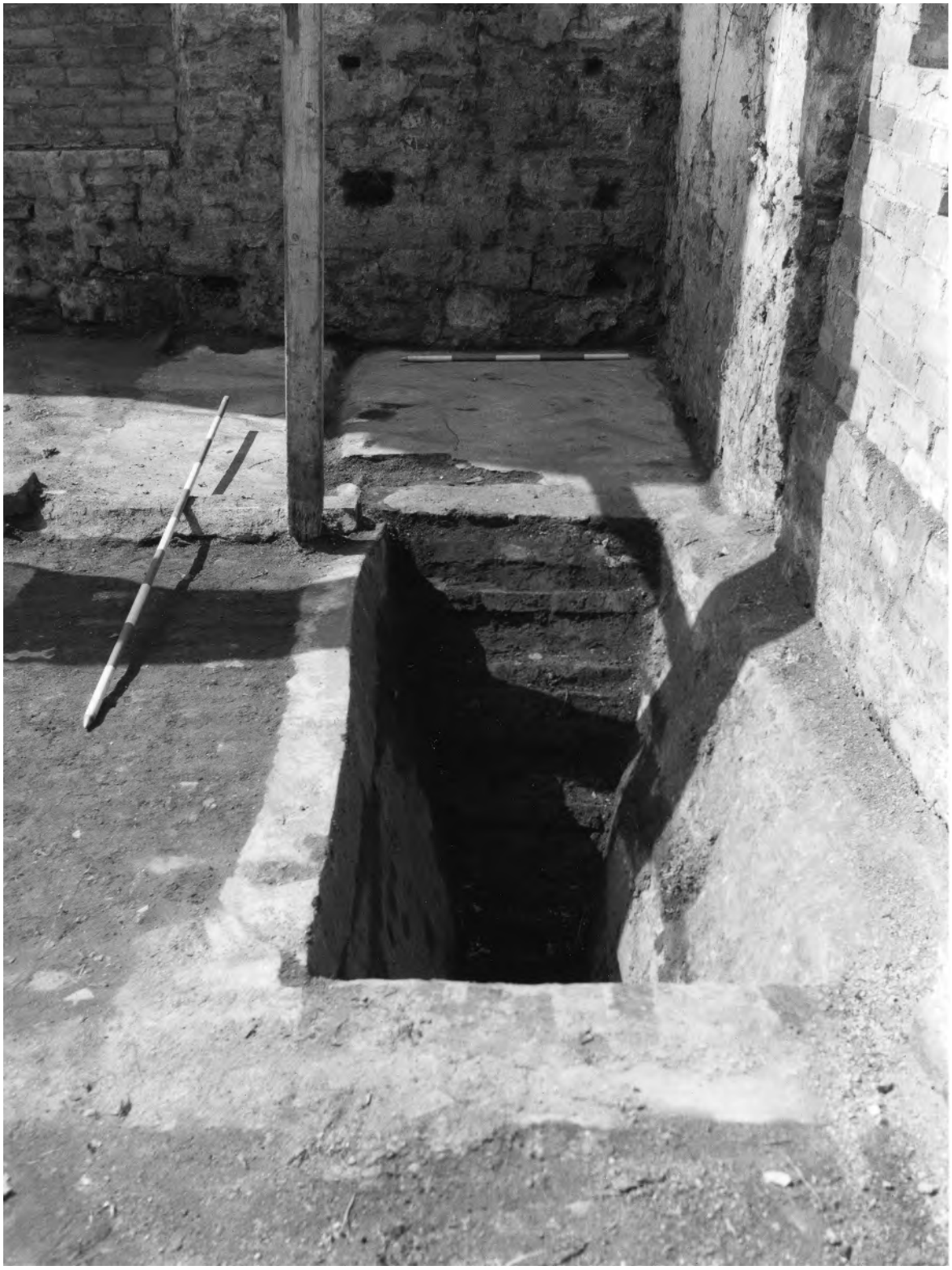

Plate XXIV Madeley Court barn: sheep dip in south-west extension.

Phase 4: Agricultural upgrading

All the agricultural floors throughout the building had become very worn, to a point where they could no longer be patched, and were re-covered with new brick floors in a similar form (Fig. 17 Phase 4A). The engine and boiler were removed, and the wall between them was repaired and buttressed, but the boiler and engine bases were not demolished entirely. A period of upgrading of the fittings within the barn followed a little later. The animal stalls were provided with specially moulded brick troughs and a brick-built staircase was added against the west wall of the central space on the south side (Fig. 17 Phase 4).

