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WOODLAND MANAGEMENT STUDIES FROM CARLISLE: ANNETWELL STREET, 1983-4.

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Summary

Over 2000 pieces of small, roundwood from the Roman fort at Annetwell Street, Carlisle were analysed.

Alder was the most frequent species with moderate amounts of oak, hazel and birch. The species used suggest that a variety of woodland types were available and that probably most, if not all, of the wood was supplied from these local woodlands.

The material from the Flavian Period fort (Period 3) indicated choice by size rather than age, itself implying collection by the draw method. The second timber fort (Period 5) produced more wood from a narrower age range and could indicate a more formal coppice-type management system.

The analysis of material from a wide range of features indicates that little was wasted, stems being used for stakes and the branchwood and twigs for road foundations, hurdles etc.

Author's address :-

J P Huntley

Department of Archaeology
University of Durham
Science Laboratories (AP II), South Road
DURHAM
DH1 3LE

Woodland management studies from Carlisle: Annetwell Street, 1983-4

J.P. Huntley

SECTION 1: INTRODUCTION

Besides the structural timbers, a large amount of smaller wood was very well preserved in the waterlogged deposits of the Roman fort excavated at Annetwell Street, Carlisle.

Analysis of this small wood was undertaken to gain insight into the range of species and sizes used, and to investigate whether woodland in the vicinity was actively managed or just casually used. Effort was concentrated upon material from Period 3 (the Flavian timber fort) and Period 5 (the second timber fort) - both periods having large amounts of wood preserved and buildings using large quantities of wood. Only a small amount of material from Period 4 was analysed. This period consists primarily of demolition and levelling deposits and therefore was not expected to give much pertinent information about the use of wood.

SECTION 2: METHODS

The material analysed was chosen primarily by the excavator from specific buildings and features over the whole site. This, it was felt, should give a good, general picture of the wood used.

In the Biological Laboratory, each piece of wood was frozen for approximately 24hrs at *circa* --12°C. Its surface was then planed smooth and a thin transverse section taken for ring counting and, potentially ring width measurements. Tangential- and radial-longitudinal sections were taken, as necessary, to aid identification. Identification was by use of Schweingruber (1978) and comparison with reference slides of modern wood held in the Biological Laboratory.

Where applicable, notes were made of asymmetry, evidence of working, damage etc..

Annual growth increments were measured using a calibrated eye-piece graticule on a binocular microscope. For each piece of wood thus measured, the mean ring width was calculated with its standard deviation. The deviation of each ring width from the mean was divided by the standard deviation of the mean; this value was plotted against ring number with the bark edge to the left of any plot. This calculation allows direct comparisons to be made

between pieces of wood which will naturally vary in absolute ring width depending upon the environmental and other conditions under which the tree was growing.

In addition to the material analysed by the author, two further datasets were made available. The excavator provided a database of stake diameters etc. measured by his workers at the Carlisle Archaeological Unit. These were joined with the author's data giving a further *c.*250 records. In the cases where one piece of wood had been measured twice, the data from the author was retained since species identification and ageing had also been carried out. The two origins of the data can be identified since a "sample" number refers to the author's material and a "wood number" refers to the excavator's material. An undergraduate student from the Department of Archaeology provided some of the data from contexts 2453 and 2454, a period 5 drain.

The data were directly input into a DBASE III+ file on a PC microcomputer. The structure of the database is presented below and a copy of the data may be directly obtained from the author by request (computer requirements - two 360K PC-DOS diskettes).

Table 1: Database structure

Sample - wood number from author measured material
Context - archaeological context
Structure - associated building or structure (fence etc)
Period - period and sub-periods
Wall - associated sub-structure where applicable
Woodno - wood number from excavator measured material
Species
Age_yr
Diam_mm
Type - whether a stake, wattle, miscellaneous etc.
Notes - on working, physical condition etc
Feature - contextual information if available
Period_sum - overall period (*ie* 3, 4 or 5) for ease of manipulation

Sub-sets of this database were extracted and used as direct input to a spreadsheet (Borland's QUATTRO) from which graphs were plotted. The graphs were "printed" to files which were directly read and implemented by Microsoft's WORD IV during subsequent printing.

SECTION 3: RESULTS AND DISCUSSION

The full data are not presented in this report although all of the metric data and summaries of the contextual information are (see Section 4, page 23).

A total of over 1800 pieces of wood were identified. Nearly all of this material was waterlogged, a few pieces of wood were either charred or completely carbonised and this has been noted on the relevant tables. With the extra data available more than two thousand pieces of wood have been examined.

3.1: THE SPECIES USED

The following taxa (in order of abundance) were identified:

Alnus - alder
Betula - birch
Corylus - hazel
Quercus - oak
Salix - willow
Crataegus-type - hawthorn, blackthorn
Fraxinus - ash
Ilex - holly
cf. Prunus avium - gean
Pinus - Scots pine
Prunus - gean, bird cherry
Ulmus - elm

All of these species are native to the British Isles.

ALNUS **(ALDER)**

Alder produces a "ring porous" wood which has little differentiation between spring and summer wood. Its main characteristics are the uni-seriate rays in transverse section and the scalariform plates with 15-20 "rungs" in tangential longitudinal section. The central pith of the stem if often trilete in transverse section and, at least in very young material, is characteristic.

At Annetwell Street the alder is commonly a distinctive "Bournville" chocolate brown; frequently it has also rotted towards the bark giving a mottled effect through which annual rings cannot be counted.

The tree is common today growing on wet soils, particularly along river banks and valleys and on peats.

Given the rivers Eden, Caldew and Petteril at Carlisle, suitable habitats for alder are likely to have been abundant during the Roman period.

Its wood is rarely used today as a source of constructional timber but it was once valued for temporary carpentry such as scaffolding (Rackham, 1980). In many cases it took the place of the ubiquitous softwoods today. During the Medieval period, in East Anglia, alder woods were regularly coppiced to produce a supply of timber for quayside pilings (Rackham, *op cit.*) since the wood, when waterlogged, is resistant to decay. This fact must also be considered given that much of the Annetwell material is alder. However, the other species present are generally in a similar condition to alder with respect to preservation and it is suggested that the material recovered is a genuine reflection of the wood originally present and not a reflection of taphonomic processes.

Many of the stakes show symmetrical growth, *ie.* the pith is in the centre of the piece, and this implies that the wood is from stems and not branches.

BETULA **(BIRCH)**

The wood of birch is very similar to that of alder although it has multi-seriate rays. The pith is commonly oval in section.

Although the Roman material is often a yellowish colour it is not reliable enough to be a diagnostic feature.

Two species of tree birch occur in Britain today - *Betula pendula* and *B. pubescens*. The former is common on acid, sandy and dry soils forming an open canopy woodland with a grassy ground flora and perhaps some oak in the canopy. The latter favours damper, mineral soils, particularly around the edges of bogs. It is not possible to distinguish between the two on their wood structure.

As with the alder, there are suitable habitats for both of these species in the vicinity of Carlisle today.

Birch, too, is rarely used in constructional work but was once used as such in Scotland (Rackham, *op cit.*).

CORYLUS **(HAZEL)**

The structure of hazel wood is very similar to those of birch and alder except that there are only 5-10 "rungs" on the scalariform plates; it also has the multiseriate rays of birch. In poorly preserved specimens it is not always possible to separate these three species. The pith is often circular and consists of large parenchyma cells.

Hazel, today, tends to be a tall shrub growing as an understorey to a mixed, deciduous canopy with oak, elm etc.. It can form quite large trees but they are often multi-stemmed. It prefers a rich soil and will tolerate neither waterlogged nor very dry conditions. It can form dense thickets in upland areas today.

It is likely to have formed an important part of the local deciduous woodland on the slopes of the river valleys but not in the bottoms of those valleys nor on the surrounding, high hills.

Hazel has been managed on coppice cycles for many centuries to supply the small-wood needs of wattle and daub buildings, fences, hurdles etc..

QUERCUS (OAK)

Oak has an extremely characteristic wood structure which is strongly ring porous, *ie.* shows very large vessels during spring growth and much smaller ones during the summer growth. It also has huge aggregate rays in transverse section which are absolutely characteristic. These are often missing, or much reduced, in young wood and this can lead to confusion with elm and ash. Full microscopic examination usually defines these three. The central pith of oak generally takes the form of a 5- or 7-point star which is diagnostic.

There are two species of oak in Britain today, *Quercus robur* and *Q. petraea*. The former is predominantly found in the south of England on rich, clay soils whereas the latter is more common in the north on more acidic soils. The two hybridise freely and many of the oak trees today are, in fact, a mixture of these two species. They cannot be distinguished by their wood structure.

As with the hazel, oaks are likely to have grown in the vicinity of Carlisle as they do today.

Oak has been the main constructional timber in Britain at most times and, indeed, many of the large, structural posts at Annetwell St. are oak. It does also coppice, *ie.* many stems will grow again once a main trunk has been cut, and some of the smaller stakes may be from coppiced stools. At least some of the material shows the asymmetric central pith that is characteristic of branch wood implying use of the whole tree.

The other taxa recorded from the Annetwell Street material are very minor and will only be briefly discussed here:

SALIX (WILLOW)

The wood structure of willow is similar to that of alder but it has simple, compared with scalariform, perforation plates.

Tree willows most commonly grow on wet soils, both mineral and peaty, and are hence abundant along water courses. The tall shrub species will form thickets, again in wet places. Willows are commonly found with alder although the two tend to form single-species stands adjacent to each other rather than a mixed community.

Perhaps the most common use of the wood has been in the making of baskets from osiers, some of which have been found in Roman deposits at Carlisle (Huntley, unpub.)

CRATAEGUS-TYPE (including HAWTHORN, BLACKTHORN, APPLE, PEAR)

These species cannot be differentiated by their wood structure. The wood is diffuse-porous and is characterised by bi- or tri-seriate rays which are homogeneous.

As well as forming thickets along roadsides and at the edges of the woods some of the members of this wood-type will also form forest trees eg. the apple and pear. They are all likely to have grown in the Carlisle area during Roman times.

FRAXINUS **(ASH)**

Ash has a similar wood structure to oak but lacks the aggregate rays.

It forms a tall forest tree on more calcareous soils than, for example, oak but will also grow in a mixed deciduous woodland with the oak, elm, hazel etc..

The anatomical structure of the wood makes it very "springy", hence its use in manufacture of wheels. The tree also grows rapidly and straight in open conditions thus providing long stakes.

ILEX **(HOLLY)**

Holly produces a fine-grained, ring diffuse wood with an extremely even structure. Its diagnostic feature are the short, wide rays in tangential section.

Today, holly can form large, multi-stemmed bushes at the edges of woods and as an understorey. Occasionally it forms a single-stemmed hedge tree. It grows best on moist, fertile soils and is a component of the mixed decidouous woodland along with oak, hazel, elm etc..

Holly, traditionally, has been used mainly for turning small items such as spindles, bobbins etc.

CF. PRUNUS AVIUM **(GEAN)** and *PRUNUS* **SPP (GEAN, BIRD CHERRY)**

The wood of these species is difficult to separate because they are ring-diffuse and have very few positive characters, *ie* they do not possess many of the features which, in isolation, are used to determine other species.

The different species, today, still grow in northern England but generally as isolated trees or bushes. *Prunus avium* (gean) forms a forest tree on moist, neutral to acidic soils whereas *P. padus* (bird cherry) forms multi-stemmed thickets in hedges and at the edges of woodland.

PINUS SYLVESTRIS **(SCOTS PINE)**

Scots Pine is a conifer and hence its wood structure is completely different from any of the other taxa recorded from Annetwell Street.

It grows on acid, sandy soils and is most common, today, in Scotland or on the heaths of S.E. England. It is likely to have grown on the edges of the moorland around Carlisle during the Roman period but was probably never abundant.

ULMUS **(ELM)**

Elm has a wood structure similar to oak but without the aggregate rays.

It grows amongst mixed deciduous woodland in northern Britain where it forms part of the canopy. The "suckering" elms of lowland Britain rarely occur in the north.

The species of tree used by the Romans suggests that a variety of woodland types were available in the vicinity although how close to Carlisle is impossible to say; for general building purposes they may have used wood that was close at hand but perhaps went much further afield if a particular species was required for a particular purpose.

Alder woods, with some willow, are likely to have occurred along the river valleys with mixed deciduous woodland in patches on the slopes above the potentially wet ground. Birch woodland, perhaps with some pine, would have been found on the drier, sandy soils at the edges of the moorlands.

A further line of evidence concerning vegetation types present in an area is obtained from pollen analyses. For the Carlisle area there is only one dated pollen diagram and that is from Scaleby Moss (Walker, 1966). In it the data are presented as percentages rather than absolute values and hence an increase in one pollen types does not necessarily indicate an increase in the amount of that plant in the vegetation. Also, they take no account of the differential pollen production by the various trees and therefore, for example, the quantity of pine is always over-represented. However, it does give an indication of the local vegetation. During the Roman period the landscape was predominantly wooded (*c.*70% arboreal pollen) with alder, oak and birch the most common trees and hazel the most abundant shrub. Elm, ash and pine were all present but only in low amounts. This is in accord with the proportions of wood identified and suggests that most, if not all, of this wood was supplied from the local woodlands.

3.2: SPECIES DISTRIBUTION BETWEEN PERIODS

For each of the three periods under discussion, all of the records for a given species were totalled and expressed as percentages of the total number of identified pieces of wood. This therefore excludes both unidentifiable material as well as stakes that were measured but not identified by the excavator:

PERIOD	3	4	5
TOTAL WOOD ID	735	65	676
percentage:			
Alnus	65.6	71.8	28.6
Betula	5.6	-	8.9
Corylus	7.6	7.7	28.9
Quercus	17.0	12.8	33.0
Ilex	1.0	2.6	0.4
Salix	0.1	-	0.7
Fraxinus	1.9	-	0.2
Ulmus	0.3	-	-
Pinus	0.3	-	-
Prunus	0.7	-	-
cf. Prunus padus	-	5.1	-
Crataegus	-	-	0.3

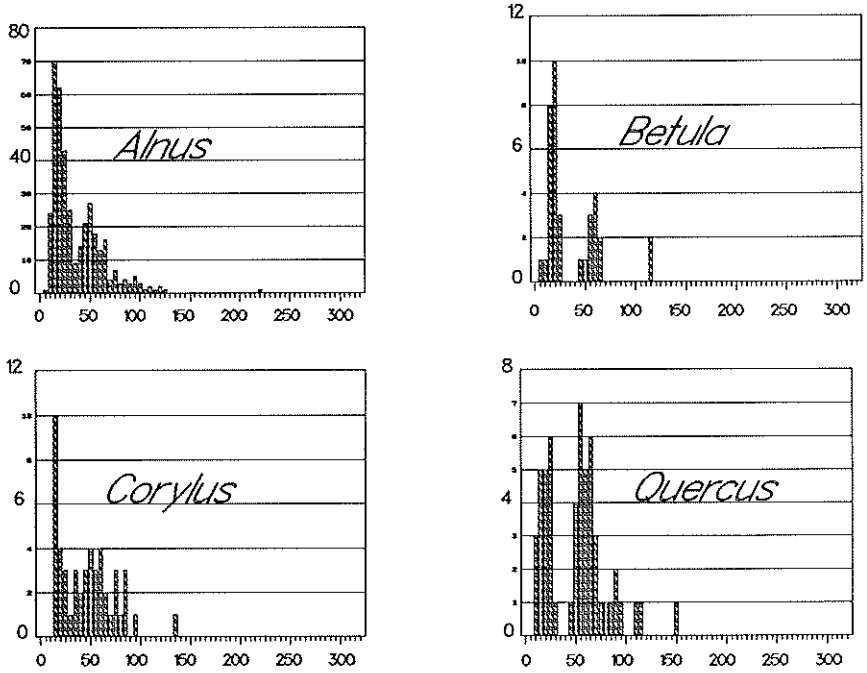
Period 3 has large amounts of alder present with some oak and a small amount of both birch and hazel. The other taxa occur as a few pieces. Period 4 generally follows this pattern although considerably fewer pieces in total were identified. The relatively high values of cf. *Prunus padus* were accounted for by wattles from one feature, the wood probably originating from one thicket. Approximately the same number of identifications were made from Period 5 as from Period 3 and therefore more realistic comparisons may be made between these two. The taxa themselves are similar although Period 3 shows greater diversity - whether this is significant or not is debatable. The most common taxa are the same in the two periods although the proportions vary. In Period 5 alder, hazel and oak are equally common with smaller amounts of birch, whereas alder dominates Period 3.

Figures 1 and 2 present the diameter and age frequency plots for the four most common taxa (alder, birch, hazel and oak) in Periods 3 and 5. Figure 3 presents the age/diameter scatter plots for the same species. Data from Period 4 were not used since too few pieces of wood had been identified.

