

DODDERHILL BUILDING  
RECORDING:  
OLD ASTWOOD FARM,  
ASTWOOD LANE,  
HANBURY

Shona Robson-Glyde

Illustrations by Carolyn Hunt

3<sup>rd</sup> November 2005

© Historic Environment and Archaeology Service,  
Worcestershire County Council

Historic Environment and Archaeology Service,  
Worcestershire County Council,  
Woodbury,  
University College Worcester,  
Henwick Grove,  
Worcester WR2 6AJ



Project P2746  
Report 1346  
WSM 34370

# Contents

<b>Part 1 Project summary</b>	<b>1</b>
<b>Part 2 Detailed report</b>	
1. <b>Background</b> .....	<b>2</b>
1.1 Reasons for the project .....	2
1.2 Project parameters .....	2
1.3 Aims .....	2
2. <b>Historical context</b> .....	<b>2</b>
3. <b>Results</b> .....	<b>3</b>
3.1 Structural analysis .....	3
3.1.1 Phase 1 - 1580s (from dendrochronology).....	3
3.1.2 c1700 .....	3
3.1.3 Phase 2 - Late 18 <sup>th</sup> century .....	3
3.1.4 Phase 3 - 19 <sup>th</sup> century .....	3
3.1.5 Phase 4 – Late 19 <sup>th</sup> century.....	4
4. <b>Synthesis</b> .....	<b>4</b>
5. <b>Publication summary</b> .....	<b>4</b>
6. <b>The archive</b> .....	<b>4</b>
7. <b>Acknowledgements</b> .....	<b>4</b>
8. <b>Personnel</b> .....	<b>5</b>
9. <b>Bibliography</b> .....	<b>5</b>
10. <b>Abbreviations</b> .....	<b>5</b>
11. <b>Appendix 1 Figures</b> .....	<b>6</b>

---

# **Dodderhill Building Recording: Old Astwood Farm, Astwood Lane, Hanbury**

**Shona Robson-Glyde**

## **Part 1 Project summary**

Building recording was undertaken at Old Astwood Farm, Astwood Lane, Hanbury, Worcestershire (NGR SO 93332 65062). It was undertaken on behalf of the Dodderhill Research Group. The project aimed to establish the character and history of the building.

Old Astwood Farm started its life in the 1580s as an 'H' shaped hall and cross wing house. By the 17<sup>th</sup> century the north wing had been demolished and the hall was demolished in the late 18<sup>th</sup> century. However extensions to the building were also constructed in the 18<sup>th</sup> and 19<sup>th</sup> centuries allowing the high status of the building to continue.

## Part 2 Detailed report

### 1. Background

#### 1.1 Reasons for the project

Building recording was undertaken at Old Astwood Farm, (NGR SO 93332 65062), Astwood Lane, Hanbury, Worcestershire (Fig 1), on behalf of the Dodderhill Research Group.

#### 1.2 Project parameters

The project conforms to the *Standard and guidance for the archaeological investigation and recording of standing buildings or structures* (IFA 2001) and *Recording historic buildings: a descriptive specification (3<sup>rd</sup> edition)* (RCHME 1996).

#### 1.3 Aims

The aims of the recording were to establish the character, history, dating, form and archaeological development of the building.

### 2. Historical context

Old Astwood Farm currently lies on the boundary of Dodderhill and Hanbury parishes but is and always has been within the parish of Hanbury. The house lies just off the Astwood Lane to the east of Wychbold. It is a grade II\* listed building that is described in the listing text as follows:

‘Farmhouse, now house. Late C16, altered mid-C18, c1800 and mid-C19. Part timber-framed with rendered infill, part brick, plain tiled roofs. Former hall with two two-bay cross-wings at north and south gable ends; the north cross-wing was demolished in the mid-C18 and the hall in c1800 when a two-bay brick range was added to the south side elevation of the remaining cross-wing; during the mid-C19 a single-bay brick addition was built in place of the former hall with wings to east and west adjoining the cross-wing; the original cross-wing has an external sandstone chimney with four rebuilt diagonal stacks to its south elevation, and the south wing has a large, external brick chimney with off-sets and rebuilt stack to its rear elevation. Two storeys, attic and cellar with coggled eaves cornice; south wing is of one storey and attic with dormers. Framing: cross-wing has three rows of close-set vertical studs from sill to wall-plate, the upper row at the gable ends having some decorative panels and short straight braces at the upper corners; the attics are jettied on a moulded bressummer and have collar and tie-beam trusses with two collars, struts and decorative panels. West front elevation: casement windows throughout; original gable end has a 3-light and a single-light window on the ground floor with plank weatherings, a 2-light and a 3-light first-floor window and an attic light; to the left is the main entrance having a mid-C19 gabled timber-framed porch with moulded bargeboards and finial and a panelled door. The mid-C19 addition to the left has a ground-floor bay window and a first-floor 3-light window with a cambered head. The south wing to the right has three 3-light windows, a rectangular light and two doors, all with cambered heads, and two gabled dormers with 2-light windows. Interior: stop-chamfered cross-beamed ceiling and large sandstone fireplace on west bay of cross-wing; also winder staircase beside chimney to south wing upper floor. The house was occupied by the Vernon family before they moved to Hanbury Hall in the early C18’ (DoE 1986).

Old Astwood Farm was recorded in the 1970s by the Hereford and Worcester Architectural Record Group. Their records are now in Worcestershire Record Office. The records for Old Astwood Farm (BA 14130/222) include some documentary evidence which give a history of the farm as follows:

‘The oldest record of Astwood I have found is reference to a sale which took place between 1580 and 1614 when Richard Vernon (1550-1627), Rector of Hanbury from 1580-1627 and who founded the family who became Lords of the Manor and largest local landowners, bought the property from Edward Morgan, gent. The inventory taken after his death in 1627 exists, and describes the rooms of an affluent household. Inventories are always difficult to relate to plans, but a possible reconstruction is shown on the plan [Fig 3]. I assume that the surviving timber framed wing contained the ‘Great Parlour’ (fine ceiling beams still exist and are shown dotted on the main plan [Fig 5]), ‘new pantry’ and ‘new cellar’.