These changes are difficult to date but perhaps belong to the very end of the 19th century, or a little later. The exterior of the building seems to have survived in this arrangement at least into the 1950s, and is recorded in a photograph of the north elevation taken in 1954 (see p. 7, Plate V above).

Phase 5: Latest alterations

Later still, a concrete floor was laid in the north-east corner, and a pit, possibly designed as a sheep dip, was built into the south-west corner (Plate XXIV). The building became a store during the period of ownership, firstly by Dawley Development Corporation from 1964, and then by the Telford Development Corporation in the 1970s.

APPENDICES

DENDROCHRONOLOGICAL DATING

By MICHAEL WORTHINGTON

The building's timbers have never been fully assessed for their suitability for dendrochronology. During restoration all reusable materials were set aside for potential use. The main trusses were saved as part of this process and were incorporated in the restoration. They are therefore available and could be reassessed with regard to their potential for further chronological dating. This might produce a narrower date range or, if sapwood remains, a precise felling date for the timbers.

The sample which produced the date range given below was collected during clearing of the building interior, and was processed in 1998 as part of a research project to produce a Master Chronology for Shropshire. It was collected from the primary phase, first floor, transverse beam and produced a date range of 1606–1636.

Sample timber & position number	Dates AD spanning	H/S bdy	sap-wood	mean width	std devn	mean sens mm.	date range mm.
MCT1 First floor transverse beam	1481–1595	1595	h/s	2.72	137	0.206	*1606–1636

**Using a sapwood estimate of between 11–41 rings (Miles D.H 1997a)*

Dating-mct1 <1481–1595> Madeley Court Barn – mct1 a+b at 1595

Cross-dating by Treedate programme
Report compiled 02.02.98 23:30:07

SALOP95	(Miles D.H., 1995)	<881–1745>: o/lap = 111 t=7.54
*LANGLEY	(Hillam J., & Groves C., 1993)	<1491–1600>: o/lap = 101 t=7.13
*GOLDING	(Miles D.H., & Haddon-Reece D., 1996)	<1491–1666>: o/lap = 101 t=6.31
HANTS97	(Miles D.H., 1997b)	<1041–1972>: o/lap = 111 t=6.30
NORTH	(Hillam J., 1994)	<1440–1742>: o/lap = 111 t=6.13
*UPWICH3	(Groves C., & Hillam J., 1997)	<1454–1651>: o/lap = 111 t=6.12
BEARSTP2	(Miles D.H., & Worthington M., 1997)	<1478–1607>: o/lap = 111 t=6.10

*Component of Salop95

PALYNOLOGICAL AND PETROGRAPHIC ANALYSIS OF COAL FROM THE HEARTH OF THE BOILER BASE (23.12.1992)

By PAMELA SPRIGGS

Palynological Analysis

A Palynological Analysis was carried out to determine the age of the coal by extracting and identifying the fossilised spore/pollen grains. The stratigraphically significant species identified in the spore assemblage demonstrated that the coal was from a seam in the lower part of the Middle Coal Measures.

The level of abundance of the various spore types indicates the coal was likely to be from the Doudle or Upper Flint Seam.

Petrographic Analysis

A representative portion of the sample was made into a polished particulate block, and examined by reflected light microscopy. The rank or reflectance value of the coal was determined by measuring the amount of light reflected from its vitrinite component.

The reflectance value of the coal was 0.56%, demonstrating that it was of low rank.

Reflectance data for coal worked at Broseley, Coalbrookdale and Madeley Collieries is not available but the reflectance value of the coal is consistent with that of other Midland coal and is similar to that worked at Coventry and Daw Mill Collieries.

Conclusion:

- The coal was consistent in age and reflectance value with that of Midlands coal.
- The coal was considered likely to have derived from the Doudle or Upper Flint Seam.

THE MALTING PROCESS

By MICHAEL WORTHINGTON

Malt is artificially germinated grain (usually barley) in which germination is stopped at a certain point in order to conserve the saccharine contained in the budding grain. This is then fermented with yeast, in a brewery, to form alcohol. The traditional process of making malt was floor malting, a method which took two weeks or more from start to finish, and, since the 19th century, it has been superseded gradually by faster and more efficient techniques.