Figure 1: Diameter frequency plots

x axis = diameter (mm), y axis = number of stems

Period 3



Period 5

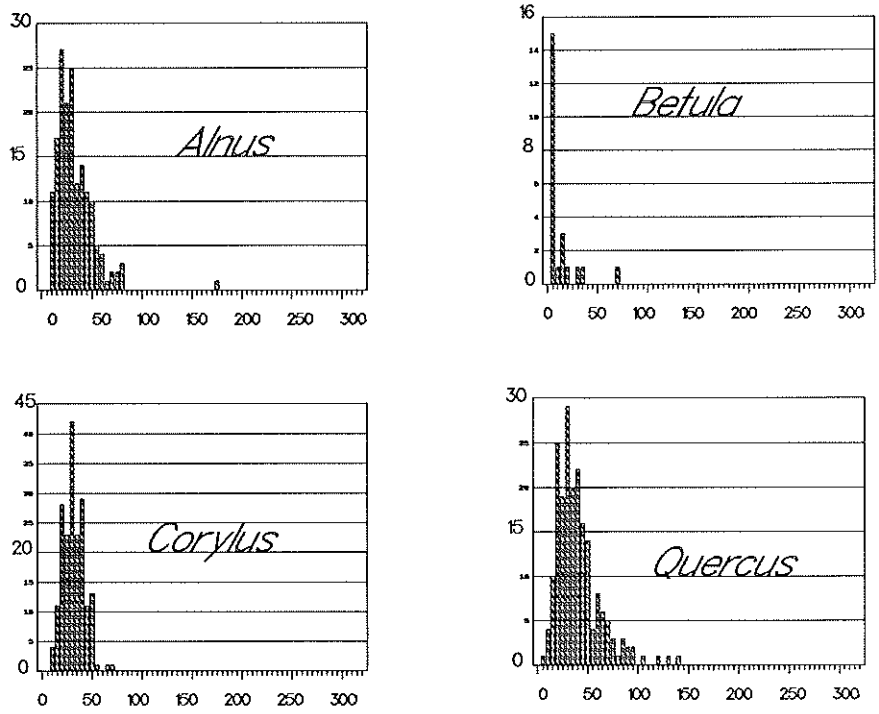
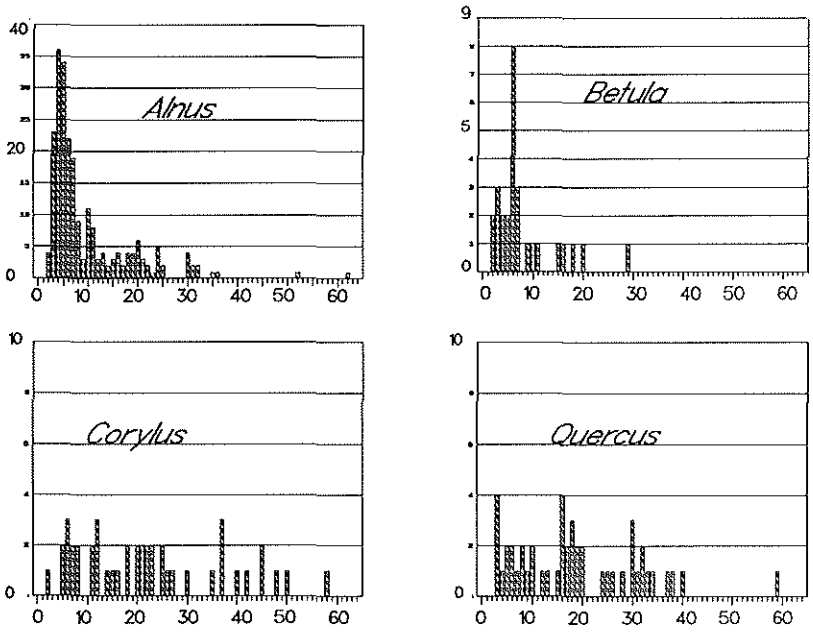


Figure 2: Age frequency plots:

x axis = age (yrs), y axis = number of stems

Period 3



Period 5

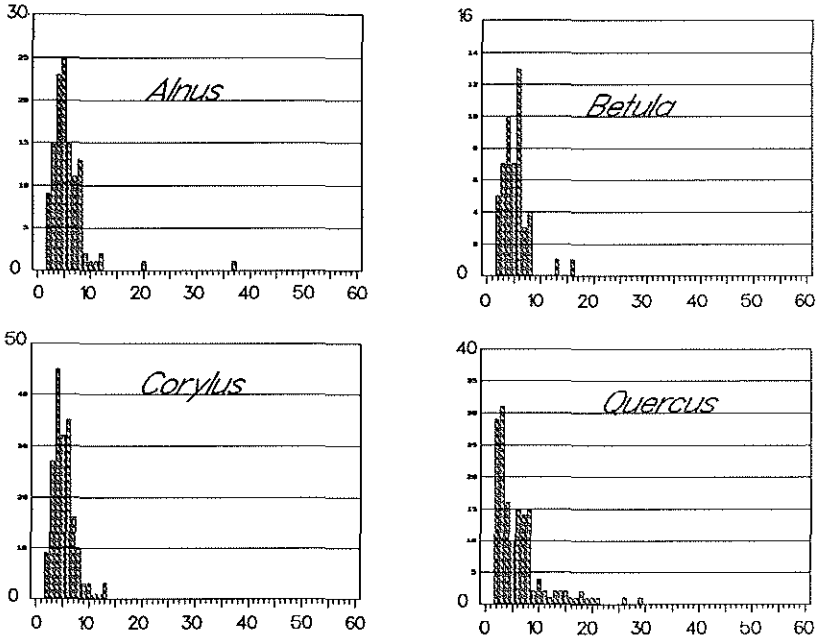
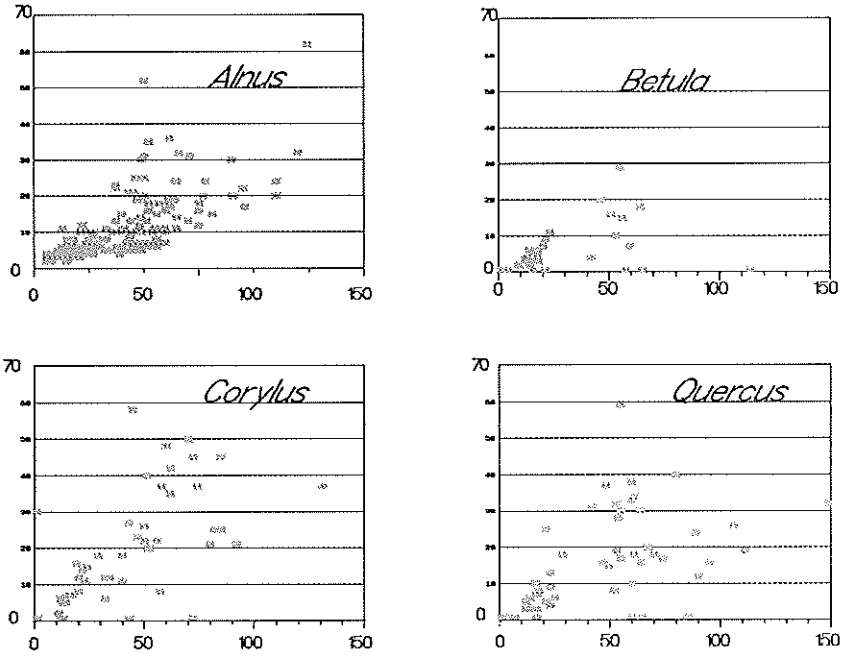


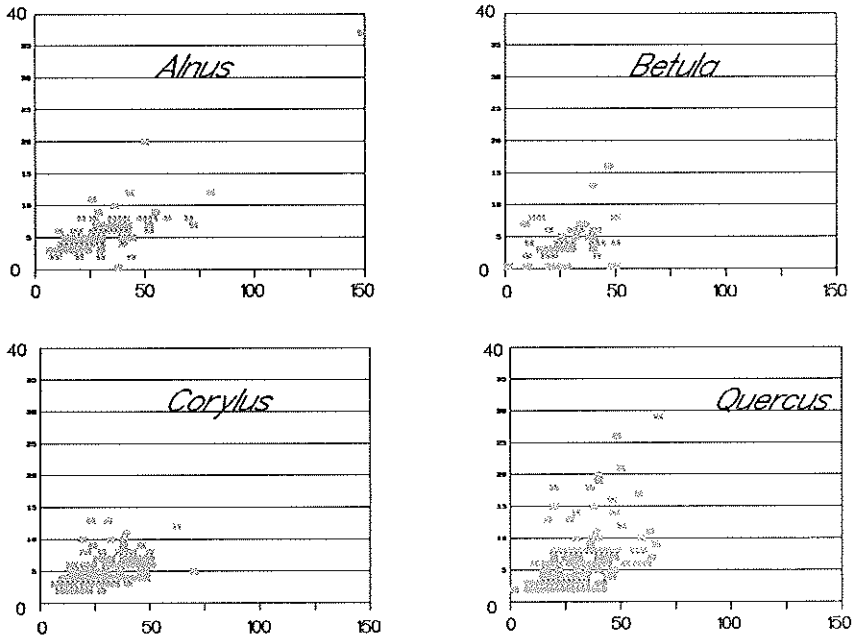
Figure 3: Age/Diameter scatter plots

x axis = diameter (mm), y axis = age (yrs)

Period 3



Period 5



PERIOD 3

Alder, birch and oak all show bimodal peaks at diameters of 15-20mm and 50-55mm (Figure 1). Hazel has the 15mm peak but a broader peak for the larger diameters. All four species have a few samples of up to 150mm diameter.

Looking at the age frequency plot (Figure 2) alder has a peak at 4-6 yrs, birch peaks at 6-7 yrs and oak at 4-5 yrs, 15-16 yrs and 30-31 yrs. The curve for hazel is much more spread out with no strong peaks. Alder, oak and hazel all have specimens up to 60 yrs old.

A large amount of alder was obviously cut from quite a narrow age range and this could indicate a systematic harvesting of managed woodland. Interestingly, the larger diameter peak of alder is not accompanied by an equivalent older age peak. This suggests that more than one area of woodland was being utilised with the larger, but still young, wood being obtained from trees growing under more favourable conditions.

Birch shows similar distributions although the total number of wood pieces identified was considerably less than in the case of alder.

The hazel pieces cover a wide range of ages and show no suggestion of formal management.

Although oak shows three age peaks, which may indicate some form of management, the older one is not accompanied by a larger-diameter peak. Again, this may indicate supply from several sources.

The bi-modal diameter peaks distinguish between material used for wattles and for stakes, indicating choice by size.

Given that the material largely has these peaks in diameter but with no accompanying strong age peaks implies that wood was being gathered from a variety of sources growing under different conditions. It is therefore most likely that material was cut using the draw method, *ie.* the cutters went into a wood and selected stems of the "right" size but if the stools had previously been coppiced not all of the stems would necessarily be cut at one time. The cutters are unlikely to have clear-felled a whole area, which should show as similarly aged material.

There is, of course, always the possibility that areas were clear-felled with the timber subsequently sorted into size heaps at the fort, and this stock was then used as appropriate. We could therefore be seeing selection for a given job which bears little relationship to the local woodland as a whole.

PERIOD 5

All four major species show strong, unimodal peaks at 30mm diameter and *c.*5 yrs old - again this partly reflects that much of the material analysed was from wattling.

For oak the maximum diameter is 140cm whereas for the other taxa it is *c*.80mm with one alder at 175mm.

The age ranges widely with species - alder reaching 37 yrs but most are 13 yrs or under, birch 18 yrs or less, hazel 15 yrs or less and oak under 30 yrs. However, the majority of alder, hazel and birch are 4-6 yrs old.

Hazel, alder and birch show close correspondence between age and diameter frequencies - perhaps indicating one, or at least few, sources of material of similar age, possibly formal management.

This again suggests systematic use or management but of better grown timber, thus reaching required diameters at younger ages than Period 3 material.

The age/diameter scatter plots for Period 5 are much less dispersed than those for Period 3. This suggests that, during Period 5, more timber was supplied from a given age/diameter range, itself implying plot management of some kind. Management, by its very nature, should produce wood of a more even size and age.

3.3: SUMMARY OF DATA FROM BUILDINGS BY PERIOD

PERIOD 3

Figures 3 and 4 present summaries of the Period 3 data for each building. Table 1a shows the mean stake and wattle diameters for the various buildings where it was considered reasonable to calculate them. Obviously there is some subjectivity in determining what is a stake or wattle but, generally, the former was vertical *in situ* and the latter horizontal. Usually there is also a distinct size difference but not always (see Period 5 contexts 2453 and 2454 later).

The immediate impression from Figure 4 is that the wattles, whatever their species, are very uniform in size (15-20mm). The stakes are more varied and this may be related, in part, to their function. For example, both the north and west walls of [4857] were more than 85mm average on diameter suggesting a substantial structure. Other such walls included the west one of [6266] and 4177 of [4183]. These are all buildings immediately adjacent to the rampart. In comparison, the stakes from [6267] and [6271], also buildings abutting the rampart, are the smallest measured from this period. This indicates less substantial structures which may simply be fenced areas for storage - particularly in view of their position adjacent to a series of ovens. The three buildings of Period 3A/1 in this S.E. area therefore consist of the substantially built [6266], the oven [6118] and the less substantial [6267] perhaps a storage area. Environmental evidence from floor contexts of these areas may suggest a function for them. Other features with small stakes include the internal walls of [5754] and these, presumably had little or no load bearing capacity.

The remaining features with material analysed from them have stakes between 50 and 60mm in diameter and suggest even-sized material and construction. These are from a variety of miscellaneous features which have been analysed principally to obtain an as wide as possible picture of wood utilisation on-site rather than to answer specific questions.

The Piazza and contexts with scattered timber tended to have more species present but this is to be expected since otherwise waste or un-needed wood would probably have been thrown down as foundations, attempts to raise paths above mud etc.. Building [4857] although substantial also has five species present. Possibly the workman had to obtain relevant sized timber from a wider area thus utilising more species-rich woodland.

Oak is only dominant in fence 4313 although it is present in more than half of the contexts sampled. This, of course, excluded the large structural posts etc which have not been included in this work and are mainly from oak.

The material from this period, the first timber fort, was predominantly alder and it is suggested that alder woodland was abundant over large areas in the river valleys and that this was cleared by the Romans at an early stage. This would have been for strategic reasons as well as being a convenient source of timber. Broadly speaking, the wood for a particular piece of work was chosen on a size basis with little evidence of peaks in age. There is unlikely to have been much formal management during this period.

Table 1A: Period 3

		species						mean diameter (mm)	
Structure		Al	Q	Be	Co	Ind.	others	w	s
[3858]		***	*		*		Pinus,Fraxinus		
	S.wall s	***						15.5	
	S.wall n	***	*					19.2	
[3873]		***							
[4150]		***	*		*		Salix	15.4	45.3
[4183]		***	*	*	*				31.5
	4177	***	*			*		18.1	72.3
4313		1	***						66.4
[4707]		**	1						
[4857]		**	**	*	**		Ilex		
	5461 W.	1	*	1			Ilex		89.8
	4734 N.								87.5
4861		***	**		*			14.1	
[5754]		**	*		*	*			40.6
[6036]		**		*	*			14.7	
[6118]	6118	***						17.6	64.7
	6228	***	*						48.8
[6266/70]		**							51.5
[6266]	W.	**	*				Prunus		71.6
	6163 N.	***			*			16.2	49.6
	6193	**	**		*				52.4
[6267]		***			1				
	5634 W.	***							44.6
	5715 N.	***			1				49.5
[6270]		1			1				
[6271]		**	*	*	*		Fraxinus,Ulmus		47.7
	6299	**					Ulmus		
[6272]		*	*		*	*			
[6302]		**		*			Fraxinus		
[6303]	3977	***	*	*					56.6
	5977	***	**						61.3
	3864	*		*	*	*			
[6306]		***	*	*	**			14.9	55.8
[6314]	5370	***	1	*					56.8
IV.StW	3800	*	*	*		*	Ilex,Fraxinus		
Piazza		*	*	**	*			15.1	

Figure 4

Period 3: mean diameters

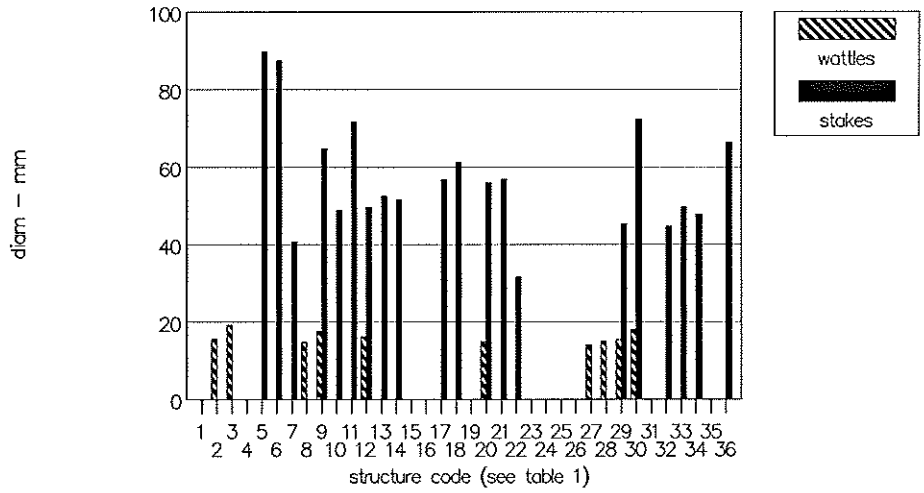
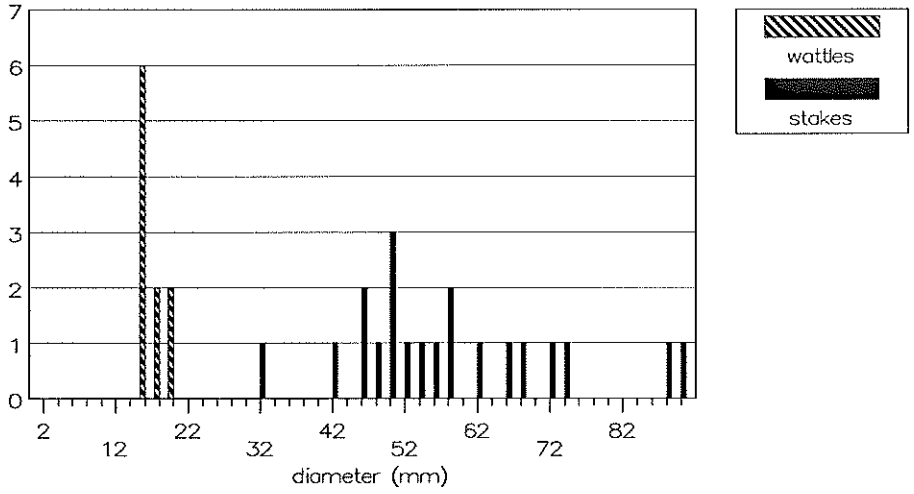


Figure 5

Period 3: mean size frequency



PERIOD 5

Table 1b, Figs 6 and 7 present the summary data for each building from Period 5.