---

This wing is therefore acceptably dated to the first quarter of the seventeenth century. The decorative gable end is shown in the drawing without subsequent alterations. The finial has a carved head at the base.

The reconstruction of the seventeenth century plan shows a hall range at right angles to the present timber wing, and another cross wing at the north end of the hall. This is quite a likely plan, although it means that the house has ‘migrated’ to the south since first being built, and is supported by a small illustration of the house dated 1733 (see drawing [Fig 4]). This shows the hall range with outside chimneystack, and entrance with porch alongside (opposite the existing gate in the stone wall dating from this period [Fig 6]). The second cross wing has been demolished and a new structure built at the south end. This is presumably not the present brick range, which seems to be c1800. This building corresponds to the [other] inventories of 1705 and 1760, whereas the 1678 inventory still refers to the old parlour wing’ (Harris 1977).

### 3. **Results**

Old Astwood Farm was recorded in June 2005 and a dendrochronology survey was carried out in March 2005. These surveys have allowed a basic chronology to be created for the house.

#### 3.1 **Structural analysis**

The results of the structural analysis are presented below and the basic phasing can be seen on Figure 2.

##### 3.1.1 **Phase 1 - 1580s**

In the 1580s a large hall and cross-wing house (H-shaped) was constructed. Dendrochronology has dated the house to 1584 or within a couple of years of this date (Bridge 2005). The house may have been a replacement of an earlier building on the same site although it is more likely to have been a newly built structure as it lies very close to Astwood Manor. Of this original house only the south cross-wing remains (Fig 7). This was recorded in an inventory of 1627 as the ‘Great Parlour’ and was to the immediate south of the hall with the other cross wing to the north of the hall (Fig 3).

##### 3.1.2 **Phase 2 - c1700**

At some time prior to the early 18<sup>th</sup> century the north wing of the original house was demolished. It is uncertain at what time this occurred but brewhouse and dairy wing had been constructed against the south elevation of the south wing by 1705. This dairy wing had three gables (Fig 4), probably with windows to allow light into the first floor, and incorporated a cheese room and a granary (Harris 1977, 1705 inventory).

##### 3.1.3 **Phase 3 - Late 18<sup>th</sup> century**

In the late 18<sup>th</sup> century the brewhouse and dairy wing was replaced and with the current brick-built wing (Fig 8). This has 2 dormer windows and the original door, see in a photo of c1900 (Fig 9), has since been blocked up and the blocked door, seen in the 1900 photo, has now been reopened. This building currently incorporates the kitchen and it is probable that the range was built to serve this function and as laundry/utility area.

##### 3.1.4 **Phase 4 - 19<sup>th</sup> century**

By the early 19<sup>th</sup> century the hall of the original house had been demolished. In this phase a brick replacement to the hall was constructed against the north elevation of the south wing. The north wall of the south wing contains two doorways that have been incorporated into the building of this phase. These were the entrances from the hall into the parlour and the cellar. One of these has been incorporated into the current bathroom (Fig 10) and the other into the dining room (Fig 11). The timbers in the bathroom itself appear to be the remnants of the east wall of the original hall (Fig 10) still surviving encased within the later building.

### 3.1.5 **Phase 5 – Late 19<sup>th</sup> century**

In this phase the earlier 19<sup>th</sup> century building was extended to the east and west to provide a long range against the whole of the original south wing elevation. These extensions can be seen as a building break against the north wall of the range (Fig 12) and as the different rooflines of the range (Fig 13).

## 4. **Synthesis**

This large former farmhouse has developed extensively through time but its original form can still be ascertained from the surviving fabric and documentary evidence. The original building would have been substantially bigger than the current one and also very imposing. The current building however shows some lovely features including the beams in the drawing room (Fig 14) that give an idea of the appearance of the original building.

The 18<sup>th</sup> century brick extension is typical of the period. It was not unusual to see brick kitchen and washhouse ranges being added at this time as social changes warranted the expansion of houses to include these functions separate from the main living areas.

The 19<sup>th</sup> century extensions to the house were needed to compensate for the loss of the hall. The hall was the main living and eating area. By the 19<sup>th</sup> century, houses of this status required separate dining areas. The 19<sup>th</sup> century extensions to Old Astwood Farm served this function.

## 5. **Publication summary**

The Service has a professional obligation to publish the results of archaeological projects within a reasonable period of time. To this end, the Service intends to use this summary as the basis for publication through local or regional journals. The client is requested to consider the content of this section as being acceptable for such publication.

*Building recording was undertaken on behalf of Dodderhill Research Group at Old Astwood Farm, Hanbury, Worcestershire (NGR ref SO 93332 65062; SMR ref WSM 34370). Old Astwood Farm started its life in the 1580s as an 'H' shaped hall and cross wing house. By the 17<sup>th</sup> century the north wing had been demolished and the hall was demolished in the late 18<sup>th</sup> century. However extensions to the building were also constructed in the 18<sup>th</sup> and 19<sup>th</sup> centuries allowing the high status of the building to continue.*

## 6. **The archive**

The archive consists of:

- 4 Photographic records AS3
- 112 Digital photographs
- 1 Building record forms AS43a
- 4 Building record phase forms AS43b
- 2 Scale drawings
- 1 Computer disk

## 7. **Acknowledgements**

The Service would like to thank the following for their kind assistance in the successful conclusion of this project, Mr and Mrs Morris and family, Chris Bowers and the Dodderhill Research Group.

---

## 8. Personnel

The fieldwork and report preparation was led by Shona Robson-Glyde. The project manager responsible for the quality of the project was Derek Hurst. Fieldwork was undertaken by Shona Robson-Glyde and illustration by Carolyn Hunt.

## 9. Bibliography

Bridge M C, 2005 *The tree-ring dating of Old Astwood Farm, Astwood Lane, Hanbury Worcestershire*, Oxford Dendrochronology Laboratory, report **2005/7**

Harris A D, 1977 *Notes on Astwood, Hanbury*, Hereford and Worcester Architectural Record Group (BA 14130/222)

IFA, 2001 *Standard and guidance for the archaeological investigation and recording of standing buildings or structures*, Institute of Field Archaeologists

DoE 1986, *List of buildings of special architectural or historic interest: District of Wychavon, Parish of Dodderhill*, Department of the Environment, Building no 147745

RCHME, 1996 *Recording historic buildings: a descriptive specification (3rd edition)*, Royal Commission on the Historical Monuments of England

## 10. Abbreviations

NMR National Monuments Record.