There are three main stages in the conversion of barley into malt. These are steeping, germinating and kilning. Malting is carried out in a dedicated building (the Malthouse) either by independent maltsters or by the brewer.

The barley is first soaked in water in a steeping tank for a number of days, and then spread onto special floors to allow germination to take place at controlled levels of temperature and humidity. As the barley shoots, important enzymes are released which change the protein and starches, stored in each grain, into sugar. The barley is then taken to the kiln to be dried, thus halting the germination and the enzyme activity. Kilning also gives the malt its colour and flavour; darker beers are made with malt which has a longer kilning period.

The malt is then taken from the Malthouse and distributed to breweries where it is crushed to form a starch (grist). This is then mashed with water in a controlled environment and converted into sugar. The sugary liquid (wort), which is thus produced, forms the basis of the beer solution. The beer solution goes through three further processes (boiling, cooling and fermenting) when the hops and yeast are added. The resulting brew is run off into casks where it settles as beer.

Layout of a Maltings

The buildings used for malting have to incorporate a number of special features. These include:

- Louvres on the windows to allow temperature and ventilation to be monitored.
- A large uninterrupted floor space for the germination of the barley.
- A tank in which to steep the grain. This could be a purpose-built brick-lined structure, a large wooden/metal barrel or a trough.
- A kiln.

Because of these special features maltings evolved into long, rectangular buildings of several storeys with a kiln at one end and a number of steeping tanks at the other, and small regularly-spaced windows down the sides. The building at Madeley, in its primary phase, is a predecessor to this format in that it has all these features but laid out in a different way. It had long, uninterrupted floor space on a number of floors. The kiln/kilns, rather than being at one end, was/were built into the side of the building and there is no evidence for the position of the steeping tank at this early stage. Heat and ventilation were controlled by windows along the walls and possibly by hearths (situated in the west wall) in which small fires could be lit to draw air through the building.

THE PLATEWAY WEIGHBRIDGE

By MARTIN HARRISON-PUTNAM

The railway deck of a plateway weighbridge was found reused as the base for a steam engine in the south-east corner of the room or space at the centre of the south side of the building. Documentary evidence suggests that its reuse is most likely to have occurred in the period 1854–1882 (see p. 116).

The deck was cast-iron, 2.74m. long and 0.94m. wide (9ft. × 3ft. 1inch: Fig. 18 and Plate XXII). On top of the weighbridge a pair of L-shaped plateway rails, with a gauge of 510mm. (18inches), had been attached. A pattern of raised bosses had been cast into the area between the rails and, on the underside, were four pivot struts. One rail had been partly cut away to house the engine base, and several holes indicate the line for holding-down bolts for the engine. The pattern of the engine bed was also visible in the mortar traces remaining on the weighbridge surface. The bed of the weighbridge was rusted and traces of brick rubble were found adhering to it.

Weighbridges, or weighing machines, were originally used on turnpike roads in order to ascertain whether vehicles were loaded within legal weight limits. Similar structures were used to weigh materials leaving industrial sites by road, railway and canal. The earliest form of weighing machine was the steelyard on which carriages were lifted by chains. By 1800 weighbridges were in use, involving a platform placed over a pit on the line of a railway or road. The platform was supported by two double levers level with the surface of the road. These moved a horizontal level from which a small iron rod was carried to one end of a scale made up of a number of small weights. In 1796 Robert Salmon patented a machine with a dial rather than a scale.

A rare example of an excavated weighbridge was found at Banwen ironworks (Glamorgan), dating to 1847–48. The railway deck rested on four pivot struts which, in turn, operated a pair of subsidiary levers and a main lever arm which ran into the hut. Inside the hut was a vertical arm on which weights could be hung. The whole assemblage was bolted down onto a cast-iron foot plate set onto levelling courses of wood on walls of firebrick in a stone-lined pit. The Banwen bridge used edge rail (Hughes, 1990, 182–84).

L-shaped plateways were introduced to the Shropshire coalfield in the 1790s, probably by their inventor, John Curr. They replaced Coalbrookdale iron rails which comprised a flat iron plate on a wooden base and had been introduced by 1767 to solve the problems of wear and tear of the wooden railways, which had been used locally since 1608. L-shaped rails were used with small carriages with iron wheels, the flange being on the rail rather than on the wheel. L-shaped plateway was used widely in this area during the 19th century for short distance industrial transport, even after the introduction of standard gauge lines.