The wattles are more varied in size than from Period 3 and this must be due, in part, to the material being less well defined as a stake or wattle. The wattle-lined drain 2453, 2454, in particular, has had all of its material amalgamated since some so-called "wattles" were larger than the "stakes". The feature is not strictly a stake and wattle structure but rather vertical and horizontal stakes. The frequency-size histogram of the individual pieces of wood show a single, broad, normally distributed curve (see page 76).

The stakes from this period are mostly 40-50mm mean diameter for any one feature. The only two structures with substantial stakes were [2512] and 6345, [2512] lying directly over the position of 6345. [2512] had mainly oak stakes whereas those from the earlier 6345 were predominantly of alder. Overall, it may therefore be said that the features from Period 5 largely consist of less robust fences and walls, and probably functioned predominantly as somewhat simply built or ephemeral, protective structures around the ovens and generally industrial areas of this period.

Much more oak was used during this period, particularly in drains, gulleys and road-edge fences. These are all features which do not need very specifically sized timber. At least some of the material was from branches and much had no bark on it. It is suggested that this material largely represents waste from trees being cut principally for their trunks. The commodity was too valuable to just burn and was therefore used in necessary but non-specific size work. The lack of bark may indicate deliberate removal for use in tanning leather. The oak in [2512] reflects the larger stakes required in this substantial building.

Much more hazel was used during this period and this may well indicate the presence of areas of formally managed woodland; management practices having developed since Period 3 with the continuing demand for a large and regular supply of wood.

Table 1b: Period 5

		species						mean diameter (mm)	
Structure		Al	Q	Be	Co	Ind.	others	w	s
[1636]		*	***	*	**	*		23.9	46.4
[1833]		**	*						
[2006]		***	*		*				
	2906	***	1		1			14.8	40.9
	2654 E.	**						13.8	
	misc		*						58.9
[2025]		*	*	*	**		Salix		
[2082]		*	*	*	*		Salix	11.1	
2353		*		*	**				26.4
[2359]		**	*	**	*		Ilex	12.2	44.6
[2366]		***	1					16.6	47.1
2453		*	*	**	***			30.7	
2454		**	*	*	**			29.4	
[2512]		**	***						73.1
[2645]		*	**			*	Frax,Crataegus	22.5	49.1
2845		*	**	*					35.2
3112		*	***				Salix	23.1	
3207		*	***		**		Salix	17.9	
3769		1	***			*		17.9	
6345		***	*					17.7	73.5

Figure 6

Period 5: mean diameters

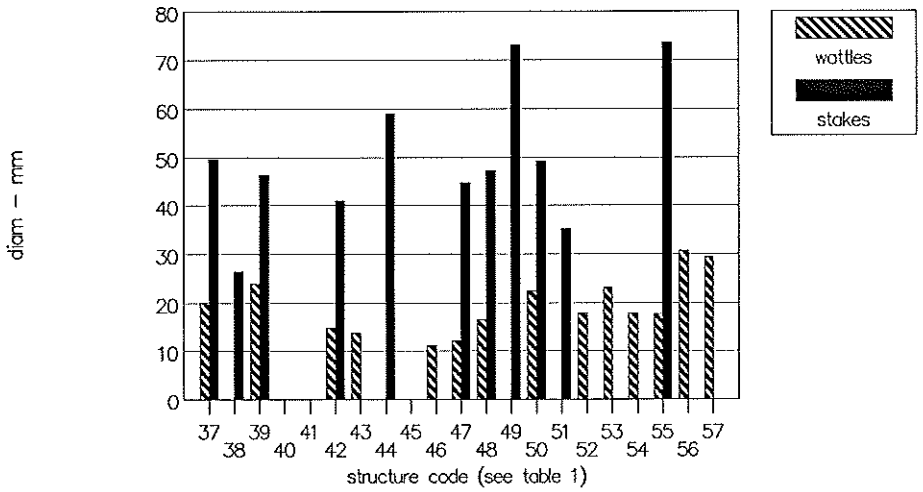
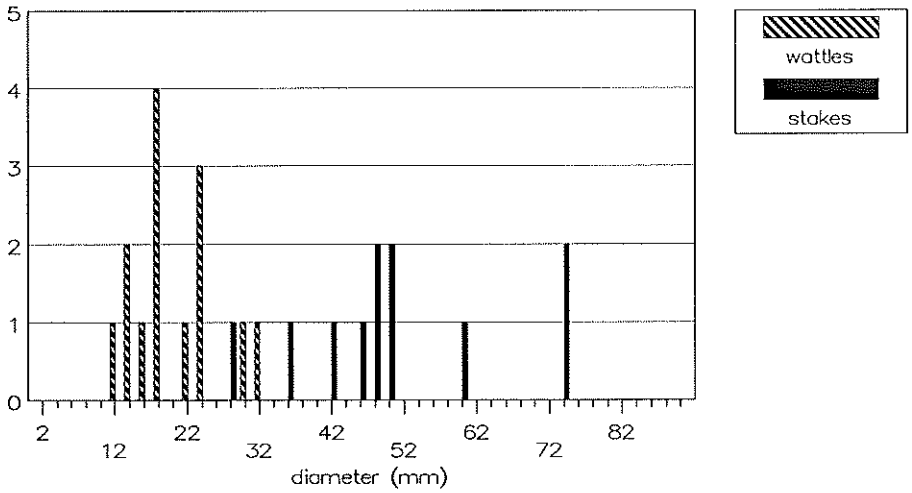


Figure 7

Period 5: mean size frequency



3.4: COMPARISON BETWEEN PERIODS 3 AND 5

It is difficult to compare the two periods except in very broad terms given that the features analysed and, indeed, present were so different. Period 3 has more, well-defined buildings as such with a few fences and drains whereas Period 5 has very few well-defined buildings but many more ovens, fences and areas of miscellaneous brushwood.

It is not a constructive exercise to compare data from these ephemeral features because specific timber is less likely to have been chosen for, for example, a drain. They were probably built with whatever was at hand at the time.

Overall, the Romans used larger material in their substantial buildings with smaller-sized stakes in fences etc.. They were careful about waste and used all of the brushwood/branches in suitable applications. This is clearly demonstrated in Period 5 where there are few patterns of, for example, species distribution. A wide variety of species have been found in most features.

By Period 5 they were obviously exploiting a larger area with respect to wood, having cleared and used the alder that was probably growing in the immediate vicinity during Period 3. This is reflected in the larger quantity of oak and hazel present during period 5.

Returning to Figures 1 and 2, discussed earlier, it is confirmed that material of a particular size was chosen for a particular job. However, during Period 3 the wood is of a wide age-range but during Period 5 it is from a narrower, and younger, age range. This suggests that by Period 5 there was probably some management of local woodland.

With respect to the exact system of management there are, traditionally, two main methods. One is to cut all of the material from an area at once and thus each coppice stool will consist of even-aged stems. The other is the draw method where required-size stems are selected from a multi-aged woodland. As a result each coppice stool will have stems at various stages and ages of regrowth.

Perhaps there was a mixture of the two methods although with few areas of formal arrangement. The alder in the near vicinity may have all been cut and allowed to regrow but perhaps the draw method was more applicable to the mixed species, deciduous woodland on drier soils.

3.5: GROWTH RINGS STUDIES

Some of the larger stakes did have measurements of their growth rings taken and these, too, are available in a database. Most of the sequences were less than 30 years and therefore probably too short to fit into a master dendrochronological curve.

There were apparently obvious patterns in that several pieces of wood from one feature showed 3 or 4 extremely narrow rings amongst generally complacent ones and these may have been from trees felled at the same time. This was visible in both oak and hazel pieces

although the hazel was more varied. It is a species which does not always produce an annual ring and this causes obvious problems in any potential matching.

It is hoped that, when the master curve for Carlisle has been completed by the Dendrochronological Group in Sheffield that further work may be carried out on these short sequences.

3.6: FUTURE WORK

A considerable amount of data on the small wood from Roman Carlisle has now been amassed; these data show similar trends in species used and a size-selective criterion in contexts from both inside the military fort and the external vicus (Huntley, 1987), although the status of the vicus is speculative. In future work, a sample of the general material from Roman levels should be analysed, to confirm or otherwise these patterns, but, more importantly, more material from a narrow selection of features should be studied. In this way a very detailed picture of the specific use of wood should be attained.

In addition, it is extremely important to look at material from different periods, particularly post-Roman, to gain insight into the changing styles of usage, availability of local timber, import of wood etc..

If there is to be any attempt to tie in the demand for wood, at whatever period of time, with the impact on the local landscape, detailed pollen studies, with radiocarbon dates, are also vital.

ACKNOWLEDGEMENTS

I thank Ian Caruana and his workers from the Carlisle Archaeological Unit for providing both the wood and the "stake data" and Mick Cressey, 3rd year undergraduate in the Department of Archaeology, University of Durham for allowing me access to his data from drain 3564. I also thank Martin Jones and Chris Morris of the Archaeology Department, and Ian Caruana for their patient and critical reading of this manuscript.

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SECTION 4: DATA APPENDIX

In this section all of the metrical data are presented with a synopsis of the descriptions. The data are ordered by period initially and subsequently by structure, the site convention of square brackets, [ ], is used for all buildings. The details of sub-period are appended to each building and are as produced by the excavator on March 2nd 1989. An index of these structures is presented at the end.

Where buildings have had reasonable amounts of wood identified (*c.*30 pieces or more) frequency plots are presented and a brief discussion given. This is related to specific archaeological queries where relevant.

The section may be considered archival.

PERIOD 3

DRAIN 3470

This lay across the threshold of the main gate through the rampart during Period 3A/2.

Sample	Wood number	Context	Period	Wall	Species	Age (yr)	Diam (mm)	Type	Notes
2292.00	0	3470.00	3A/2	3470	Alnus		0	0 m	
2301.00	0	3470.05	3A/2	3470	Alnus		13	70 m	squared off
2287.00	0	3607.00	3A/2	3470	Alnus		0	0 m	misc chunk
2288.00	0	3608.00	3A/2	3470	Betula		0	0 m	
2284.00	0	3609.00	3A/2	3470	Alnus		0	0 m	misc chunk

STRUCTURE [3858]

This building is possibly the centurion's block in a barrack and was present throughout Period 3B. Alder is the most commonly used wood in this structure although hazel, oak and ash are all used for stakes. Much of the material was in a poor state of preservation in that the wattles were flattened. Many were unageable.

Sample	Wood number	Context	Period	Wall	Species	Age (yr)	Diam (mm)	Type	Notes
0.00	4507	4018.00	3B	0		0	75	Round	
0.00	2384	3709.00	3B	0		0	37	Round	
0.00	4396	4026.00	3B	0		0	45	Round	
0.00	4368	4083.00	3B	0		0	50	Round	
0.00	4519	4117.00	3B	0		0	17	Round	
0.00	4074	4113.00	3B	0		0	55	Round	
0.00	4342	4116.00	3B	0	Oak	0	56	Round	
0.00	3508	4098.00	3B	0		0	72	Round	
0.00	4061	4154.00	3B	0	Oak	0	42	Round	

0.00	4228	4102.00	3B	3986		0	42	Round

east wall: all rotten dry wattles

4233.19	0	4458.00	3B	0	?Alnus	0	22 w	
4233.19	0	4458.00	3B	0	?Alnus	0	16 w	
4233.17	0	4458.00	3B	0	?Alnus	0	0 w	
4233.14	0	4458.00	3B	0	?Alnus	0	22 w	angled end
4233.15	0	4458.00	3B	0		0	0 w	angled end
4233.01	0	4458.00	3B	0	?Alnus	0	0 w	

Internal wall:

4348.07	0	5688.00	3b	0	Alnus	0	7 w	
4348.04	0	5688.00	3B	0	Alnus	0	15 w	
4348.02	0	5688.00	3B	0	Alnus	2	8 w	
4348.05	0	5688.00	3B	0	Alnus	4	18 w	
4348.03	0	5688.00	3B	0	Alnus	0	15 w	
4348.01	0	5688.00	3B	0	Alnus	0	7 w	
4348.06	0	5688.00	3B	0	Alnus	0	22 w	branch

Internal wall between rooms 1 and 2:

material rotten and large quantities of fungal hyphae. Impossible to age

4410.03	0	5732.00	3B	0	cf.Alnus	0	0 w	
4410.02	0	5732.00	3B	0		0	23 w	
4410.05	0	5732.00	3B	0		0	0 w	

Internal wall between rooms 2 and 3:

wattles in very poor condition

3847.04	0	5176.00	3B	0	cf.Alnus	0	20 w	angled end.
3847.08	0	5176.00	3B	0	cf.Alnus	0	24 w	angled end.
3847.01	0	5176.00	3B	0	cf.Alnus	0	21 w	angled end. branch
3847.03	0	5176.00	3B	0	cf.Alnus	0	21 w	angled end. branch

Part of drain 3986 in room 1:

0.00	4527	4101.00	3B	3986		0	54	Half-round
0.00	4231	4103.00	3B	3986		0	35	Round
4228.00	0	4102.00	3B	3986	Alnus	0	0 s	
4231.00	0	4103.00	3B	3986	Alnus	11	33 s	
4527.00	0	4101.00	3B	3986	Alnus	19	47 s	

Post trench fills:

4350.01	0	4877.00	3B	4457	Quercus	38	60 s	post trench fill
4331.00	0	5683.00	3B	4457	Corylus	0	0 s	post trench for wall A4457

for internal wall 4309:

3581.00	0	4969.20	3B	5022	Alnus	0	0 s	pst trench fill of cut 5022
4401.00	0	5669.00	3B	5754	Alnus	0	0 s	struct post, trench A5732

for south wall 5615:

4465.00	0	5600.00	3B	5615	Quercus	16	47 s	Period 4, asym. post trench
4462.00	0	5600.00	3B	5615	Corylus	25	85 s	Period 4, asym. post trench
4465.00	0	5600.00	3B	5615	Quercus	40	80 s	Pd 4, >40,1/4 cut. post tnc
4464.00	0	5600.00	3B	5615	Quercus	16	47 s	Pd 4, asym. post trench

Poorly preserved wattles and stakes from west wall 4457:

4350.00	0	4877.00	3B	4457	Quercus	38	60	s	fill as A5600 post trench
4544.00	0	5683.90	3B	4457	Alnus	7	45	s	W. wall stakes. post trench
3451.05	0	4457.00	3B	0	cf.Alnus	0	25	w	rotten wattle, angled end.
3451.06	0	4457.00	3B3	0	cf.Alnus	0	16	w	rotten wattle, angled end.
2751.00	0	3979.00	3B	3858	Fraxinus	0	0		?collap/dem wattle feature;

Room 1:

4528.00	0	5830.00	3B	0	?Alnus	0	0	s	
4396.00	0	4026.00	3B	3858	Alnus	15	40	s	
4451.00	0	5393.00	3B	3858	Alnus	0	0	m	
4018.02	0	4250.60	3B	0	Alnus	0	0	s	drain
4018.01	0	4250.60	3B	0	Alnus	0	0	s	Period 4 drain
4073.00	0	4025.00	3B	5435	Quercus	0	0	m	part of 5435?
4333.00	0	5374.00	3B	3858	Quercus	0	0	f	phase 1
4449.00	0	5390.00	3B	5435	Alnus	0	0	s	phase 1
4087.00	0	4033.00	3B	5435	Corylus	18	40	s	phase 1
4051.00	0	4114.00	3B	5435	Corylus	12	34	s	phase 1
4334.00	0	5375.00	3B	3858	Corylus	0	0	s	phase 1
4070.00	0	5386.00	3B	5435	Alnus	0	0	s	phase 1
4085.00	0	4155.00	3B	5435	Pinus	0	0	s	phase 1
4335.00	0	5376.00	3B	3858	Alnus	0	0	m	phase 1
4452.00	0	5384.00	3B	3858	Alnus	0	0	s	phase 1
4074.00	0	4113.00	3B	5435	Alnus	30	49	s	phase 1
4450.00	0	5391.00	3B	5435	Alnus	0	0	p	phase 1
4516.00	0	5377.00	3B	3858	Alnus	30	49	s	phase 1?
4507.00	0	4018.00	3Bor4	3858	Alnus	0	0	m	phase 2. [3858] or [3882]
4525.02	0	4019.00	3Bor4	0	Pinus	0	0	s	phase 2; [3858] or [3882]
4336.00	0	5379.00	3B	3858	Alnus	0	0	m	stake
4506.00	0	5380.00	3B	3858	Corylus	0	0	s	stake
4523.00	0	5826.00	3B?	0	Alnus	0	0	s	stray off-cut or post
2728.00	0	4145.00	3B	3858	?Alnus	0	0	s	?construction, much wood
4516.01	0	5377.00	3B	3858	Alnus	30	49	s	phase 1?

Room 2:

3829.00	0	5164.00	3B	3858	Alnus	0	0	s	
3867.00	0	5165.00	3B	3858	Alnus	5	45	s	

Room 3:

3702.00	0	5025.00	3B	3858	Quercus	31	42	s	
3780.00	0	5151.00	3B	3858	Fraxinus	0	0	p	
3609.00	0	5019.00	3B	3858	Alnus	0	0	s	
3760.00	0	5136.00	3B?	3858	Alnus	25	50	s	
4368.00	0	4083.00	3B	3858	Fraxinus	13	35	s	
3635.00	0	4259.00	3B	3858	Alnus	0	0	s	half round stake
3601.00	0	3990.00	3B	0	Alnus	21	46	s	round stem or branch
2384.00	0	3709.00	3B	0	Alnus	22	37	s	charred. Poss from A[5754].