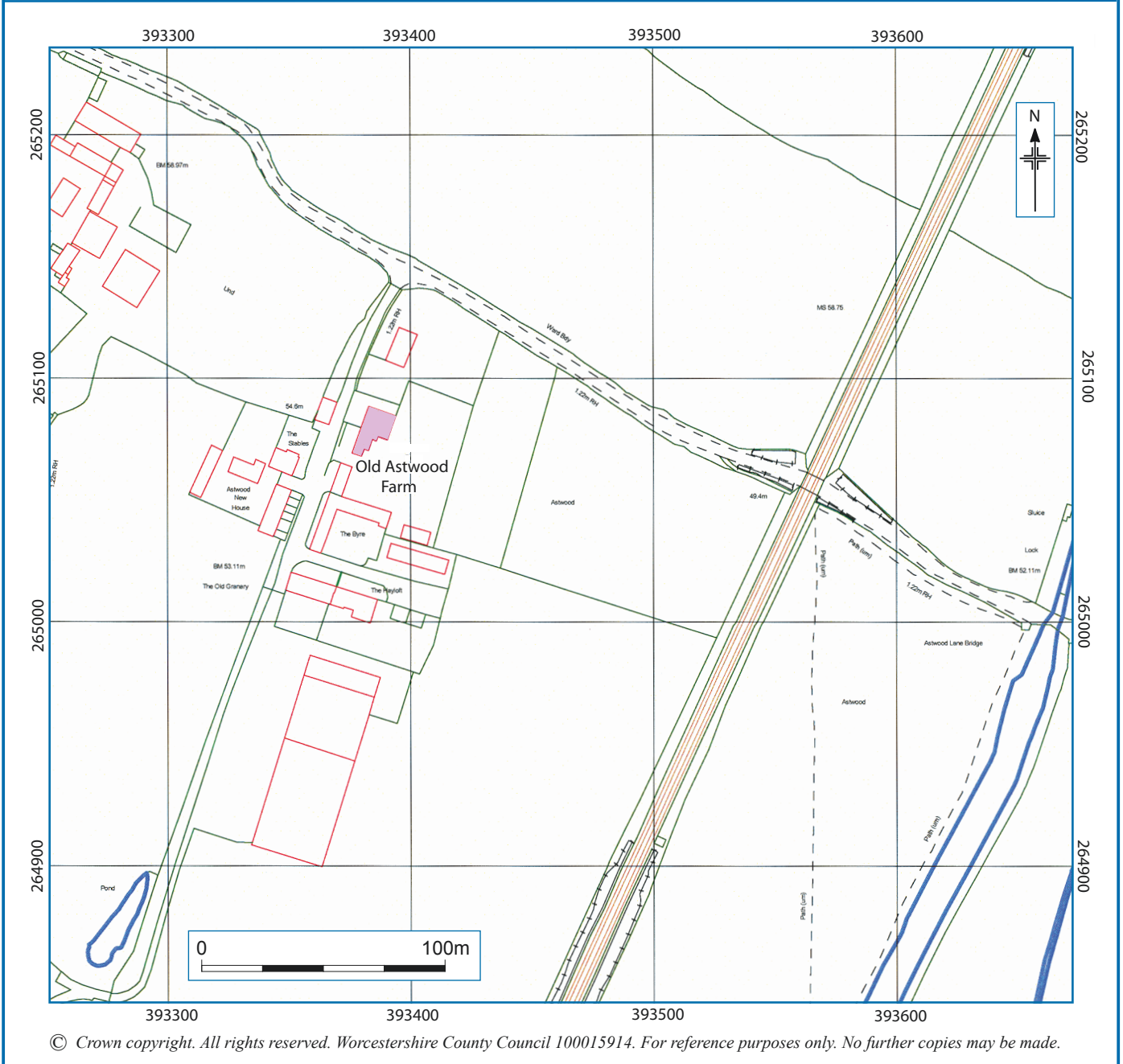
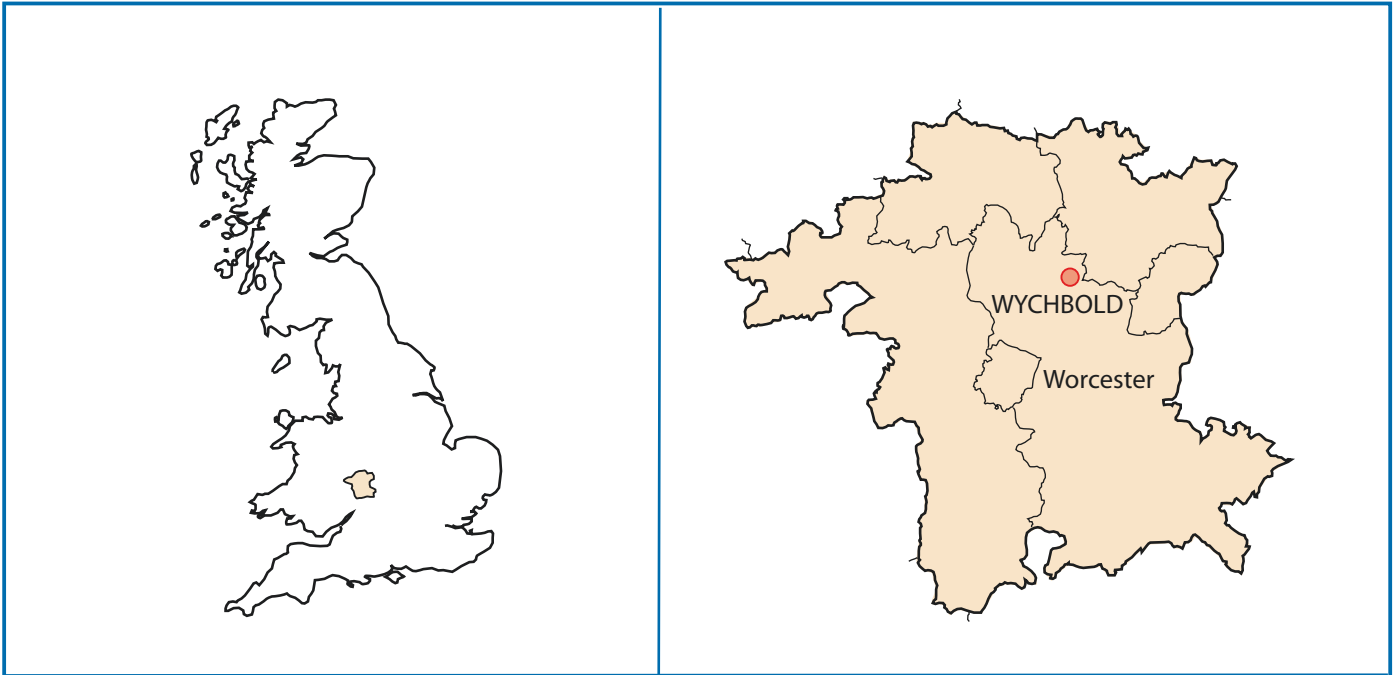
SMR Sites and Monuments Record.