Archaeological evidence has indicated that different iron- and coal-producing concerns, all operating in the Coalbrookdale Coalfield, used at least six different gauges. Some companies employed more than one gauge on their line suggesting that such development was uncoordinated. Similarly, there have been found a bewildering variety of rail lengths and sleeper types which would have prevented the through-running of different systems. Both 18 inch and 22 inch gauges have been found in Coalbrookdale.

To date, it has been assumed that Birkenshaw rail was used on the lines between Madeley Court Ironworks and adjacent mines. John Birkenshaw, of Northumberland, patented a T-shaped wrought-iron rail in 1820, and rails of this type were discovered at Madeley Court in the late 1960s, together with cast-iron sleepers which show the gauge of the line to have been roughly 30 inches. All the rails were broken off but the largest were 10ft. long, and it is probable that, like other Birkenshaw rails, they were originally rolled in 15ft. to 18ft. lengths. The top edges of the rails were 2ft. wide, and the sleepers were of two types – one with a simple straight-through groove in the shoe and the other with two stopped grooves to hold lapping rails.

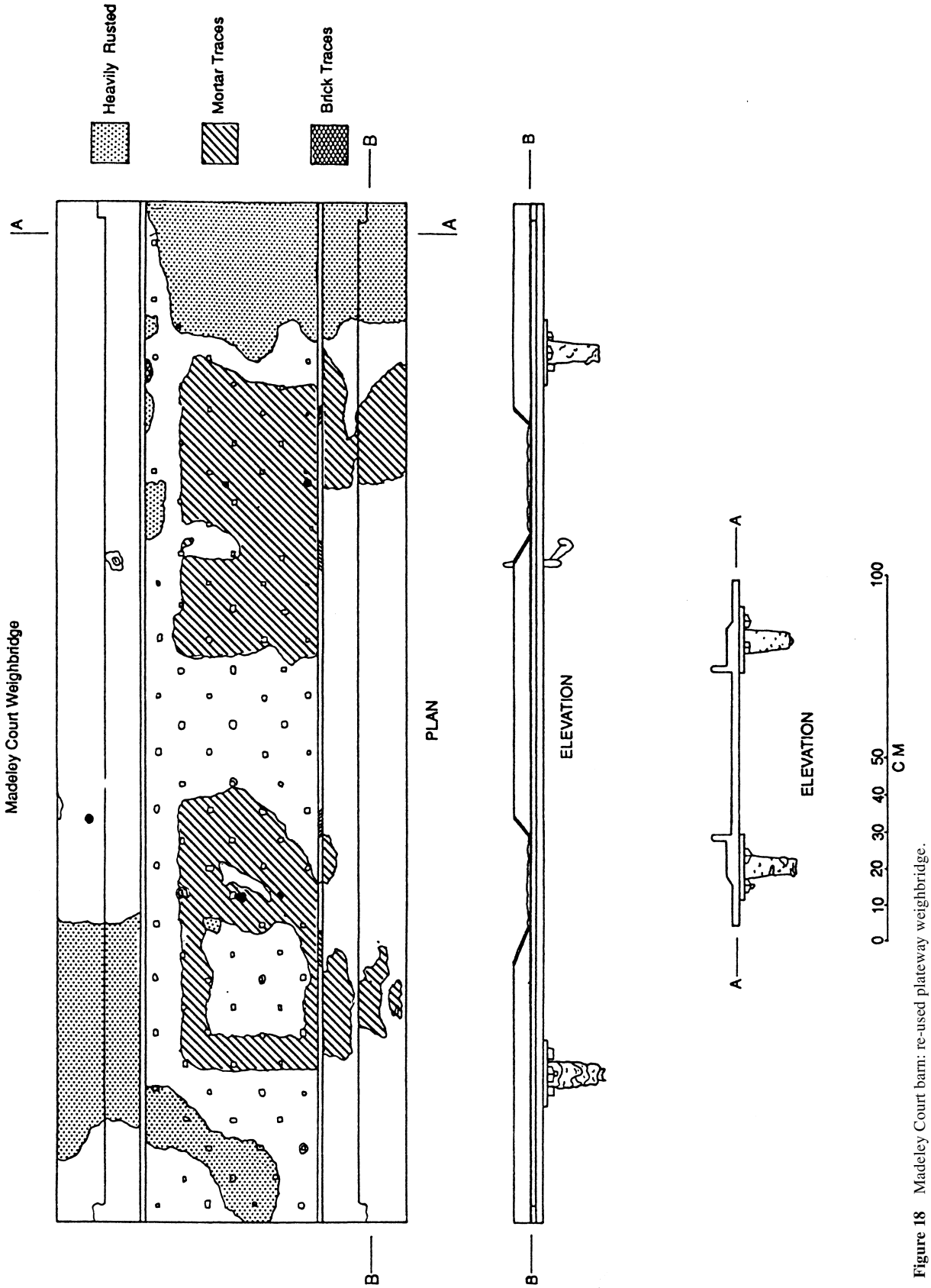

Figure 18 Madeley Court barn: re-used plateway weighbridge.

Conclusion

Iron is a valuable commodity on industrial sites, and any redundant ironwork is either reused or thrown back into the furnace. The Madeley Court weighbridge was, most likely, a useful piece of iron, found nearby, and perhaps only recently out of use. The rails are not of the Birkenshaw type normally associated with the Madeley Court Works. This suggests either that the plateway was in use prior to, or at the same time as, Birkenshaw rail, or that the weighbridge was brought from another part of the coalfield.

The Madeley Court plateway weighbridge is the only example of such a weighbridge known from the Coalbrookdale Coalfield, an area of national importance with regard to the early history of railways.