Mass of off-cuts lying in SE corner, period 4

4371.00	0	5710.00	3B	3858	Quercus	0	0	s	Period 4, construction
4370.00	0	5710.00	3B	3858	?Quercus	0	0	s	Period 4, construction
2616.00	0	3904.00	3C/1?	0	Fraxinus	0	0		?demolition. Prob. stray

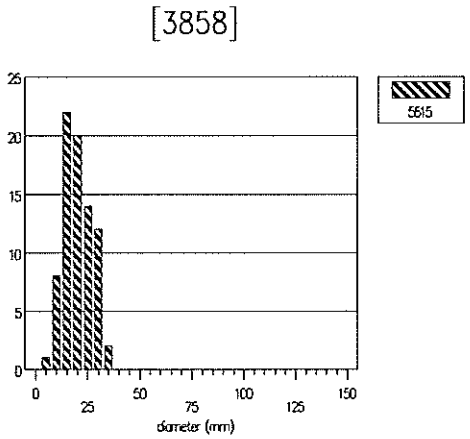
South wall: north side:

4347.02	0	5615.00	3B	3858	Alnus	4	25 w	
4347.01	0	5615.00	3B	0	Alnus	5	25 w	
4268.19	0	5615.00	3B	3858	Alnus	0	15 w	
4268.13	0	5615.00	3B	3858	Alnus	5	27 w	
4268.14	0	5615.00	3B	3858	Alnus	4	26 w	peg
4268.15	0	5615.00	3B	3858	Alnus	0	24 w	peg
4268.10	0	5615.00	3B	3858	Alnus	0	19 w	twig elbow
4268.03	0	5615.00	3B	3858	Alnus	0	7 w	twig
4268.04	0	5615.00	3B	3858	Alnus	0	10 w	twig
4268.08	0	5615.00	3B	3858	Alnus	4	16 w	twig
4268.05	0	5615.00	3B	3858	Alnus	0	9 w	twig
4268.22	0	5615.00	3B	3858	Alnus	0	30 w	peg 2
4268.01	0	5615.00	3B	3858	Alnus	4	11 w	twig
4268.12	0	5615.00	3B	3858	Alnus	0	10 w	twig
4268.17	0	5615.00	3B	3858	Alnus	0	11 w	twig
4268.18	0	5615.00	3B	3858	Alnus	0	8 w	twig
4268.02	0	5615.00	3B	3858	Alnus	4	15 w	twig
4268.20	0	5615.00	3B	3858	Alnus	0	22 w	twig
4268.21	0	5615.00	3B	3858	Alnus	0	12 w	twig
4268.23	0	5615.00	3B	3858	Alnus	5	23 w	asym branch
4268.06	0	5615.00	3B	3858	Alnus	0	12 w	
4268.07	0	5615.00	3B	3858	Alnus	0	9 w	twig
4268.09	0	5615.00	3B	3858	Alnus	3	18 w	shaped peg
4268.00	0	5615.00	3B	3858	Alnus	4	27 w	peg
4269.01	0	5615.00	3B	3858	Alnus	0	14 w	small branch
4269.10	0	5615.00	3B	3858	Alnus	0	29 w	shaped peg
4269.11	0	5615.00	3B	3858	Alnus	0	27 w	shaped peg
4269.12	0	5615.00	3B	3858	Alnus	0	26 w	shaped peg
4269.13	0	5615.00	3B	3858	Alnus	5	26 w	shaped peg
4269.14	0	5615.00	3B	3858	Alnus	0	30 w	shaped peg
4269.15	0	5615.00	3B	3858	Alnus	0	22 w	branch
4269.16	0	5615.00	3B	3858	Alnus	0	16 w	twig
4269.02	0	5615.00	3B	3858	Alnus	0	19 w	shaped peg
4269.03	0	5615.00	3B	3858	Alnus	0	23 w	shaped peg
4269.04	0	5615.00	3B	3858	Alnus	5	23 w	small branch
4269.05	0	5615.00	3B	3858	Alnus	0	31 w	shaped peg
4269.06	0	5615.00	3B	3858	Alnus	6	30 w	shaped peg
4269.07	0	5615.00	3B	3858	Alnus	7	28 w	shaped peg
4269.08	0	5615.00	3B	3858	Alnus	4	20 w	shaped peg
4269.09	0	5615.00	3B	3858	Alnus	4	14 w	small branch

south side:

4268.24	0	5615.00	3B	3858	Alnus	4	13 w	twig
4268.28	0	5615.00	3B	3858	Alnus	3	19 w	twig
4268.35	0	5615.00	3B	3858	Alnus	4	15 w	twig
4268.45	0	5615.00	3B	3858	Alnus	0	15 w	twig
4268.49	0	5615.00	3B	3858	Alnus	0	20 w	twig
4268.11	0	5615.00	3B	3858	Alnus	0	16 w	twig
4269.17	0	5615.00	3B	3858	Alnus	0	0 w	shaped peg
4269.18	0	5615.00	3B	3858	Alnus	0	5 w	shaped peg
4269.19	0	5615.00	3B	3858	Alnus	0	8 w	twig
4269.20	0	5615.00	3B	3858	Alnus	0	0 w	branch
4269.21	0	5615.00	3B	3858	Alnus	0	12 w	shaped peg
4269.22	0	5615.00	3B	3858	Alnus	0	11 w	shaped peg
4269.23	0	5615.00	3B	3858	Alnus	0	0 w	branch
4269.24	0	5615.00	3B	3858	Alnus	0	21 w	branch

4268.25	0	5615.00	3B	3858	Alnus	5	17 w	branch
4269.26	0	5615.00	3B	3858	Alnus	0	19 w	branch
4268.26	0	5615.00	3B	3858	Alnus	4	16 w	twig
4268.27	0	5615.00	3B	3858	Alnus	5	16 w	branch
4269.27	0	5615.00	3B	3858	Alnus	0	0 w	branch
4269.28	0	5615.00	3B	3858	Alnus	0	17 w	branch
4268.29	0	5615.00	3B	3858	Alnus	4	16 w	twig
4269.29	0	5615.00	3B	3858	Alnus	0	24 w	shaped peg
4269.30	0	5615.00	3B	3858	Alnus	0	13 w	branch
4268.30	0	5615.00	3B	3858	Alnus	0	13 w	twig
4268.31	0	5615.00	3B	3858	Alnus	3	15 w	branch
4269.31	0	5615.00	3B	3858	Alnus	0	32 w	shaped peg
4269.00	0	5615.00	3B	3858	Alnus	0	12 w	twig
4269.32	0	5615.00	3B	3858	Alnus	4	20 w	branch
4268.32	0	5615.00	3B	3858	Alnus	2	15 w	small bran
4268.33	0	5615.00	3B	3858	Alnus	0	16 w	branch
4269.33	0	5615.00	3B	3858	Alnus	4	20 w	shaped peg
4268.34	0	5615.00	3B	3858	Alnus	4	6 w	twig
4268.36	0	5615.00	3B	3858	Quercus	0	0 w	charcoal
4268.37	0	5615.00	3B	3858	Alnus	0	14 w	twig
4268.38	0	5615.00	3B	3858	Alnus	0	11 w	branch
4268.39	0	5615.00	3B	3858	Alnus	5	25 w	branch
4268.40	0	5615.00	3B	3858	Alnus	0	21 w	shaped peg
4268.41	0	5615.00	3B	3858	Alnus	0	20 w	branch
4268.42	0	5615.00	3B	3858	Alnus	0	25 w	twig
4268.43	0	5615.00	3B	3858	Alnus	0	19 w	shaped peg
4268.44	0	5615.00	3B	3858	Alnus	0	13 w	shaped peg
4268.44	0	5615.00	3B	3858	Alnus	0	13 w	shaped peg
4268.46	0	5615.00	3B	3858	Alnus	0	25 w	shaped peg
4268.47	0	5615.00	3B	3858	Alnus	0	0 w	branch
4268.48	0	5615.00	3B	3858	Alnus	0	26 w	shaped peg



The alder wattles from the south wall were commonly from branches, showing the characteristic asymmetric central pith. This suggests the use of the whole tree, may be because long, thin stems were not available or that relatively short pieces of wood were considered adequate in this structure. Presumably the wattling was covered with a clay daub and therefore the appearance of the wood was unimportant. The walls are also unlikely to

have been load-bearing or structural since the short pieces of wattling would not be strong. The wattles showed a peak in diameter of between 15 and 20mm and, where ageable, most were between 4 and 5 years old. On average, those from the north side of the south wall are slightly thicker (19.2 mm) than those from the south side (15.5 mm); this is probably not a large enough difference to be significant.

OVEN [3873]:

This consisted of clay walls and base built upon a stake and wattle frame (6032). The oven was definitely present during period 3B/2b but its period of construction is uncertain.

The alder wattles identified were all in a very poor state of preservation but were of a similar size range to those from other ovens on this site.

Sample	Wood	Context	Period	Wall	Species	Age (yr)	DiamType (mm)	Notes
all in very poor condition, dried out and held together with tape								
4647.01	0	6032.00	3B/2	3873	?Alnus	0	25 w	stake and wattle support for oven
4646.00	0	6032.00	3B/2	3873	?Alnus	0	0 w	stake and wattle support for oven
4647.02	0	6032.00	3B/2	3873	?Alnus	0	20 w	stake and wattle support for oven
4647.03	0	6032.00	3B/2	3873	?Alnus	0	15 w	stake and wattle support for oven
4647.04	0	6032.00	3B/2	3873	?Alnus	0	14 w	stake and wattle support for oven
4562.00	0	6035.00	3B/2	6032	?Alnus	0	30 w	back of oven
4652.00	0	6035.00	3B/2	6032	Alnus	0	0	better preserved at back of oven

STRUCTURE 4150

This structure was a hurdle lying under the Intervallum road and over pit 4162. It may have been used to seal the pit but whether it was made for this purpose or was discarded from elsewhere is impossible to say. Period 3B/2.

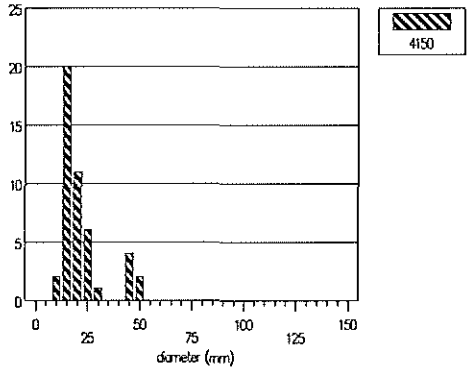
The few stakes measured were all alder and had a mean diameter of 45.3mm. The wattles (mean diameter 15.4mm) are mostly from alder but some from oak and hazel. One piece was willow which is a species rarely recorded from Annetwell Street.

Hurdle lying under intervallum road and over pit 4162

Sample	Context	Period	Wall	Species	Age (yr)	Diam (mm)	Type	Notes
3287.28	4150.00	3B/2	4150	Alnus	4	13	w	
3287.14	4150.00	3B/2	4150	Alnus	4	12	w	
3287.35	4150.00	3B/2	4150	Salix	0	16	w	
3287.01	4150.00	3B/2	4150	Quercus	9	23	w	
3287.04	4150.00	3B/2	4150	Alnus	5	11	w	
3287.43	4150.00	3B/2	4150	Alnus	0	19	w	
3287.07	4150.00	3B/2	4150	Quercus	10	16	w	
3287.11	4150.00	3B/2	4150	Alnus	8	18	w	
3287.30	4150.00	3B/2	4150	Alnus	3	15	w	
3287.33	4150.00	3B/2	4150	Corylus	7	15	w	
3287.06	4150.00	3B/2	4150	Alnus	0	15	w	

3287.02	4150.00	3B/2	4150	Alnus	3	13 w
3287.27	4150.00	3B/2	4150	Alnus	6	15 w
3287.38	4150.00	3B/2	4150	Quercus	5	12 w
3287.00	4150.00		4150	Alnus	10	23 w
3287.46	4150.00	3B/2	4150	Alnus	9	27 w
3287.22	4150.00	3B/2	4150	Alnus	8	15 w
3287.48	4150.00	3B/2	4150	Alnus	0	24 w
3287.05	4150.00	3B/2	4150	Alnus	7	18 w
3287.41	4150.00	3B/2	4150	Alnus	0	7 w
3287.49	4150.00	3B/2	4150	Alnus	0	11 w
3287.32	4150.00	3B/2	4150	Alnus	0	0 w
3287.09	4150.00	3B/2	4150	Quercus	8	18 w
3287.42	4150.00	3B/2	4150	Alnus	5	15 w
3287.25	4150.00	3B/2	4150	Alnus	4	15 w
3287.20	4150.00	3B/2	4150	Alnus	0	17 w
3287.37	4150.00	3B/2	4150	Alnus	10	23 w
3287.42	4150.00	3B/2	4150	Corylus	0	12 w
3287.15	4150.00	3B/2	4150	Alnus	7	17 w
3287.40	4150.00	3B/2	4150	Alnus	4	18 w
3287.18	4150.00	3B/2	4150	Quercus	25	21 w
3287.16	4150.00	3B/2	4150	Alnus	5	11 w
3287.12	4150.00	3B/2	4150	Alnus	6	13 w
3287.29	4150.00	3B/2	4150	Alnus	10	21 w
3287.50	4150.00	3B/2	4150	Corylus	7	17 w
3287.31	4150.00	3B/2	4150	Alnus	4	13 w
3287.21	4150.00	3B/2	4150	Corylus	0	13 w
3287.17	4150.00	3B/2	4150	Alnus	3	11 w
3287.03	4150.00	3B/2	4150	Alnus	3	14 w
3287.10	4150.00	3B/2	4150	Alnus	3	17 w
3287.39	4150.00	3B/2	4150	Alnus	0	10 w
2807.00	4150.00	3B/2	4150	Alnus	0	42 s
2809.00	4150.00	3B/2	4150	Alnus	0	43 s
2808.00	4150.00	3B/2	4150	Alnus	0	50 s
2807.00	4150.00	3B/2	4150	Alnus	9	44 s
2808.00	4150.00	3B/2	4150	Alnus	10	49 s
2809.00	4150.00	3B/2	4150	Alnus	0	44 s

4150

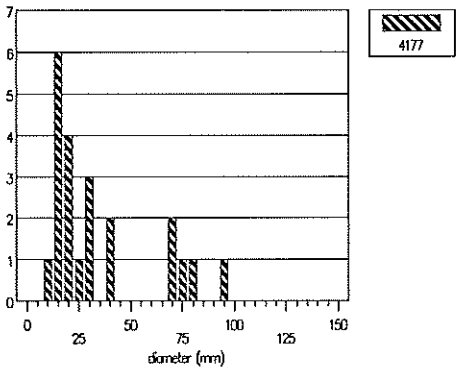


STRUCTURE 4183

Structure on the East Gate Tower site during Period 3B.

Sample	Wood number	Context	Period	Wall	Species	Age (yr)	Diam (mm)	Type	Notes
0.00	3021	4305.00	3B	0	Oak	0	36		Half-round
0.00	3797	4185.00	3B	0	Oak	0	110		Round
3166.00	0	4384.00	3B	0	Alnus	0	55	s	phs 1, peg for threshold
3198.00	0	4323.00	3B	0	Alnus	11	40	s	east room, phase 1
Bonfire covering east gate tower:									
pile of timber stacked in middle of room 2									
2844.00	0	1759.77	3C/1?	0	Alnus	0	0	m	
2815.00	0	1759.35	3C/1?	0	Alnus	0	16	m	charcoal, half section
2711.00	0	1759.01	3C/1?	0	Quercus	0	0	m	charcoal chunk;
2829.00	0	1759.43	3C/1?	0	Quercus	10	60	m	Charcoal stake;
2813.00	0	1759.62	3C/1?	0	Alnus	0	23	m	charcoal;
North wall 4177:									
3554.00	0	4177.00	3B	4177	Alnus	0	0	w	
3554.04	0	4177.00	3B	4177	Alnus	0	14	w	
0.00	3569	4190.00	3B	4177	Oak	0	69		Half-round
3554.07	0	4177.00	3B	4177	Alnus	0	27	w	
3554.06	0	4177.00	3B	4177	Alnus	0	27	w	
3554.05	0	4177.00	3B	4177	Alnus	0	20	w	
3561.00	0	4201.00	3B	4177	Alnus	0	72	s	rather dry and split
4001.00	0	4202.00	3B	4177	Alnus	0	76	s	quarter section
3566.00	0	4193.00	3B	4177	indet	0	0	s	horrible condition
3565.00	0	4194.00	3B	4177	Alnus	0	0	s	squared off. mottled
0.00	3564	4195.00	3B	4177		0	30		Round
3554.03	0	4177.00	3B	4177	Alnus	0	19	w	
3557.09	0	4177.00	3B	4177	Alnus	0	11	w	
3557.10	0	4177.00	3B	4177	Alnus	2	6	w	
3557.05	0	4177.00	3B	4177	Alnus	5	14	w	
3557.06	0	4177.00	3B	4177	Alnus	7	16	w	
3557.07	0	4177.00	3B	4177	Alnus	5	21	w	
3557.08	0	4177.00	3B	4177	Alnus	4	12	w	
3554.08	0	4177.00	3B	4177	Alnus	0	38	w	
3554.02	0	4177.00	3B	4177	Quercus	6	14	w	
3557.04	0	4177.00	3B	4177	Alnus	5	13	w	rather dry and split .
3557.03	0	4177.00	3B	4177	Alnus	0	18	w	rather dry and split .