WCRO Worcestershire County Records Office.

WSM Numbers prefixed with 'WSM' are the primary reference numbers used by the Worcestershire County Historic Environment Record.

11. **Appendix 1 Figures**



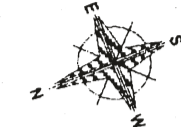


© Crown copyright. All rights reserved. Worcestershire County Council 100015914. For reference purposes only. No further copies may be made.

Location of the Old Astwood Farm.

Figure 1

# OLD ASTWOOD FARM



--- = reduced headroom below 1.5mt/6'0"

KEY	
	1580s
	late 18th century
	19th century
	later 19th century

0 approximate scale 10m

Phase plan

Figure 2

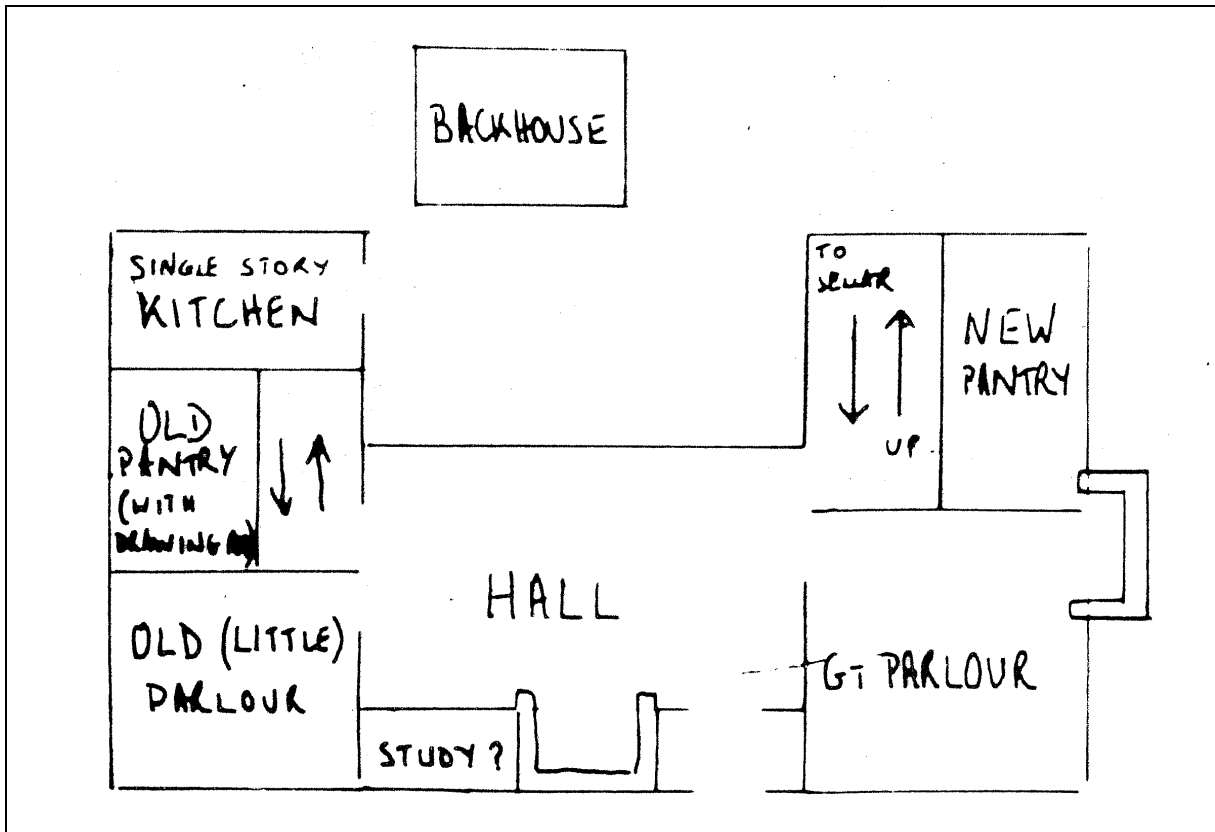


Figure 3: Reconstructed plan of Old Astwood Farm in 1627 (Harris 1977)



Figure 4: Drawing of Old Astwood Farm in 1733 (Harris 1977)