It has been donated, by Lyric Hotels, to the Ironbridge Gorge Museum Trust.

BIBLIOGRAPHY (PART II)

Christiansen, R., 1973, *A Regional History of the Railways of Great Britain*, **7**: *The West Midlands*.

Groves, C. and Hillam, J., 1997, 'Tree-ring analysis of timber from Upwich, Droitwich, Hereford & Worcester 1983–1984" in Hurst, J. D. (ed.), *A Multi-Period Salt Production Site at Droitwich: Excavations at Upwich*: CBA Research Report 107.

Hillam, J., 1994, 'Compilation of master chronologies from Northern England and Wales' (unpublished computer file NORTH, Sheffield Dendrochronology Laboratory).

Hillam, J. and Groves, C., 1993, 'Tree-ring dating of oak timbers from Langley Gatehouse, Shropshire', *Ancient Monuments Laboratory Report 23/93*.

Hughes, S. R., 1990, *The Brecon Forest Tramroads*: RCHM Wales.

Miles, D. H., 1995, 'Shropshire Dendrochronology Project' (unpublished computer File SALOP95).

Miles, D. H., 1997a, 'The Interpretation, Presentation and use of Tree-ring Dates', *Vernacular Architecture*, **28**, 40–56

Miles, D. H., 1997b, (unpublished Hampshire Dendrochronology Project).

Miles, D. H. and Haddon-Reece, D., 1994, 'Golding Hall, Cound, Salop' (List 56 – Tree-ring Dates), *Vernacular Architecture*, **25**, 28–36.

Miles, D. H. and Worthington, M., 1997, 'Bear steps Gallery, Shrewsbury, Shropshire' (List 81 – Tree-ring Dates), *Vernacular Architecture*, **28**, 159–163.

Raistrick, A., 1953, *Dynasty of Ironfounders: The Darbys of Coalbrookdale*.

Randall, J., 1880, *History of Madeley, including Ironbridge, Coalbrookdale and Coalport*.

Randall, J 1883, *The Old Court House (or Manor House) Madeley*.

Rees, A., 1819, *Rees Cyclopaedia*, 38.

Schubert, H. R., 1957, *History of the British Iron & Steel Industry from c.450BC to AD1775*.

Trinder, B. S., 1970, 'Early railways in East Shropshire', *Shropshire Newsletter*, **39**.

VCH Shropshire, XI, 1985, *The Victoria County History of Shropshire*, **XI**.

Wanklyn, M. D. G., 1973, 'Iron & steelworks in Coalbrookdale in 1645', *Shropshire Newsletter*, **44**, 3–6.

CONSOLIDATED INDEX FOR PARTS I AND II

ENGLISH HERITAGE