[4183]



The north wall contained several stout alder or oak stakes (72.3mm) and, predominantly, alder wattles (18.0mm). All of the wood is generally stouter than from many other buildings indicating a more substantial structure.

Part of internal wall 4180:

4008.00	0	4425.00	3B	4180	Alnus	0	0 m	misc barkless chunk
3164.00	0	4186.00	3B	4180	Alnus	0	92 s	quarter section
3149.00	0	4368.00	3B	4421	Alnus	4	39 s	phs 1; peg for threshold
5043.00	0	4190.90	3B	4177	Quercus	16	64 s	west room, phase 3.
0.00	4008	4425.00	3B	4180		0	65	Round

STAKE LINE 4313

This lay to the west of and at right angles to the main road, towards the western edge of the excavation. Period 3B?

0.00	3120	4354.00	3B	0	Oak	0	62	Round
1160.00	0	3920.00	3B	4313	Alnus	0	84 s	
2960.00	0	4215.00	3B?	4313	Quercus	34	61 s	measured
2955.00	0	4219.00	3B?	4313	Quercus	33	60 s	measured
2947.00	0	4235.00	3B?	4313	Quercus	0	85 s	v dense rings,rot
2951.00	0	4237.00	3B?	4313	Quercus	32	53 s	measured
3120.00	0	4354.00	3B?	4313	Quercus	0	60 s	>40,rot,v dense

STRUCTURE [4707]

This is also at the northern edge of the excavation and to the east of the main N-S road. Period 3B/1b

3303.00	0	2883.00	3B	0	Alnus	0	84	s	stake
3305.00	0	2917.00	3B/1?	0	Quercus	4	23	s	part of S wall.
3305.00	0	2917.00	3B/1	0	Alnus	0	70	s	part of south wall
0.00	3297	4687.00	3B/1b	0		0	24		
0.00	3300	4697.00	3B/1b	0		0	40		
3304.00	0	4716.00	3B/1	0	Alnus	0	63	s	part of south wall
3477.00	0	4875.00	3B/1?	0	Alnus	8	31	s	

STRUCTURE [4847]

lies immediately to the east of, and adjoining, [4707]. 3B/1a.

0.00	3341	4758.00	3B/1a	0		0	83	Round

STRUCTURE [4857]

This structure is the East Gate Tower during period 3A/2. The wood identified is a mixture of oak, hazel and alder in approximately equal proportions with small amounts of holly and birch.

Sample	Wood number	Context	Period	Wall	Species	Age (yr)	Diam (mm)	Type	Notes
0.00	4049	3831.00	3A/2	0	Oak	0	111		Round
0.00	4071	4324.00	3A/	0		0	31		Round
0.00	0	4325.00	3A/2	0		0	48		Round
0.00	3189	4411.00	3A/2	0		0	50		Round
0.00	3215	4500.00	3A/2	0		0	38		Round
0.00	3192	4505.00	3A/2	0		0	41		Round

Phase 4, charcoal spread with oak boards: (may be equivalent to A4527)

3631.00	0	5034.21	3A/2	0	Alnus	0	0	m	plank of wood.
3637.00	0	5034.22	3A/2	0	Corylus	45	72	m	measured; chunk of wood.
3640.00	0	5034.28	3A/2	0	Alnus	0	0	m	chunk of wood.
3642.00	0	5034.30	3A/2	0	Alnus	0	0	m	chunk of wood;
3607.00	0	5034.30	3A/2	0	Alnus	0	0	m	Broken chunk of wood.
3682.00	0	5034.41	3A/2	0	Alnus	32	66	m	measured; diam estim.
3628.00	0	5034.47	3A/2	0	Quercus	0	0	m	thin wedge of wood.
0.00	0	5086.00	3A/2	0		0	62		Half-round
0.00	0	5113.00	3A/2	0	ROUND	0	100		
0.00	3799	5114.00	3A/2	0		0	102		Round
0.00	4044	5115.00	3A/2	0		0	80		Round
0.00	4045	5116.00	3A/2	0		0	92		Round
0.00	3754	5118.00	3A/2	0	Oak	0	101		Round
0.00	4033	5120.00	3A/2	0		0	70		Round
0.00	5042	5121.00	3A/2	0		0	64		Round
0.00	3746	5123.00	3A/2	0	Oak	0	58		Half-round

0.00	3747	5124.00	3A/2	0		0	28		Round
0.00	3842	5177.00	3A/2	0		0	49		Round
0.00	3876	5221.00	3A/2	0	Oak	0	63		Round
0.00	0	5243.00	3A/2	0		0	83		Round
0.00	0	5249.00	3A/2	0		0	43		Round
0.00	0	5250.00	3A/2	0		0	63		Half-round
0.00	0	5252.00	3A/2	0		0	56		Round
0.00	3889	5253.00	3A/2	0		0	42		Round
0.00	4118	5254.00	3A/2	0		0	32		Round
0.00	0	5284.00	3A/2	0	Oak	0	61		Round
0.00	4050	5358.00	3A/2	0		0	99		Round
0.00	0	5448.00	3A/2	0	Oak	0	53		Half-round
0.00	4113	5477.00	3A/2	0		0	67		Plano-convex x2
0.00	4117	5507.00	3A/2	0		0	120		Round
0.00	4137	5515.00	3A/2	0		0	28		Round
0.00	4143	5522.00	3A/2	0		0	51		Round
0.00	0	5564.00	3A/2	0		0	25		Oval
0.00	4200	5565.00	3A/2	0	Oak	0	100		Round
0.00	0	5659.00	3A/2	0	Oak	0	69		Half-round

North wall 4734:

3957.00	0	3851.00	3A/2	4734	Ilex	31	80	s	Assym
3958.00	0	3863.00	3A/2	4734	Alnus	0	85	s	
3956.00	0	5327.00	3A/2	4734	Alnus	22	95	s	
3963.00	0	5331.00	3A/2	4734	Quercus	16	95	s	
3960.01	0	5332.00	3A/2	4734	Quercus	0	0	s	Assym + central rot
3960.00	0	5332.00	3a/2	4734	Alnus	20	91	s	Asym
3966.00	0	5333.00	3A/2	4734	Alnus	20	91	s	Asym
3959.00	0	5334.00	3A/2	4734	Alnus	20	110	s	
3961.00	0	5335.00	3A/2	4734	Quercus	18	70	s	
3962.00	0	5336.00	3A/2	4734	Corylus	37	131	s	
3965.00	0	5337.00	3A/2	4734	Corylus	21	92	s	
3967.00	0	5338.00	3A/2	4734	Quercus	19	111	s	
3972.00	0	5339.00	3A/2	4734	Quercus	19	53	s	
3976.00	0	5340.00	3A/2	4734	Corylus	21	80	s	
3980.00	0	5341.00	3A/2	4734	Quercus	20	67	s	Asym
3977.00	0	5350.00	3A/2	4734	Ilex	31	76	s	Heel of branch
3978.00	0	5351.00	3A/2	4734	Alnus	20	77	s	
3979.00	0	5352.00	3A/2	4734	Quercus	24	89	s	Assym
4197.00	0	5353.00	3A/2	4734	Corylus	25	82	s	

Fence 5144:

0.00	3787	5155.00	3A/2	5144		0	31	Round
0.00	3791	5156.00	3A/2	5144		0	23	Round
0.00	3790	5157.00	3A/2	5144		0	49	Round
0.00	3796	5158.00	3A/2	5144		0	17	Round
0.00	3793	5161.00	3A/2	5144		0	21	Round

Fence 5145:

0.00	3786	5153.00	3A/2	5145		0	31	Round

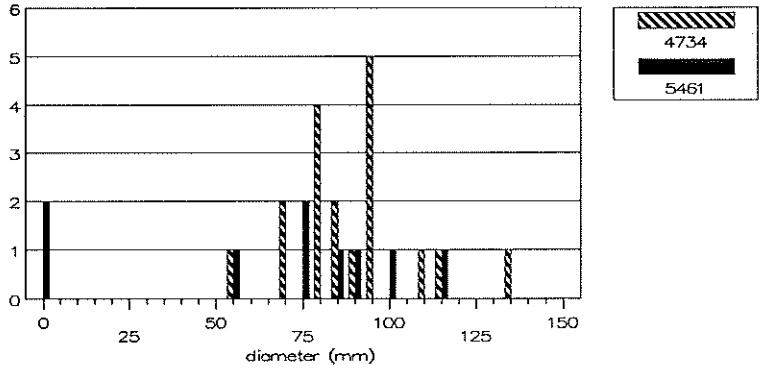
Wall at west end of ascensus:

0.00	4062	5409.00	3A/2	5173		0	93	Round

West wall 5461:

4081.00	0	5463.00	3A/2	5461	Betula	0	0 s	
4080.00	0	5464.00	3A/2	5461	Alnus	18	75 s	Rotten in centre
4078.00	0	5466.00	3A/2	5461	Ilex	72	115 s	
4077.00	0	5467.00	3A/2	5461	Alnus	30	90 s	Age >30, rotten
4076.00	0	5468.00	3A/2	5461	Quercus	0	0 s	Rotten centre
4093.00	0	5470.00	3A/2	5461	Ilex	66	98 s	
0.00	4094	5471.00	3A/2	5461		0	85	1/2 round, prob.const
4095.00	0	5472.00	3A/2	5461	Ilex	21	72 s	
4154.00	0	5473.00	3A/2	5461	Quercus	28	54 s	

[4857]



A comparison of the stake diameters in the north (4734) and west (5461) walls shows that similar sized material was used for both. The average size of the north wall stakes was 87.5mm (n=18) and that for the west wall 89.8mm (n=7). Both also had a similar mixture of species, namely, oak, alder, holly and hazel. The material suggests contemporary construction with no botanical evidence of repair.

STRUCTURE [5754]

This building underlay [3858] during period 3A/2. A variety of species were identified but the material was not in a good state of preservation. The average diameter of those from internal walls was 40.6 mm (n=5); again a mixture of alder, oak and hazel were used.

Sample	Wood number	Context	Wall	Species	Age (yr)	Diam (mm)	Type	Notes
0.00	3603	4099.00	0		0	55	Round	
0.00	3617	5018.00	0		0	37	Round	
0.00	3730	5020.00	0		0	58	Half-round	
0.00	3727	5024.00	0		0	37	Half-round	
0.00	3723	5027.00	0		0	50	Round	
0.00	3729	5028.00	0	Oak	0	73	Round	
0.00	3709	5030.00	0		0	375	Round	
0.00	3701	5090.00	0		0	45	Round	
0.00	3704	5091.00	0		0	45	Round	

0.00	4511	5824.00	0		0	49	Round
0.00	4514	5825.00	0		0	32	Round

Material from various internal walls:

3890.00	0	5204.00	5276	Alnus	0	0	s	structural post
3862.00	0	4082.00	5754	Alnus	62	124	s	structural post, square cut.
3618.00	0	5021.00	5754	Corylus	0	0	s	Forked branch heel,twin room 5
3757.00	0	5095.00	5754	Alnus	18	60	s	internal wall. gulley
3899.00	0	5202.00	5754	cf. Alnus	0	0	s	int stake. room 2, under 5192,
3877.00	0	5203.00	5754	Corylus	18	29	s	int stake. room 2, under 5169?
3877.01	0	5203.00	5754	Alnus	8	33	s	int stake. room 3
3897.00	0	5209.00	5754	Quercus	8	52	s	int stake. asym room 2
4469.00	0	5798.00	5754	Quercus	18	29	s	int stake room 1
4467.00	0	5773.00	5773	indet	0	0	s	rod from wall poss in a[6272]
4479.00	0	5774.00	5773	Alnus	0	0	s	structural post
4481.00	0	5775.00	5773	Alnus	0	0	s	structural post
4476.00	0	5776.00	5773	Alnus	0	0	s	structural post

STRUCTURE [5990]

Stake and wattle oval that once supported oven walls but since demolished. Present during 3B/1b.

0.00	4642	5906.00	3B/1b	0	0	30	Round

STRUCTURE 6036

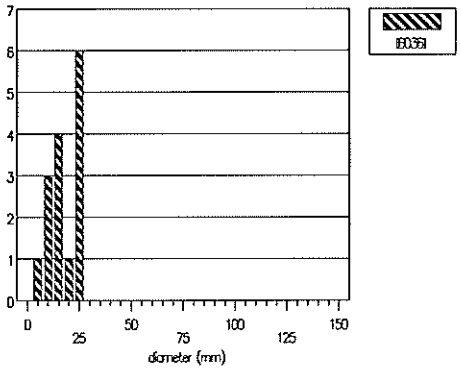
6036 is an oven from period 3A/2, it is formed by a clay oval supported by stakes and wattle 6033. The wattles identified were alder, birch or hazel. It more or less lay directly over oven 6118 which had been present during 3A/1.

Sample	Context	Period	Species	Age (yr)	Diam (mm)	Type	Notes

Framework for oven 6036: all very mouldy and poor condition

4729.13	6033.003A/2	Corylus	6	12	w	split section wattle
4729.11	6033.003A/2	Betula	0	4	w	
4729.14	6033.003A/2	Corylus	0	0	w	split section wattle
4729.15	6033.003A/2	Corylus	5	13	w	
4729.00	6033.003A/2	Alnus	0	21	w	
4729.18	6033.003A/2	Alnus	0	11	w	
4729.16	6033.003A/2	cf.Alnus	0	7	w	
4729.17	6033.003A/2	Alnus	5	22	w	
4729.20	6033.003A/2	Alnus	0	7	w	
4729.12	6033.003A/2	Alnus	4	6	w	
4729.10	6033.003A/2	Alnus	0	14	w	
4728.03	6033.003A/2	Alnus	0	18	w	
4728.02	6033.003A/2	Alnus	6	22	w	charcoal wattle
4728.01	6033.003A/2	Alnus	3	21	w	
4729.09	6033.003A/2	Betula	0	21	w	
4728.04	6033.003A/2	Alnus	0	21	w	

[6036]



The wattles are predominantly alder with some birch and hazel. They ranged in age from 3-6 years but most were unageable. The plot of diameter frequency suggests that two peaks occur - one at 10-15mm and the second at 20-25mm. Although the total numbers identified are low this bi-modal peak may reflect a particular weaving pattern using two sizes of wattle. Examination of any records of full hurdle/wattle features is necessary to check this rather than identification of wood pieces in isolation which may simply reflect the tops and bottoms of wood pieces.

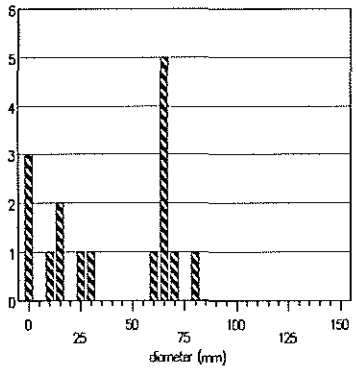
STRUCTURE 6118

6118 is also an oven and is from 3A/1. It is formed from a pink clay on cobble base with the flue to the north. It is revetted by fences to the north, east (6122) and west (6228)

Sample	Wood number	Context	Period	Wall	Species	Age (yr)	Diam (mm)	Type	Notes
North revetment of oven, wattle fence:									
4903.00		6118.00	3A/1	6118	Alnus	4	24	w	
4903.00		6118.00	3A/1	6118	Alnus	4	10	w	
4903.00		6118.00	3A/1	6118	Alnus	4	13	w	
4903.00		6118.00	3A/1	6118	Alnus	11	13	w	
4903.00		6118.00	3A/1	6118	Alnus	6	28	w	
4904.00		6176.00	3A/1	6118	Alnus	19	61	s	
4904.00		6176.00	3A/1	6118	Alnus	0	65	s	
4905.00		6177.00	3A/1	6118	Alnus	24	78	s	
4908.00		6178.00	3A/1	6118	Alnus	24	64	s	square cut
4907.00		6179.00	3A/1	6118	Alnus	24	64	s	
4908.00		6180.00	3A/1	6118	Betula	18	64	s	
4909.00		6200.00	3A/1	6118	Alnus	8	56	s	
4910.00		6201.00	3A/1	6118	Alnus	0	0	s	
4911.00		6202.00	3A/1	6118	Alnus	0	0	s	
0.00	4912	6203.00	3A/1	6118		0	69		Pentagon

4913.00		6204.00	3A/1	6118	Alnus	19	61 s	

[6118]



All of the material, except for one piece of birch, was alder. The nine stakes measured averaged 64.7mm diameter and ranged from 18-24 years old, the wattles averaging 17.6mm and ranging from 4-11 years old.

Revetment for west side of oven:

4922.00		6072.00	3A/1	6228	Betula	4	42 s	
4925.00		6075.00	3A/1	6228	Quercus	17	74 s	
4947.00		6217.00	3A/1	6228	Alnus	6	38 s	
0.00	4949	6218.00	3A/1	6228		0	37	Round
4945.00		6220.00	3A/1	6228	Alnus	0	0 s	
4944.00		6221.00	3A/1	6228	Alnus	0	55 s	
4942.00		6222.00	3A/1	6228	Alnus	0	0 s	cf. 6223,6234
4943.00		6223.00	3A/1	6228	Alnus	5	44 s	
4950.00		6224.00	3A/1	6228	Alnus	5	44 s	
4940.00		6225.00	3A/1	6228	Alnus	6	56 s	
4939.00		6226.00	3A/1	6228	Alnus	6	51 s	
4937.00		6227.00	3A/1	6228	Alnus	6	48 s	
4933.00		6229.00	3A/1	6228	Alnus	6	46 s	west
4936.00		6230.00	3A/1	6228	Alnus	7	54 s	west
4934.00		6231.00	3A/1	6228	Alnus	5	41 s	west
4935.00		6232.00	3A/1	6228	Alnus	6	50 s	west
4948.00		6233.00	3A/1	6228	Alnus	6	40 s	west
0.00	4938	6234.00	3A/1	6228	Oak	0	59	Segment
4951.00		6228.00	3A/1	6228	Alnus	3	20 w	
4951.00		6228.00	3A/1	6228	Alnus	4	24 w	
4951.00		6228.00	3A/1	6228	Alnus	3	17 w	
4951.00		6228.00	3A/1	6228	Alnus	3	20 w	

The stakes from this side of the oven revetment averaged 48.8mm diameter (n=18) and, again, were predominantly alder. The four wattles identified were all alder. The southern half of

this fence revets the oven whilst the northern half delineates the rake-out area in front of the oven.