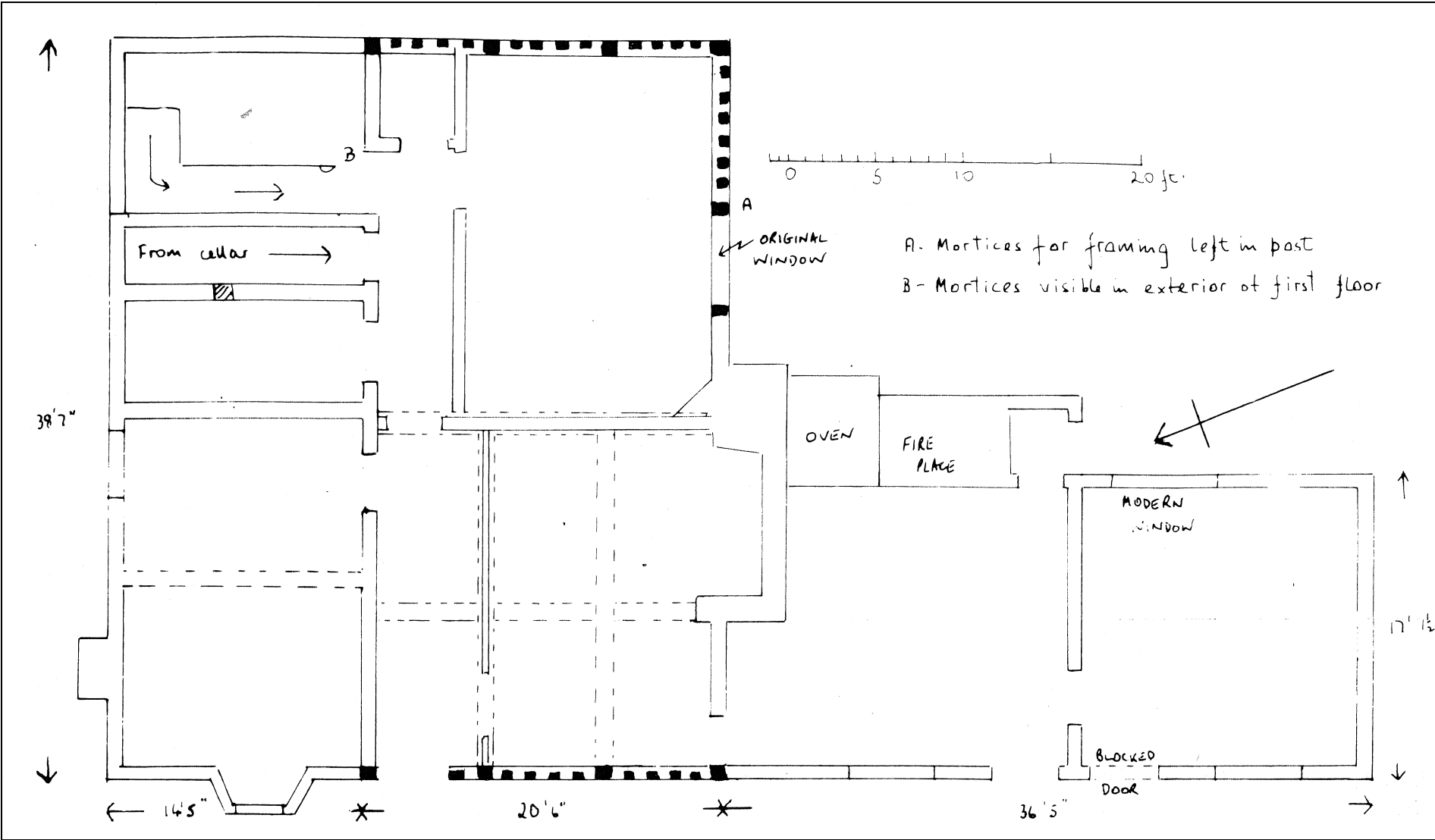


Figure 5: Old Astwood Farm ground plan in 1977 (Harris 1977)



*Figure 6: Early 18<sup>th</sup> century entrance into Old Astwood garden. The hall entrance was opposite this gate.*



*Figure 7: Surviving 16<sup>th</sup> century south wing of Old Astwood Farm*





Figure 8: Late 18<sup>th</sup> century wing



Figure 9: c1900 photograph of Old Astwood Farm



Figure 10: Former doorway now incorporated into the current bathroom of the phase 3 building.



Figure 11: Former doorway now incorporated into the current dining room of the phase 3 building





Figure 12: Building break showing east extension to the early 19<sup>th</sup> century building



Figure 13: Different roof styles of the brick built north range phases 3 (gable) and 4 (left and right ridges)





*Figure 14: Drawing room timber beams*

**THE TREE-RING DATING OF  
OLD ASTWOOD FARM,  
ASTWOOD LANE,  
HANBURY,  
WORCESTERSHIRE  
(NGR SO 933 650)**



**Summary**

Eight timbers from the original crosswing were sampled, of which one, a tiebeam, was found to be of elm. Of the remaining seven samples, four dated, the other three were either contained too few rings, or contained several abrupt growth changes and did not give consistent matching. The dated timbers appear to form a single group, most likely felled in the period **1568-98**. A single timber retained complete sapwood, having been felled in **spring 1584**. It seems most likely therefore that the original Hall and crosswings were constructed in 1584 or within a couple of years after this date. The site chronology matched well against dated reference material from a wide geographical area, though the strongest match was with a building in the neighbouring parish of Impney, suggesting a local origin for the timbers.

**Author:**

Dr M C Bridge  
Oxford Dendrochronology Laboratory  
Mill Farm  
Mapledurham  
Oxfordshire  
RG4 7TX

March 2005

## **The Tree-Ring Dating of Old Astwood Farm, Astwood Lane, Hanbury, Worcestershire (NGR SO 933 650)**

### **BACKGROUND TO DENDROCHRONOLOGY**

The basis of dendrochronological dating is that trees of the same species, growing at the same time, in similar habitats, produce similar ring-width patterns. These patterns of varying ring-widths are unique to the period of growth. Each tree naturally has its own pattern superimposed on the basic 'signal', resulting from genetic variations in the response to external stimuli, the changing competitive regime between trees, damage, disease, management etc.

In much of Britain the major influence on the growth of a species like oak is, however, the weather conditions experienced from season to season. By taking several contemporaneous samples from a building or other timber structure, it should be possible to crossmatch the ring-width patterns, and by averaging the values for the sequences, maximise the common signal between trees. The resulting 'site chronology' may then be compared with existing 'master' or 'reference' chronologies.

This process can be done by a trained dendrochronologist using plots of the ring-widths and comparing them visually, which also serves as a check on measuring procedures. It is essentially a statistical process, and therefore requires sufficiently long sequences for one to be confident in the results. There is no defined minimum length of a tree-ring series that can be confidently crossmatched, but as a working hypothesis most dendrochronologists use series longer than at least fifty years.

The dendrochronologist also uses objective statistical comparison techniques, these having the same constraints. The statistical comparison is based on programs by Baillie & Pilcher (1973, 1984) and uses the Student's *t* test. The values of '*t*' which give an acceptable match have been the subject of some debate; originally values above 3.5 being regarded as acceptable (given at least 100 years of overlapping rings) but now 4.0 is often taken as the base value. It is possible for a random set of numbers to give an apparently acceptable statistical match against a single reference curve - although the visual analysis of plots of the two series usually shows the trained eye the reality of this match. When a series of ring-widths gives strong statistical matches in the same position against a number of independent chronologies the series becomes dated with an extremely high level of confidence.

One can develop long reference chronologies by crossmatching the innermost rings of modern timbers with the outermost rings of older timbers successively back in time, adding data from numerous sites. Data now exist covering many thousands of years and it is, in theory, possible to match a sequence of unknown date to this reference material.

It follows from what has been stated above that the chances of matching a single sequence are not as great as for matching a tree-ring series derived from many individuals, since the process of aggregating individual series will remove variation unique to an individual tree, and reinforce the common signal resulting from widespread influences such as the weather. However, a single sequence can often be successfully dated.

Growth characteristics vary over space and time, trees in south-eastern England generally growing comparatively quickly and with less year-to-year variation than in many other regions (Bridge, 1988). This means that even comparatively large timbers in this region often exhibit few annual rings and are less useful for dating by this technique.

When interpreting the information derived from the dating exercise it is important to take into account such factors as the presence or absence of sapwood on the sample(s), which indicates the outer margins of the tree. Where no sapwood is present it may not be possible to determine how much wood has been removed, and one can therefore only give a date after which the original tree must have been felled. Where the bark is still present on the timber, the year, and even the time of year of felling can be determined. In the case of incomplete sapwood, one can estimate the number of rings likely to have been on the timber by relating it to populations of living and historical timbers to give a statistically valid range of years within which the tree was felled. For this region the estimate used is that 95% of oaks will have a sapwood ring number in the range 11 - 41 (Miles 1997a).

### **OLD ASTWOOD FARM** (Previously known and listed as Astwood Farmhouse)

The building is Listed as being of late 16<sup>th</sup> century origin, with mid-18<sup>th</sup>, c1800 and mid-19<sup>th</sup> century alterations. It was a former Hall, with two, two-bay crosswings, of which only the south crosswing now remains, the Hall and north crosswing having been demolished during the historic alterations to the property. The framing of this original crosswing has three rows of close-set vertical studs from sill to wallplate, the upper row at the gable ends having decorative panels and short straight braces at the upper corners (see cover photograph). The attics are jettied on a moulded bressumer and have collar and tiebeam trusses with two collars, struts and decorative panels. The house was occupied by the Vernon family before they moved to Hanbury Hall in the early 18<sup>th</sup> century.

### **SAMPLING**

Sampling took place in February 2005, the locations of the samples being described in Table 1, and some being illustrated in Figure 1. Core samples were extracted using a 15mm diameter borer attached to an electric drill. They were labelled (prefix **oaf**) and removed for further preparation and analysis. Cores were mounted on wooden laths and polished with progressively finer grits down to 400 to allow the measurement of ring-widths to the nearest 0.01 mm. The samples were measured under a binocular microscope on a purpose-built moving stage with a linear transducer, attached to a desktop computer. Measurements and subsequent analysis were carried out using DENDRO for WINDOWS, written by Ian Tyers (Tyers 2004).



**Figure 1:** Second floor east room, looking east, showing some of the timbers sampled for dendrochronology

## **RESULTS**

Timber **oaf06**, a tie in between the middle and west rooms on the second floor, was found to be of elm (*Ulmus* spp.) and no further analysis was carried out on it. Sample **oaf02** was found to have only 36 rings, and it too was not used in any further analysis. Of the remaining six samples, neither **oaf03** or **oaf07** gave consistent matching, the relatively short **03** giving weak matches at several potential positions, and **07** containing some abrupt growth changes, atypical of normal growth.

Matching between the remaining four samples was relatively poor, probably as a result of their 'sensitive' series, that is to say there was a lot of variation in the year-to-year changes in ring width, perhaps resulting from management of the trees. Sample **oaf01** matches **oaf04** with a  $t$ -value of 4.6 (62 years of overlap), but because of the generally weak matches, each timber was individually matched against reference data as a quality control, the results being shown in Tables 2 - 5.

The timbers **oaf 01, 04, 05** and **08** were combined into a 202-year site chronology **ASTWOOD** which was compared with a range of regional multi-site and individual site chronologies, the best results being shown in Table 6, and the relative positions of overlap of the dated samples are shown, along with the interpreted likely felling dates in Figure 2.

**Table 1:** Timbers sampled from Old Astwood Farm, Hanbury, Worcestershire.

Sample number	Timber and position	Dates AD spanning	H/S bdry	Sapwood complement	No of rings	Mean width mm	Std devn mm	Mean sens mm	Felling seasons and dates/date ranges (AD)
* oaf01	Mid-rail in S wall, E 1 <sup>st</sup> floor bedroom	1465-1583	1558	25¼C	119	1.41	0.98	0.254	spring 1584
oaf02	Stud in S wall, E 1 <sup>st</sup> floor bedroom	undated	-	-	36	2.07	0.72	0.126	unknown
* oaf03	NW purlin in E 2 <sup>nd</sup> floor room	undated	-	7	60	2.84	1.10	0.234	unknown
* oaf04	NE purlin in E 2 <sup>nd</sup> floor room	1501-1562	1562	H/S	62	2.78	1.57	0.290	1573-1603
* oaf05	SW purlin in E 2 <sup>nd</sup> floor room	1382-1554	1551	3	173	1.21	0.66	0.264	1562-1592
oaf06 <sup>1</sup>	Tiebeam, 2 <sup>nd</sup> from W	undated	-	H/S		NM			unknown
oaf07	N queen strut, E 2 <sup>nd</sup> floor room	undated	-	-	70	1.37	0.56	0.249	unknown
* oaf08	N principal rafter, 2 <sup>nd</sup> floor room	1451-1555	1555	H/S	105	1.26	0.84	0.244	1566-1596
* = in Site Master <b>ASTWOOD</b>		<b>1382-1583</b>	<b>1557</b>		<b>202</b>	<b>1.58</b>	<b>0.65</b>		<b>1568-1598</b>