The archaeologists determined that stakes 6222, 6223 and 6234 were additional to, but contemporary with, the main line of the fence and were possibly for re-inforcement. They are certainly of similar size and species to the main line. It is possible that they did act as re-inforcement because the stakes, generally, from this line are considerably smaller than those for the north revetment fence.

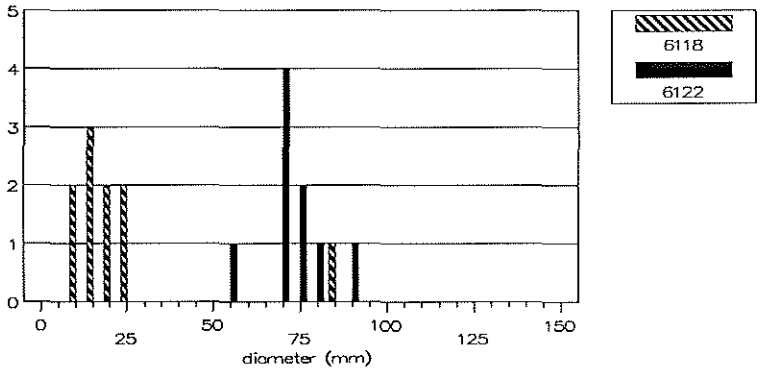
Comparing the material from the north and west sides of this oven, the stakes from the north are more varied in size and larger than those from the west. This may have been deliberate policy since the west side of the oven abutted building [6267], a structural feature, whereas the north revetment was a protective fencing.

STRUCTURE [6266]

This building lies immediately to the east of oven 6118 and was present during 3A/1.

Sample	Wood number	Context	Period	Wall	Species	Age (yr)	Diam (mm)	Type	Notes:
0.00	4897	6151.00	3A/1	0		0	95		Round
0.00	4893	6197.00	3A/1	0		0	70		Segment
4894.00	0	6198.00	3A/1	0	Betula	29	55	s	Asym stake/peg of ?function
0.00	4891	6199.00	3A/1	0	Oak	0	55		Rectangle
east revetment of oven 6118/ west wall of [6266]									
4858.00	0	6122.00	3A/1	6122	Prunus	8	12	w	wall
4858.00	0	6122.00	3A/1	6122	Alnus	3	12	w	
4858.00	0	6122.00	3A/1	6122	Prunus	7	18	w	
4858.00	0	6122.00	3A/1	6122	Alnus	3	10	w	
4858.00	0	6122.00	3A/1	6122	Alnus	4	14	w	
4858.00	0	6122.00	3A/1	6122	Prunus	8	23	w	
4858.00	0	6122.00	3A/1	6122	Alnus	3	15	w	
4858.00	0	6122.00	3A/1	6122	Alnus	4	22	w	
4858.00	0	6122.00	3A/1	6122	Alnus	3	10	w	
4858.00	0	6122.00	3A/1	6122	Prunus	7	20	w	
4871.00	0	6148.00	3A/1	6122	Alnus	15	81	s	part of wall 6122 and oven 6118
0.00	4896	6140.00	3A/2	6122	Oak	0	88		Round
0.00	4853	6141.00	3A/2	6122		0	73		Round
0.00	4854	6142.00	3A/2	6122		0	70		Round
0.00	4850	6143.00	3A/2	6122		0	68		Round
0.00	4849	6144.00	3A/2	6122		0	52		Round
0.00	4846	6145.00	3A/2	6122		0	67		Round
0.00	4847	6146.00	3A/2	6122		0	71		Round
0.00	4848	6147.00	3A/2	6122		0	69		Round
0.00	4915	6168.00	3A/2	6122		0	78		Round

[6266]



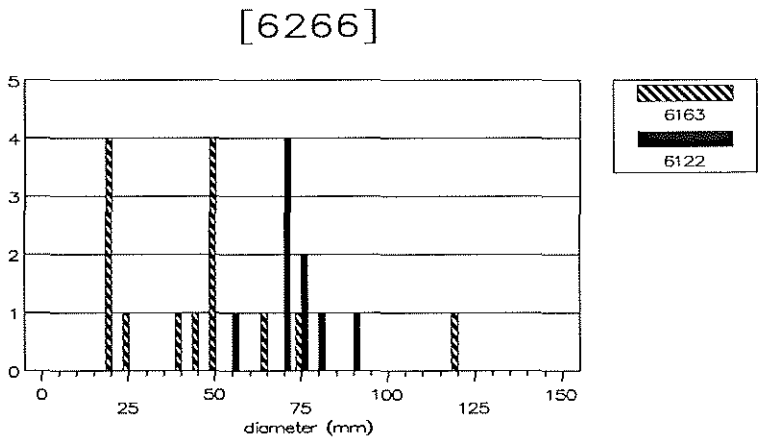
The identified wood from all 6122 is a mixture of alder and *Prunus*. The cherry wattles are quite likely to have come from one source since Bird Cherry (*P. padus*), in particular, naturally forms multi-stemmed thickets.

The data for the stakes were provided by the excavator and species were not identified. They had an average diameter of 71.6mm and this may indicate usage in structural walls rather than protective fences such as 6228 and north revettment around oven [6118].

The north wall (6163) of building [6266], as expected, was built mainly from alder stakes with some hazel plus alder wattle. Mean diameter of stakes was 49.6mm, wattles 16.2mm. This perhaps indicates a protective feature again.

Part of north wall 6163 [6266]

4917.00	0	6152.00	3A/1	6163	Alnus	0	120 s	bark rings too dense to count
4861.00	0	6154.00	3A/1	6163	Alnus	20	50 s	measured
4862.00	0	6155.00	3A/1	6163	Alnus	31	71 s	meas but bark edge too dense
4863.00	0	6156.00	3A/1	6163	Alnus	24	65 s	measured
4864.00	0	6157.00	3A/1	6163	Corylus	23	47 s	
4859.00	0	6158.00	3A/1	6163	Corylus	23	47 s	
4865.00	0	6159.00	3A/1	6163	Alnus	21	46 s	measured
4860.00	0	6160.00	3A/1	6163	Corylus	0	43 s	
4866.00	0	6161.00	3A/1	6163	Alnus	23	37 s	measured
4839.01	0	6163.00	3A/2	6163	Alnus	7	17 w	
4839.02	0	6163.00	3A/2	6163	Alnus	4	17 w	
4839.03	0	6163.00	3A/1	6163	Alnus	7	17 w	
4839.04	0	6163.00	3A/1	6163	Alnus	7	24 w	flattened, 24x17
4839.05	0	6163.00	3A/1	6163	Alnus	6	16 w	wall wattles



pegs for drain 6184:

4875.00	0	6186.00	3A/1	6184	Alnus	36	62 s	Same as 4789?
4876.00	0	6187.00	3A/1	6184	Corylus	40	51 s	same tree? as 4877
4877.00	0	6188.00	3A/1	6184	Corylus	48	60 s	Quarter section
4878.00	0	6189.00	3A/1	6184	Corylus	35	62 s	same tree? as 4877
4879.00	0	6190.00	3A/1	6184	Alnus	35	52 s	narrow rings; measured.

Pegs for oak beam 6193?

4856.00	0	6172.00	3A/1	6193	Corylus	27	43 s	c1/4 cut but not through centre
4855.00	0	6173.00	3A/2	6193	Corylus	26	50 s	half section only
4857.00	0	6174.00	3A/1	6193	Alnus	11	41 s	firm stake
4899.00	0	6194.00	3A/1	6193	Alnus	0	64 s	firm stake
4899.00	0	6194.00	3A/1	6193	Alnus	0	64 s	firm stake
4900.00	0	6195.00	3A/1	6193	Alnus	52	50 s	old narrow rings
4898.00	0	6139.00	3A/1	0	Quercus	30	55 s	Asym. measured
4901.00	0	6150.00	3A/1	0	Quercus	0	0 s	measured peg of ?function

This feature was a one-eighth section oak beam, one of a line dividing a room in [6266]. It was held in position by a series of substantial pegs, measured here, of oak, alder and hazel. Their average diameter was 52.4mm - equivalent to that of stakes from some walls. The beam was possibly a sill-beam feature used as footing for a substantial stake/wattle wall.

STRUCTURES [6266/70]

party wall between two rooms or structures

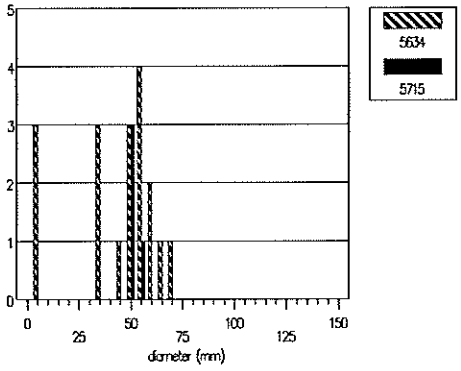
0.00	4916	6170.00	3A/1	6171		0	48	Round
4838.01	0	6171.00	3A/1	0	Alnus	2	15 w	
4838.02	0	6171.00	3A/1	0	Alnus	5	17 w	flattened 17x10 party wall
4838.03	0	6171.00	3A/1	0	Alnus	0	15 w	
4884.00	0	6164.00	3A/1	6171	Alnus	16	60 s	meas.E wall 6171 n end of 6171
4881.00	0	6166.00	3A/1	6171	Alnus	13	44 s	measured [6266] E wall 6171
4883.00	0	6169.00	3A/1	6171	Alnus	0	0 s	rotten [6266] E wall 6171

STRUCTURE [6267]

This structure abuts the west wall of oven [6118] during period 3A/1.

Sample	Wood number	Context	Period	Wall	Species	Age (yr)	Diam (mm)	Type	Notes
0.00	4541	5844.00	3A/1	0		0	64		Round
0.00	4952	6236.00	3A/1	0		0	29		Round
West wall 5634:									
3908.00	0	5292.00	3A	5634	Alnus	7	51	s	
4407.00	0	5730.00	3A	5634	Alnus	6	29	s	
4408.00	0	5731.00	3A	5634	Alnus	6	26	s	
4537.00	0	5837.00	3A/1	5634	Alnus	5	40	s	
0.00	4544	5839.00	3A/1	5634		0	46		
4545.00	0	5840.00	3A/1	5634	Alnus	7	42	s	
4538.00	0	5841.00	3A/1	5634	Alnus	0	0	s	Rotten
4540.00	0	5842.00	3A/1	5634	Alnus	8	43	s	
4539.00	0	5843.00	3A/1	5634	Alnus	0	0	s	
0.00	4546	5845.00	3A/1	5634		0	49		
4547.00	0	5846.00	3A/1	5634	Alnus	7	56	s	
4548.00	0	5847.00	3A/1	5634	Alnus	0	0	s	
4549.00	0	5848.00	3A/1	5634	Alnus	7	55	s	
4550.00	0	5849.00	3A/1	5634	Alnus	10	27	s	
4551.00	0	5850.00	3A/1	5634	Alnus	5	49	s	
4551.00	0	5850.00	3A/1	5634	Alnus	5	49	s	
4552.00	0	5851.00	3A/1	5634	Alnus	0	62	s	
4553.00	0	5852.00	3A/1	5634	Alnus	6	45	s	
North wall:									
4554.00	0	5853.00	3A/1	5715	Alnus	7	54	s	
4555.00	0	5854.00	3A/1	5715	Corylus	22	50	s	
4556.00	0	5855.00	3A/1	5715	Alnus	7	47	s	
4557.00	0	5856.00	3A/1	5715	Alnus	5	47	s	
East wall:									
4955.00	0	6210.00	3A/1	6117	Alnus	0	0	s	Poor condition
4941.00	0	6211.00	3A/1	6117	Alnus	0	0	s	Poor condition
4953.00	0	6212.00	3A/1	6117	Alnus	5	35	s	Poor condition
4954.00	0	6213.00	3A/1	6117	Alnus	0	0	s	Poor condition
4956.00	0	6214.00	3A/1	6117	Alnus	0	0	s	Poor condition
4958.00	0	6215.00	3A/1	6117	Alnus	0	0	s	Poor condition
4946.00	0	6219.00	3A/1	6117	Alnus	5	45	s	Poor condition
4837.00	0	6117.00	3A/1	6117	Alnus	0	0	w	E wall, 6116/6267

[6267]



As predictable, the timber is largely alder. There is no significant difference in size between stakes from the north and west walls (44.6mm West, 49.5mm N); those from the east wall were not well enough preserved to measure.

STRUCTURES [6268]/[4857] -

levelling? group of timbers: 3A/1

counter effects of pit subsidence?

3822.00	0	5170.06	3A	0	Alnus	0	0	m	chunk
3825.00	0	5170.09	3A	0	Alnus	0	0	m	chunk
3844.00	0	5170.15	3A	0	Alnus	0	0	m	Plank-like
3853.00	0	5170.19	3A	0	Alnus	0	0	m	Plank-like
3880.00	0	5170.29	3A	0	Fraxinus	0	0	m	chunk
0.00	4057	5433.00	3A/1	5371		0	60		Round

STRUCTURE [6270]:

Only part of the north wall of this structure was within excavation. 3A/1

4932.00	0	6239.00	3A/1	0	Corylus	37	74	s	narrow rings
4885.00	0	6167.00	3A/1	6171	Alnus	32	120	s	[6277] E wall 6171

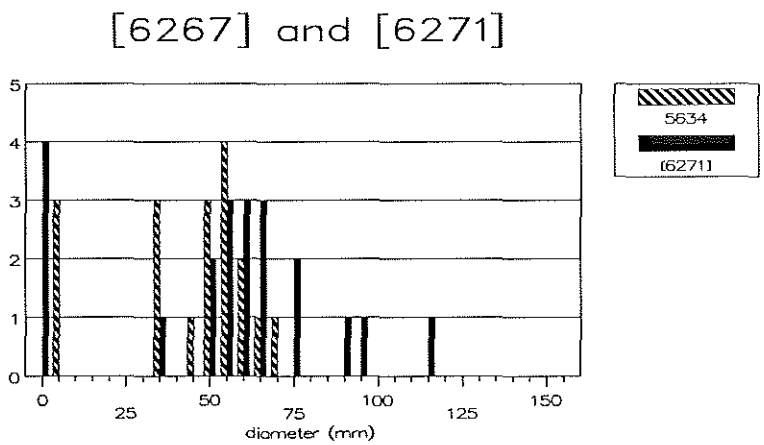
STRUCTURE [6271]

[6271] replaces [6267] in period 3A/2.

Timber floor

3949.00	0	5319.01	3A/2	0	cf. Alnus	0	0	s	poor cond. v.mottled
4120.00	0	5319.17	3A/2	0	cf. Alnus	0	0	p	thin plank
4203.00	0	5572.00	3A/2	0	Corylus	42	62	s	measured

4235.00	0	5589.00	3A/2	0	Corylus	0	72 s	broken quarter section
4236.00	0	5590.00	3A/2	0	Alnus	0	0 s	squared-off stake
4327.00	0	5680.01	3A/2	0	Fraxinus	0	0	
4330.00	0	5680.06	3A/2	0	Alnus	0	0	see sketch in file
4346.00	0	5680.08	3A/2	0	Quercus	30	64 s	dense rings, asym
4524.00	0	5829.00	3A/2	0	Betula	7	59 s	
4558.00	0	5857.00	3A/2	0	Alnus	0	56 s	split section
6058.00	0	5857.00	3A/2	0	Alnus	0	56 s	split section
4567.00	0	5862.00	3A/2	0	Alnus	10	54 s	4203
5574.00	0	5862.00	3A/2	0	Alnus	10	54 s	
4901.00	0	6071.00	3A/2	0	Betula	10	53 s	split section
4701.00	0	6098.06	3A/2	0	Fraxinus	0	0 s	>180mm,45+yrs
4233.00	0	6098.06	3A/2	0	Fraxinus	0	0 s	>180mm,45+yrs
4703.00	0	6098.08	3A/2	0	Betula	0	114 s	1/2 section,mottled
4705.00	0	6098.10	3A/2	0	Alnus	0	0	rotten
4707.00	0	6098.12	3A/2	0	Corylus	0	0 s	50+,>140, pt sect
4707.00	0	6098.12	3A/2	0	Betula	0	114 s	1/2 section,broken
4712.00	0	6098.17	3A/2	0	Fraxinus	0	0 s	quarter cut stake.
0.00	4962	6264.00	3A/2	0	Oak	0	50	Round
4313.00	0	5661.00	3A/2	6235	Alnus	0	94 s	cannot age
4312.00	0	5662.00	3A/2	6235	Corylus	6	32 s	
4314.00	0	5663.00	3A/2	6235	Quercus	30	64 s	dense rings, asym
4314.00	0	5663.00	3A/2	6235	Fraxinus	0	0	dense rings, sketch
4205.00	0	5574.00	3A/2	6298	Alnus	0	75 s	poorly preserved
4234.00	0	5602.00	3A/2	6298	Alnus	25	46 s	
4306.00	0	5651.00	3B?	6298	Alnus	20	90 s	
4307.00	0	5652.00	3A/2	6298	Betula	0	0	cut incomp sect



Most of this material consists of pieces of large stake (mean diameter 47.7mm) or miscellaneous fragments of wood. Both ash and elm have been identified - all of which came from well-grown trees. Preservation was mostly good although the annual rings of the ring-porous ash were so close as to be indistinguishable. This indicates that the trees had grown very slowly and evenly. Since ash is a light demanding species and, at least in its early years, will normally produce wide rings, the timber identified here is likely to have come from relatively dense woodland with the growth of ash restricted by poor light levels.