Key: H/S bdry = heartwood/sapwood boundary - last heartwood ring date; std devn = standard deviation; mean sens = mean sensitivity; C = winter felled; +¼C = felled the following spring. <sup>1</sup>This timber was found to be elm (*Ulmus* spp.). Sapwood estimate of 11 - 41 used for English timbers (Miles 1997a).

**Table 2:** Dating evidence for sample **oaf01**, 1465-1583 (*t*-value followed by length of overlap)

IMPNEY (Miles <i>et al</i> 2004)	5.8	119
<b>OXON93</b> (Haddon-Reece <i>et al</i> 1993)	5.3	119
HIERCALL (Miles and Worthington 2002)	5.1	119
HLSCROFT (Miles and Worthington 1999)	5.0	119
SINAI (Tyers 1997)	4.9	119
<b>SENG98</b> (Bridge 1998)	4.7	119

**Table 3:** Dating evidence for sample **oaf04**, 1501-1562 (*t*-value followed by length of overlap)

BRC (Meirion-Jones pers comm)	5.4	62
lsy1 (Miles and Haddon-Reece 1996)	4.3	62
STOKE4 (Miles and Worthington 1997)	4.2	62
HGROVNR9 (Miles and Haddon-Reece 1994)	4.2	62
<b>SALOP95</b> (Miles 1995)	4.2	62
bcm07 (Bridge 1999)	4.2	53

**Table 4:** Dating evidence for sample **oaf05**, 1382-1554 (*t*-value followed by length of overlap)

TYDDYN (Miles and Haddon-Reece 1996)	6.5	170
HERECB2 (Tyers 1996)	6.4	110
ARDEN1 (Miles and Worthington 2000)	6.2	132
CRADLEY (Miles <i>et al</i> 2004)	6.1	149
<b>WALES97</b> (Miles 1997)	6.1	173
ELLAND (Hillam 1983)	5.9	173

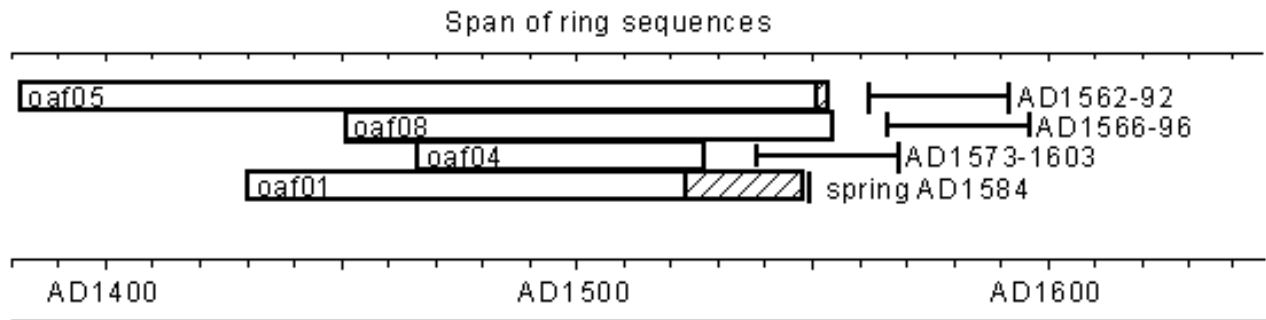
**Table 5:** Dating evidence for sample **oaf08**, 1451-1555 (*t*-value followed by length of overlap)

WGATE1 (Tyers and Wilson 2000)	6.0	68
LYSSPLAC (Miles and Worthington 2002)	5.1	91
CRADLEY (Miles <i>et al</i> 2004)	5.0	80
HABBERLY (Miles and Haddon-Reece 1995)	4.9	104
SARUMBP5 (Miles and Worthington 2000)	4.9	90
ASHLEY1 (Miles and Worthington 1997)	4.5	79

**Table 6:** Dating evidence for chronology **ASTWOOD**, 1382-1583. Regional multi-site chronologies are in **BOLD**

	<i>County or region:</i>	<i>Chronology name:</i>	<i>Short publication reference:</i>	<i>File name:</i>	<i>Spanning:</i>	<i>Overlap (yrs):</i>	<i>t-value:</i>
	Worcestershire	Impney Farm, Dodderhill	(Miles <i>et al</i> 2004)	IMPNEY	1427-1612	157	8.9
	Wales	Tyddyn Lwydion	(Miles and Haddon-Reece 1996)	TYDDYN	1385-1601	199	7.7
	Yorkshire	Yorkshire Buildings Chronology	(Hillam pers comm)	YORKS2	1192-1663	202	7.7
	Staffordshire	Sinai Park	(Tyers 1997)	SINAI	1227-1750	202	7.2
	Oxfordshire	Oxfordshire Master Chronology	(Haddon-Reece <i>et al</i> 1993)	<b>OXON93</b>	632-1987	202	7.1
	Shropshire	Ightfield Hall barn, Whitchurch	(Groves 1997)	IGHTFELD	1341-1566	185	7.1
	Shropshire	Shropshire Master Chronology	(Miles 1995)	<b>SALOP95</b>	881-1745	202	7.1
	Herefordshire	Cathedral Barn, Hereford	(Tyers 1996)	HERECB2	1359-1491	110	7.0
	Wales	Welsh Master Chronology	(Miles 1997b)	<b>WALES97</b>	404-1981	202	7.0
	Warwickshire	Bell Cottages, Tanworth	(Miles and Worthington 2000)	TANWRTH2	1352-1560	179	6.8
	Southern England	Southern England Master	(Bridge 1998)	<b>SENG98</b>	944-1790	202	6.8
	Herefordshire	Cradley Village Hall	(Miles <i>et al</i> 2004)	CRADLEY	1347-1530	149	6.5
	Cheshire	Combermere Abbey, Whitchurch	(Howard <i>et al</i> 2003)	CBMASQ01	1371-1564	183	6.5
	Hampshire	Hampshire Master Chronology	(Miles 2003)	<b>HANTS02</b>	443-1972	202	6.4
	Worcestershire	Crowle Abbey	(Hillam 1997)	CROWLE2	1412-1496	85	6.4
	Oxfordshire	Greys Court, Rotherfield Greys	(Miles <i>et al</i> 2004)	GREYSCT2	1417-1587	167	6.2
	Shropshire	Alcaston Hall	(Miles and Worthington 1998)	ALCASTON	1389-1556	168	6.1





**Figure 2:** Bar chart showing the relative positions of overlap of the dated samples in the site chronology **ASTWOOD** showing their sapwood complements (hatched areas) and their felling dates

### INTERPRETATION AND DISCUSSION

The relatively poor matching between individual series, and the fact that several series exhibit abrupt growth changes, suggests that the timbers used in this construction are likely to have come from trees that were managed in some way during their lifetime. The longer series have however retained sufficient periods of 'normal' growth for them to be matched with reference material. The four dated timbers form a site chronology which reduces the 'noise' from the individual responses to management and reinforces the climatically induced response, such that it dates well. The best match of all is with a site in the neighbouring parish of Impney, showing the value of using local chronologies.

The range of felling dates derived from the dated timbers suggests that they were cut as a single batch in the period 1568-98, derived by adding the standard sapwood number estimate for this region to the average heartwood/sapwood boundary date. A single timber retained complete sapwood, and was from a tree felled in spring 1584. Construction of the crosswing is therefore most likely to have occurred in 1584, or within one or two years after this date.

### ACKNOWLEDGEMENTS

I would like to thank Ms Carole Walder for giving her permission to carry out this work and allowing access at very short notice. The work was commissioned by the Dodderhill Parish Survey Research Group. I thank our fellow dendrochronologists for permission to use their data.

## **REFERENCES**

- Baillie, M.G.L. and Pilcher, J.R. (1973) *A simple cross-dating program for tree-ring research*. **Tree Ring Bulletin**, 33, 7-14.
- Bridge, M. C. (1998) Compilation of master chronologies from the South, unpublished computer file SENG98, University of London Dendrochronology Laboratory.
- Bridge, M. C. (1999) *Tree-ring analysis of timbers from Boyes Croft Maltings, Great Dunmow, Essex*, **Anc Mon Lab Rep**, 10/99.
- English Heritage (1998) *Guidelines on producing and interpreting dendrochronological dates*, **English Heritage, London**.
- Groves, C. (1997) *Dendrochronological analysis of Ightfield Hall Farm Barn, Ightfield, Whitchurch, Shropshire*, **Anc Mon Lab Rep**, 91/97.
- Haddon-Reece, D., Miles, D. H., Munby, J. T. and the late Fletcher, J. M. (1993) Oxfordshire Mean Curve - a compilation of master chronologies from Oxfordshire, unpublished computer file OXON93, Oxford Dendrochronology Laboratory
- Hillam, J. (1983) Tree-ring dates, **Vernacular Architecture**, 15, 69.
- Hillam, J. (1997) *Tree-ring analysis of oak timbers from Crowle Court barn, near Worcester, Worcestershire*, **Anc Mon Lab Rep**, 96/97.
- Howard, R. E., Laxton, R. R. and Litton, C. D. (2003) *Tree-ring analysis of timbers from Combermere Abbey, Whitchurch, Cheshire*, **Centre for Archaeology Report**, 83/2003.
- Miles, D. H. (1995) Working compilation of 71 reference chronologies centred around Shropshire by various researchers, unpublished computer file SALOP95, Oxford Dendrochronology Laboratory.
- Miles, D. (1997a) The interpretation, presentation, and use of tree-ring dates, **Vernacular Architecture**, 28, 40-56.
- Miles, D. H. (2002) *The tree-ring dating of timbers from Impney Farm, Dodderhill, Droitwich, Worcestershire*, **Oxford Dendrochronology Laboratory Report**, 2002/9 (unpublished).
- Miles, D. H. (1997b) Working compilation of 58 reference chronologies centred around Wales by various researchers, unpublished computer file WALES97, Oxford Dendrochronology Laboratory
- Miles, D. H. and Haddon-Reece, D. (1995) List 64 - Tree-ring dates, **Vernacular Architecture**, 26, 60-74.
- Miles, D. H. and Haddon-Reece, D. (1996) List 72 - Tree-ring dates, **Vernacular Architecture**, 27, 97-102.
- Miles, D. H. and Worthington, M. J. (1998) Tree-ring dates, **Vernacular Architecture**, 29, 111-29.
- Miles, D. H. and Worthington, M. J. (1999) Tree-ring dates, **Vernacular Architecture**, 30, 98-113.
- Miles, D. H. and Worthington, M. J. (2000) Tree-ring dates, **Vernacular Architecture**, 31, 90-113.
- Miles, D H, and Worthington, M J, 2002 Tree-ring dates, **Vernacular Architecture**, 33, 81-102.

Miles, D. H., Worthington, M. J. and Bridge, M. C. (2004) Tree-ring dates, **Vernacular Architecture**, 35, 95-113.

Tyers, I. (1996) *The tree-ring analysis of six secular buildings from the city of Hereford*, **Anc Mon Lab Rep**, 17/96.

Tyers, I. (1997) *Tree-ring analysis of Timbers from Sinai Park, Staffordshire*, **Anc Mon Lab Rep**, 80/97.

Tyers, I. (2004) *Dendro for Windows Program Guide 3rd edn*, **ARCUS Report**, 500b.

Tyers, I. and Wilson, R. (2000) *Tree-ring analysis of oak timbers from 66 and 68 Westgate Street, Gloucester*, **Anc Mon Lab Rep**, 19/2000.