West wall;

4222.00	0	5582.00	3A/2	6299	Ulmus	0	0	m	chunk large tree
4308.00	0	5583.00	3A/2	6299	Alnus	0	0	s	quarter section
4309.00	0	5584.00	3A/2	6299	Alnus	0	0	s	broken 1/4 section
4310.00	0	5586.00	3A/2	6299	Alnus	21	43	s	? addition to wall

STRUCTURES 6272 AND 6272?

Only the corner of this period 3A/1 building was in the excavation and therefore little material was recovered from it.

Sample	Wood number	Context	Period	Wall	Species	Age (yr)	Diam (mm)	Type	Notes
0.00	4355	4028.00	3A	0	Oak	0	85		
4579.00	0	5621.00	3A	0	Corylus	37	58	s	phase 3
4289.00	0	5624.00	3A	0	Corylus	45	85	s	rep to S wall, phs 3?
4287.00	0	5626.00	3A	0	Corylus	50	70	s	rep to S wall, cf 5624
4156.00	0	5532.00	3A/23	3705	Alnus	0	61	s	pt drain und N-S road
4293.00	0	5620.00	3A	3864	indet	0	21	p	tip of stake, charred
4580.00	0	5694.00	pre-3	3864	Corylus	58	45	s	poss in [6272], phs 1
4406.00	0	5728.00	3A?	5479	Quercus	32	150	s	pt of pd 3drain 5479?
4582.00	0	5743.00	pre-3	0	Alnus	5	27	s	poss in [6272], phs 1

STRUCTURE [6302]:

Present during Period 3B/2b

part of East wall

4966.00	0	6216.00	3B/2b	0	Fraxinus	0	0	s	timber off-cut
4768.00	0	5904.00	3B/2b	5904	Betula	0	0	s	radial cut, pt sect of east wall
4742.00	0	5907.00	3B/2b	5904	Alnus	0	0	m	misc. chunk part of east wall
4754.00	0	5911.00	3B/2b	5904	Alnus	0	115	s	lots of rings but centre rot
4602.00	0	5896.00	3B/2b	5938	Alnus	7	62	s	beautifully preserved plank
4612.00	0	5867.00	3A/2?	4858	Betula	0	0	s	poor condit W drain 4858 [6304]?
0.00	3483	4803.00	3B/	0		0	102		Round [6308]
2403.00	0	3727.00	3B/2?	0	Alnus	0	42	s	demolition, could be pd 4

STRUCTURE 6303

This is a fenced area around ovens during period 3B/1, it overlay the position of oven [6118] which had been present during 3A/1.

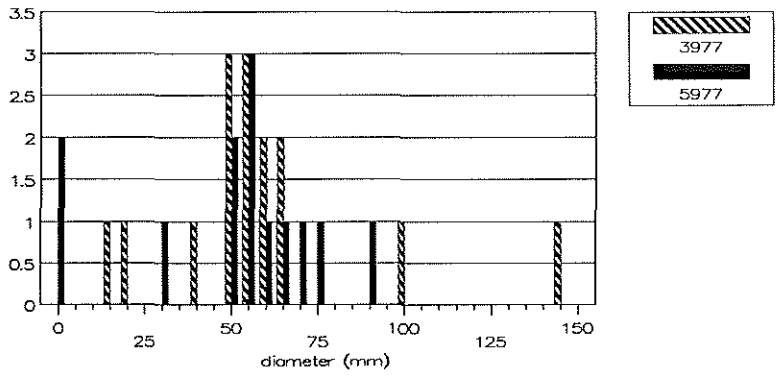
Sample	Wood number	Context	Period	Wall	Species	Age yrs	Diam mm	Type	Notes
Part of East wall of enclosure 3977									
2618.00	0	3903.01	3B/1	3977	Alnus	6	19	w	2 narrow rings 4-5
2619.02	0	3903.02	3B/1	3977	Alnus	3	13	w	
2749.00	0	3961.00	3B/1	3977	Alnus	14	48	s	wall;

2748.00	0	3962.00	3B/1	3977	Betula	15	56	s	wall;
2747.00	0	3963.00	3B/1	3977	Alnus	18	57	s	
2746.00	0	3964.00	3B/1	3977	Quercus	17	55	s	wall; spring cut. measured
2745.00	0	3965.00	3B/1	3977	Alnus	11	65	s	wall;
2744.00	0	3966.00	3B/1	3977	Alnus	10	47	s	wall;
2742.00	0	3968.00	3B/1	3977	Alnus	14	65	s	wall;
2734.00	0	3969.00	3B/1	3977	Alnus	0	49	s	wall;
2734.00	0	3969.00	3B/1	3977	Alnus	16	52	s	wall;
2913.00	0	3970.00	3B/1	3977	Alnus	13	37	s	wall;
4653.00	0	3971.00	3B/1	3977	Alnus	17	96	s	quarter section/broken
4654.00	0	3972.00	3B/1	3977	Alnus	16	52	s	wall;
0.00	4788	3973.00	3B/1	3977		0	142		Round

West side of enclosure

0.00	4617	5899.00	3B/1	5977		0	62		Round
4649.00	0	5900.00	3B/1	5977	Alnus	16	75	s	one side sliced
4639.00	0	5902.00	3B/1	5977	Alnus	0	54	s	
4620.00	0	5920.00	3B/1	5977	Alnus	0	0	s	
4616.00	0	5968.00	3B/1	5977	Quercus	20	68	s	partially squared off. Meas
4619.00	0	5969.00	3B/1	5977	Quercus	15	50	s	Branch
4624.00	0	5970.00	3B/1	5977	Alnus	12	48	s	
4621.00	0	5971.00	3B/1	5977	Alnus	11	55	s	Asym.
4618.00	0	5973.00	3B/1	5977	Alnus	15	56	s	quarter section only
4752.00	0	5975.00	3B/1	5977	Quercus	12	90	s	Felled early summer, large
4637.00	0	5976.00	3B/1	5977	Quercus	0	0	m	Misc chunk of wood.
4661.00	0	5981.00	3B/1	5977	Alnus	7	55	s	Forked branch, diam. at bas
0.00	4635	6010.00	3B/1	5977		0	30		Fragmentary
4617.00	0	5890.00	3A/2	5977	Alnus	0	0	s	Rotten 5977

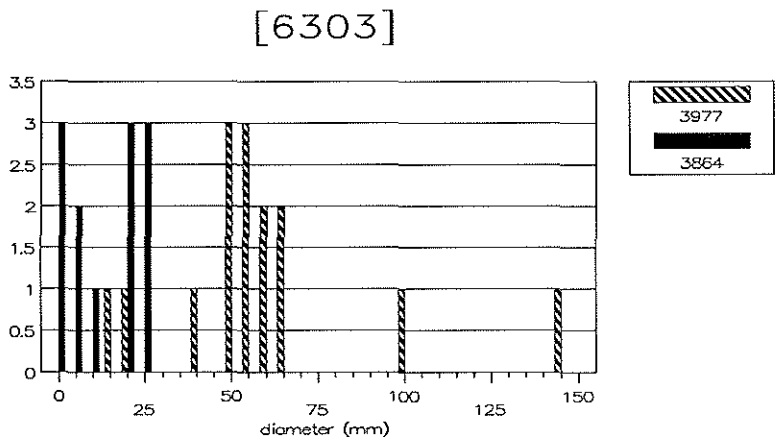
[6303]



The east wall consisted of predominantly alder stakes with a mean diameter of 56.6mm. The wall to the west side (5977) had a greater variety of species identified and a larger mean diameter for the stakes (61.3mm). Abutting this west side was the top part of the ascensus in the form of a turning area.

3B/1 demolition 3864:
material is considered to be collapsed wattle from 3977;

2620.00	3903.03	3B/1	3864	Quercus	0	0 m	quarter broken section,
2621.00	3903.04	3B/1	3864	Alnus	0	0 w	split and dried
2622.00	3903.05	3B/1	3864	Betula	7	20 w	split and dried
2622.00	3903.05	3B/1	3864	Betula	6	17 m	
2623.00	3903.06	3B/1	3864	indet.	0	3 m	split and very dry
2624.00	3903.07	3B/1	3864	Corylus	15	24 w	
2624.00	3903.07	3B/1	3864	Corylus	14	22 w	measured
2626.00	3903.09	3B/1	3864	Alnus	12	22 w	measured
2627.00	3903.10	3B/1	3864	indet.	0	5 m	split and very dry
2627.00	3903.10	3B/1	3864	cf.Alnu	0	8 w	split and dried
2628.00	3903.11	3B/1	3864	Alnus	0	0 m	split and very dry
2628.00	3903.11	3B/1	3864	Alnus	5	17 w	



The wattle was of mixed species, of a size similar to wattle from other features. Only two pieces had been measured which had definitely come from 3977 and therefore valid comparisons between 3977 and this ?demolition material cannot be made.

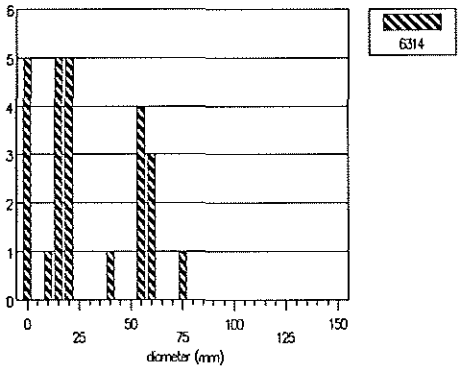
STRUCTURE [6306]

East Tower, period 3A/1.

Sample	Wood	Context	Period	Wall	Species	Age (yr)	Diam (mm)	Type	Notes
0.00	3219	4503.00	3A/1	0		0	59		Round. [6306]?
0.00	4054	4506.00	3A/1	0		0	38		pt of shaft, hurdle. [6306]?
4011.02	0	5422.00	3A	0	Betula	0	15	w	
4011.03	0	5422.00	3A	0	Alnus	6	15	w	
4011.05	0	5422.00	3A	0	Alnus	5	13	w	
4011.11	0	5422.00	3A	0	Alnus	5	16	w	
4011.04	0	5422.00	3A	0	Alnus	8	16	w	
4011.01	0	5422.00	3A	0	Alnus	3	6	w	
4011.06	0	5422.00	3A	0	Alnus	0	18	w	
4011.08	0	5422.00	3A	0	Alnus	5	16	w	

	4011.09	0	5422.00	3A	0	Corylus	16	19 w	very narrow rings
	4011.10	0	5422.00	3A	0	Alnus	8	15 w	very narrow rings
	4011.07	0	5422.00	3A	0	Betula	5	15 w	
East Tower, east wall:									
	4058.00	0	4306.00	3A	5422	Alnus	0	0 s	
	4109.00	0	5443.00	3A	5422	?Alnus	0	0 s	
	4100.00	0	5444.00	3A	5422	?Alnus	0	0 s	Square timber
	4101.00	0	5445.00	3A	5422	Alnus	0	0 s	
	4088.00	0	5446.00	3A	5422	?Alnus	0	0 s	Horrible condition
East Tower, west wall:									
	3936.00	0	4203.00	3	5305	Alnus	12	75 s	
	3935.00	0	4321.00	3A/1	5305	Corylus	8	57 s	Angled branch
	3254.00	0	4479.00	3B	5305	Quercus	59	55 s	>59 vv thin rings,?not primary
	3921.00	0	4481.00	3	5305	Corylus	20	52 s	Angled branch

[6306]



Most of the wood identified from this structure was alder with a mean size of 55.8mm for the total stakes and 14.9mm for the wattles.

The stakes identified from the west wall were from branch wood.

STRUCTURE 6314

This was a structure of uncertain status lying to the north of [4183] during period 3B/1.

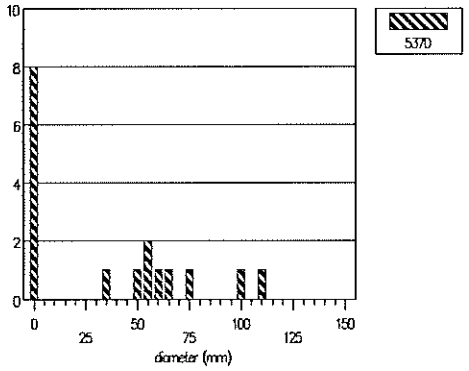
	Sample number	Wood	Context	Period	Wall	Species	Age (yr)	Diam (mm)	Type	Notes
East wall:										
	3937.01	0	5304.00	3B/1?	0	Alnus	0	13	w	dried and unageable
	3937.03	0	5304.00	3B/1?	0	Alnus	0	17	w	dried and unageable
	3937.02	0	5304.00	3B/1?	0	Alnus	0	13	w	dried and unageable
	3937.04	0	5304.00	3B/1?	0	Alnus	0	25	w	dried and unageable
	3937.05	0	5304.00	3B/1?	0	Alnus	0	23	w	dried and unageable
	3937.06	0	5304.00	3B/1?	0	Alnus	0	25	w	dried and unageable

3937.07	0	5304.00	3B/1?	0	Alnus	0	23	w	dried and unageable
3937.09	0	5304.00	3B/1?	0	Alnus	0	19	w	dried and unageable
3937.10	0	5304.00	3B/1?	0	Alnus	0	16	w	dried and unageable
3937.08	0	5304.00	3B/1?	0	Alnus	6	22	w	

Fence/wall dividing intervallum area from street

0.00	4037	4982.00	3B/1	5370	Oak	0	50		Round
4036.00	0	5242.00	3B/1	5370	Alnus	0	0	s	split branch
4034.00	0	5244.00	3B/1	5370	Betula	20	46	s	
4035.00	0	5245.00	3B/1	5370	Alnus	31	50	s	
4223.00	0	5318.00	3B/1?	5370	Alnus	0	75	s	centre rotted, unageable
4223.00	0	5318.00	3B/1	5370	Alnus	0	0	m	misc bit of branch
3975.00	0	5348.00	3B/1	5370	Alnus	6	54	s	
3992.00	0	5367.00	3B/1	5370	cf.Alnus	0	0	s	dehydrated stake
4015.00	0	5407.00	3B/1	5370	Alnus	0	0	s	split section, incomplete
4017.00	0	5408.00	3B/1	5370	Alnus	13	51	s	
4039.00	0	5410.00	3B/1	5370	Alnus	0	96	s	mottled, uncountable
4027.00	0	5412.00	3B/1	5370	Alnus	11	59	s	
4029.00	0	5414.00	3B/1	5370	Alnus	0	0	s	rounded-off squre, no bark
4030.00	0	5415.00	3B/1	5370	Alnus	11	48	s	full ring
4031.00	0	5416.00	3B/1	5370	Betula	0	65	s	
4032.00	0	5417.00	3B/1	5370	Alnus	24	110	s	
4055.00	0	5431.00	3B/1	5370	Alnus	0	32	s	split and dried

[6314]



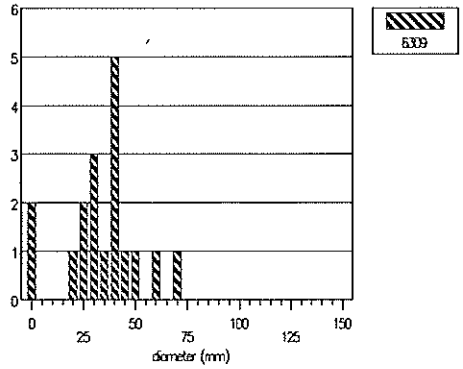
The stakes, although mostly alder, ranged widely in size from 32-110mm (mean 56.8mm). This wide range is atypical of the site as a whole and suggests a feature that was rather haphazardly built from, perhaps, waste or re-used timber. It does not show the uniformity of construction seen in most walls examined.

Collection of stakes north of [4183]:

3313.00	0	4731.00	3B/1	6309	Alnus	0	70	s
3316.00	0	4733.00	3B/1	6309	Alnus	0	36	s
0.00	3492	4897.00	3B/1	6309	Oak	0	28	
3301.00	0	4899.00	3B/1	6309	Alnus	10	36	s
3494.00	0	4900.00	3B/1	6309	Betula	3	18	s
3525.00	0	4919.00	3B/1	6309	Alnus	10	39	s

0.00	3515	4921.00	3B/1	6309	Oak	0	30	
3521.00	0	4924.00	3B/1	6309	cf. Corylus	0	0	m
0.00	3527	4928.00	3B/1	6309	Oak	0	25	
3550.00	0	4973.00	3B/1	6309	Alnus	0	29	s
3552.00	0	4974.00	3B/1	6309	Alnus	0	46	s
3553.00	0	4975.00	3B/1	6309	Alnus	0	43	s
0.00	3586	4984.00	3B/1	6309	Oak	0	36	
3571.00	0	4991.00	3B/1	6309	Alnus	0	36	s
3574.00	0	4993.00	3B/1	6309	Alnus	0	35	s
0.00	3643	5077.00	3B/1	6309	Oak	0	25	
3748.00	0	5119.00	3B/1	6309	Alnus	0	0	m

[6314]



This material consists of a collection of rather small stakes (mean diameter 31.5mm) of alder, oak plus one each of birch and hazel. They may have been deliberately discarded, being too small for stakes or too large for wattles, or may, of course, have been selected for a job which was never carried out.

INTERVALLUM STREET WEST area:

Sample	Wood number	Context	Period	Wall	Species	Age (yr)	Diam (mm)	Type	Notes
Silt layer with lots of stray wood, could be demolition									
2493.00	0	3800.00	3C/2?	0	Quercus	6	25	s	fills dip in IV St, demol
2498.00	0	3800.00	3C/2?	0	Betula	3	12	s	
2491.00	0	3800.00	3C/2?	0	Alnus	7	16	w	narrow blk of rings, meas
2495.00	0	3800.00	3C/2?	0	indet	0	5	w	
2499.00	0	3800.00	3C/2?	0	Alnus	4	13	s	
2497.00	0	3800.00	3C/2?	0	Alnus	5	15	s	
2496.00	0	3800.00	3C/2?	0	Alnus	4	21	s	
2492.00	0	3800.00	3C/2?	0	Ilex	8	38	s	measured but rather small
2487.00	0	3800.00	3C/2?	0	Quercus	5	21	s	
2494.00	0	3800.00	3C/2?	0	Betula	6	17	w	narrow block of rings, measured

0.00	2560	3870.00	3B/	0		0	30		Round
0.00	2561	3871.00	3B/	0		0	30		Round
0.00	2702	3914.00	3/	0	Oak	0	149		Round

This layer fills a dip in the Intervallum Street W. and is probably a demolition/dereliction layer, from period 3C/2. Alder, birch, holly and oak were identified - a mixture of species similar to that from [4857] during period 3A/2. Whether the demolition timber is related to [4857] is, however, impossible to determine.

Surface? of Intervallum Street W

2927.00	0	3921.06	3A/2?	0	Alnus	0	0	m	misc chunk of wood
2958.00	0	3921.07	3A/2?	0	Alnus	0	0	m	misc chunk of wood
0.00	2878	4212.00	3B/	0		0	27		Round
0.00	2879	4213.00	3B/	0		0	16		Round
0.00	2880	4214.00	3B/	0		0	13		Round

Drain 4858: lay along length of Intervallum Street W.

0.00	3532	4945.00	3A/2	6304			0	40	Round
0.00	3544	4963.00	3A/2	6304	Oak		0	90	Round
0.00	3546	4964.00	3A/2	6304	Oak		0	60	Round
3547.00	0	4965.00	3A/2?	6304	Ulmus		0	95 s	west end of drain
3547.00	0	4965.00	3A/2	6304	Alnus		0	96 s	

West end of drain 4858 (assoc. with [6304]?)

4612.00	0	5867.00	3A/2?	4858	Betula	0	0	s	poor condition
0.00	3483	4803.00	3B/	0		0	102		Round [6308]

Demolition associated with Intervallum Street W.
lies around drain 4416

3004.00	0	4291.03	3A/1	0	Fraxinus	0	0	m	misc chunk
3005.00	0	4291.04	3A/1	0	Alnus	0	0	m	misc chunk
3006.00	0	4291.05	3A/1	0	Alnus	0	0	m	misc chunk
3044.00	0	4291.08	3A/1	0	Alnus	0	0	m	misc chunk

group of E-W running logs in Intervallum Street W.

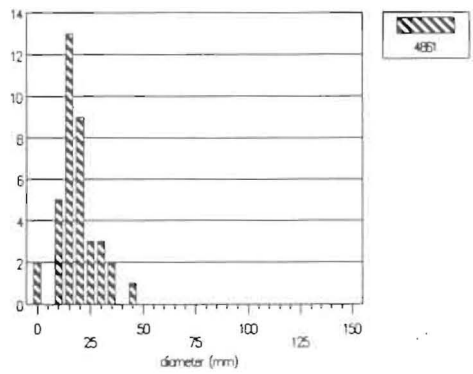
2900.00	0	4310.01	3A/2?	0	Alnus	0	0	s	sliced off bit
2904.00	0	4310.05	3A/2?	0	Alnus	0	220	s	quarter section
0.00	3376	4777.00	3A/1	0	Oak	0	108		Half-round

Wattle road foundation, west of [5754]

3419.04	0	4861.40	3a/2	0	Alnus	0	0	m	
3421.06	0	4861.60	3a/2	0	Alnus	0	45	m	sqrd on 2 sides, bark 2
3422.07	0	4861.70	3a/2	0	Corylus	30	0	m	>30 yrs, incomplete radius
3423.11	0	4861.80	3a/2	0	Alnus	4	20	w	branch
3423.10	0	4861.80	3a/2	0	Alnus	0	11	w	branch
3423.16	0	4861.80	3a/2	0	Quercus	3	17	w	
3423.23	0	4861.80	3a/2	0	Quercus	3	15	w	small branch
3423.03	0	4861.80	3a/2	0	Quercus	0	7	w	small twig
3423.02	0	4861.80	3a/2	0	Alnus	0	10	w	small branch
3423.05	0	4861.80	3a/2	0	Alnus	5	15	w	branch
3423.04	0	4861.80	3a/2	0	Alnus	3	14	w	small twig
3423.30	0	4861.80	3a/2	0	Alnus	0	28	w	small branch
3423.01	0	4861.80	3a/2	0	Alnus	3	11	w	small twig
3423.13	0	4861.80	3a/2	0	Quercus	3	15	w	
3423.17	0	4861.80	3a/2	0	Alnus	0	17	w	small branch

3423.24	0	4861.80	3a/2	0	Quercus	0	17	w	small branch
3423.28	0	4861.80	3a/2	0	Alnus	0	6	w	twig
3423.12	0	4861.80	3a/2	0	Alnus	0	30	w	branch
3423.21	0	4861.80	3a/2	0	Alnus	0	21	w	small branch
3423.06	0	4861.80	3a/2	0	Quercus	7	17	w	branch
3423.19	0	4861.80	3a/2	0	Alnus	3	17	w	small branch
3423.20	0	4861.80	3a/2	0	Alnus	5	32	w	branch shaped
3423.32	0	4861.80	3a/2	0	Alnus	0	30	w	small branch
3423.09	0	4861.80	3a/2	0	Quercus	0	7	w	twig
3423.29	0	4861.80	3a/2	0	Quercus	0	6		small branch
3423.34	0	4861.80	3a/2	0	Alnus	8	25	w	angled branch
3423.27	0	4861.80	3a/2	0	Alnus	4	17	w	small branch
3423.33	0	4861.80	3a/2	0	Alnus	3	16	w	branch
3423.25	0	4861.80	3a/2	0	Alnus	3	12	w	small branch
3423.35	0	4861.80	3a/2	0	Corylus	12	32	w	branch
3423.31	0	4861.80	3a/2	0	Quercus	13	23	w	small branch
3423.14	0	4861.80	3a/2	0	Quercus	3	12	w	
3423.07	0	4861.80	3a/2	0	Alnus	6	15	w	branch
3423.08	0	4861.80	3a/2	0	Alnus	0	0	w	twig
3423.15	0	4861.80	3a/2	0	Alnus	0	14	w	small branch
3423.26	0	4861.80	3a/2	0	Corylus	0	13	w	small branch
3423.26	0	4861.80	3a/2	0	Corylus	0	13	w	small branch
3423.18	0	4861.80	3a/2	0	Alnus	0	13	w	small branch
3423.22	0	4861.80	3a/2	0	Alnus	4	16	w	small branch

4861



Alder, oak and hazel were identified. The wattle foundation for this road consisted largely of tree branches rather than stems. This suggests that low grade wood was used as available rather than selecting stems. The latter would be more important in the manufacture of fences and hurdles when longitudinal strength was required. A road foundation would be better laid with large amounts of small pieces of wood which would compact well.

0.00	4285	5633.00	3B/1?	0	0	49	Round, misc stake
0.00	4583	5807.00	3A/	0	0	39	Round, misc stake
0.00	4533	5832.00	3A/	0	0	66	Round, misc stake
0.00	4565	5863.00	3 CON	0	0	80	Round, misc stake
0.00	4571	5869.00	3 CON	0	0	20	Round, misc stake

0.00	4973	6244.00	3/	0	Oak	0	44	Round, west of [3468]
0.00	4974	6245.00	3/	0	Oak	0	33	Round, west of [3468]

miscellaneous stakes under turf layer

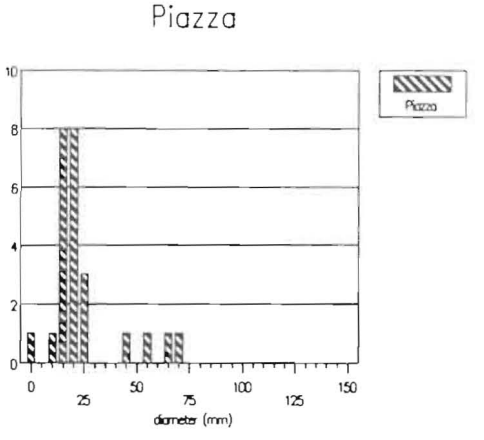
0.00	4975	6248.00	3 CON	0	Oak	0	50	Rectangle
0.00	4976	6249.00	3 CON	0	Not ID	0	58	Round
0.00	4981	6254.00	3 CON	0	Not ID	0	69	Round
0.00	4984	6257.00	3 CON	0	Not ID	0	63	Round
0.00	4986	6259.00	3 CON	0	Not ID	0	59	Round

Part of drain 4275:

3135.00	0	4269.00	3A/2	4275	Alnus	0	0	s	wedge-shaped
3228.00	0	4282.00	3A/2	4275	Quercus	18	61	s	narrow rings nr bark, meas.
3226.00	0	4566.00	3A/2	4275	Alnus	0	0	s	squared-off section;

PIAZZA

Sample	Context	Period	Species	Age yr	Diam mm	Type	Notes
3372.00	4811.00	3B/2a		0	65		Round
3300.00	4679.00	3B/2a	Alnus	0	41	s	post pit may be 3B/1b; post=4696
3706.00	4776.00	3A/1	Oak	0	67		Round
3302.00	4712.00	3B/1	Alnus	0	0	w	hollow in metalled surface
3478.00	4865.00	3B/1b	Oak	0	55		Round
3370.15	4798.00	3B/2	Betula	2	14	w	
3370.08	4798.00	3B/2	Betula	7	20	w	
3370.17	4798.00	3B/2	Betula	6	14	w	
3370.17	4798.00	3B/2	Betula	6	14	w	
3370.16	4798.00	3B/2	Corylus	2	11	w	splitting like alder!
3370.07	4798.00	3B/2	Betula	6	18	w	
3370.03	4798.00	3B/2a	Betula	11	23	w	
3370.10	4798.00	3B/2a	Betula	6	14	w	
3370.02	4798.00	3B/2a	Betula	2	9	w	
3370.05	4798.00	3B/2a	Betula	6	18	w	
3370.18	4798.00	3B/2a	Corylus	11	23	w	
3370.21	4798.00	3B/2a	Alnus	0	17	w	rotten in centre
3370.04	4798.00	3B/2a	Betula	9	21	w	
3370.13	4798.00	3B/2a	Corylus	12	20	w	5 very close rings
3370.06	4798.00	3B/2a	Betula	4	12	w	
3370.11	4798.00	3B/2a	Betula	6	18	w	
3370.01	4798.00	3B/2a	Corylus	6	12	w	5 very close rings
3370.19	4798.00	3B/2a	Betula	5	17	w	
3370.09	4798.00	3B/2a	Corylus	5	14	w	
3370.14	4798.00	3B/2a	Alnus	6	20	w	



Although the size ranges for the Piazza stakes and wattles are similar to others from Annetwell Street the species identified are, atypically, mostly birch and hazel with only a small amount of alder.

PERIOD 4

Sample	Wood number	Context	Period	Part of	Species	Age (yrs)	Diam (diam)	Type	Notes
0.00	1434	2643.00	0	0	Not ID	0	0		
0.00	1488	2767.00	0	0	Not ID	0	0		
0.00	1492	2776.00	0	0	Oak	0	0		
2312.00	0	3550.00	4B	0	Ilex	19	31	s	measured; has missing rings! dump
2265.00	0	3550.00	4B	0	Alnus	6	35	s	fine grey, sandy silt dump
1731.00	0	3117.16	4A?	0	Alnus	0	30	m	gp plnks flat on underlying 3791

TIMBER STRAPPING WEST OF GATE, centre of rampart:

2171.00	0	3448.00	4	0	Alnus	0	0	s	Pd 4, Base course
5026.01	0	4668.00	4	0	Quercus	0	0	s	Pd 4, board?
5026.00	0	4668.00	4	3882	Corylus	8	20	s	Pd 4 Assym. twig
5024.04	0	4668.00	4	4668	?Quercus	0	0	s	Pd 4, charcoal
5005.02	0	4668.00	4	4668	Quercus	0	0	s	Period 4, rampart.

FOUNDATION OF ROAD 2565

A thin spread of brushwood aligned E-W.

1443.01	0	2654.00	4A	2565	Alnus	0	21	s	shaped peg
1443.00	0	2654.00	4A	2565	Alnus	0	24	s	not in good condition
1443.02	0	2654.00	4A	2565	Alnus	6	32	s	not in good condition
1444.01	0	2654.00	4A	2565	cf.Prunus avium	0	29	w	split in half
1443.04	0	2654.00	4A	2565	cf.Prunus avium	6	29	w	
1445.00	0	2654.00	4A	2565	cf.Corylus	0	20	w	poor condition

FENCE 1941 (1791,1855-6,1943) with wattles under

1074.05	0	1941.00	4A	1791	Alnus	6	17	w	
1074.06	0	1941.00	4A	1791	Alnus	3	16	w	branches but not asymm
1074.02	0	1941.00	4A	1791	Alnus	4	20	w	fence (1791,1855-6,1943)
1074.01	0	1941.00	4A	1791	Alnus	4	15	w	fence (1791,1855-6,1943)
1074.03	0	1941.00	4A	1791	Alnus	6	15	w	fence (1791,1855-6,1943)
1074.04	0	1941.00	4A	1791	Alnus	7	17	w	fence (1791,1855-6,1943)

STRUCTURE [3882]

south wall, S. line of stakes:

4256.00	0	4064.00	4	3882	Alnus	0	0	s
4526.00	0	4063.00	4	3882	Alnus	0	0	s
4468.00	0	4066.00	4	3882	Alnus	0	0	s
4255.00	0	4061.00	4	3882	Corylus	24	0	s
4455.00	0	4032.00	4	3882	Alnus	0	0	s

4349.00	0	4017.00	4	3882	Alnus	0	0	s	
4257.00	0	4069.00	4	3882	Alnus	25	0	s	
4254.00	0	4065.00	4	3882	Alnus	0	0	s	
4471.00	0	5342.00	4	0	Alnus	0	0	s	Sqr cut part of south wall
3850.00	0	4038.00	4	0	Alnus	0	0	s	round stem or branch
2586.00	0	3781.00	4	3869	Corylus	8	20	s	Assym.stake, pt pit fill A3869
4047.00	0	4060.00	4?	3882	Alnus	11	72	s	faceted base
3813.00	0	4056.00	4?	3882	Alnus	0	42	s	
3831.00	0	4054.00	4?	3882	Alnus	0	42	s	
3871.00	0	4053.00	4?	3882	Alnus	11	61	s	
3851.00	0	5182.00	4	3882	Alnus	0	0	s	?intrusive to A[3858] prob.A[3882]
3900.00	0	4059.00	4?	3882	Quercus	0	0	s	
3835.00	0	4058.00	4?	3882	Alnus	10	32	s	assym flattened on two faces
3817.00	0	4049.00	4?	3882	Alnus	0	20	s	Pointed end pin
3827.00	0	4045.00	4?	3882	Quercus	0	0	s	faceted base round stem/branch
3832.00	0	4042.00	4?	3882	Alnus	0	42	s	round stem/branch
3845.00	0	4037.00	4?	3882	Alnus	5	21	s	round stem, stake
0.00	3850	4038.00	0	0		0	0		
0.00	3832	4042.00	0	0		0	0		
0.00	3833	4046.00	0	0		0	0		
0.00	3845	4037.00	0	0		0	0		
0.00	3871	4053.00	0	0		0	0		
0.00	3831	4054.00	0	0		0	0		
0.00	3827	4045.00	0	0		0	0		
0.00	3817	4049.00	0	0		0	0		

?DRAIN 4638

4546.00	0	3845.00	4	4638	Alnus	7	45	s	E of N/S road

PERIOD 5

Sample	Wood number	Context	Period	Wall	Species	Age yr	Diam mm	Type	Notes
0.00	1131	2194.00	5A/3?	0		0	39	Half-round	
0.00	1196	2410.00	5B/2?	0		0	46	Round	
0.00	1675	3048.00	5A/2?	0	Not ID	0	50	Round	
0.00	1672	3050.00	5A/2?	0	Not ID	0	30	Round	
0.00	1676	3051.00	5A/1a	0	Not ID	0	42	Round	
0.00	1677	3052.00	5A	0	Oak	0	44	Round	
0.00	1678	3053.00	5A	0	Stake hole	0	53	Round	
0.00	2421	3061.00	5A/1?	0	No ID	0	43	Round	
0.00	1688	3078.00	5A/2b	0	No ID	0	20	Half-round	
0.00	1692	3113.00	5A/1	0	No ID	0	27	Half-round	
0.00	2426	3581.00	5A/1?	0	Oak	0	54	Round	
0.00	2282	3587.00	5A/1?	0	No ID	0	32	Round	
0.00	2462	3590.00	5A/1?	0	Oak	0	65	Round	
0.00	2629	3592.00	5A/1?	0	Oak	0	81	Round	
0.00	4921	3593.00	5A/1?	0	Not ID	0	51	Round	
0.00	2380	3702.00	5A/	0	Oak	0	68	Round	
0.00	2874	4207.00	5/	0	Oak	0	102	Hexagon	
0.00	2978	4224.00	5/	0	Not ID	0	31	Round	
0.00	2980	4227.00	5/	0	Not ID	0	54	Round	

STRUCTURE 1636

This is a period 5B/3 fence. It separates the area of charcoal and slag dumps from, to the north, the E-W running road. It more or less overlies the line of fence 2845 (Period 5B/2).

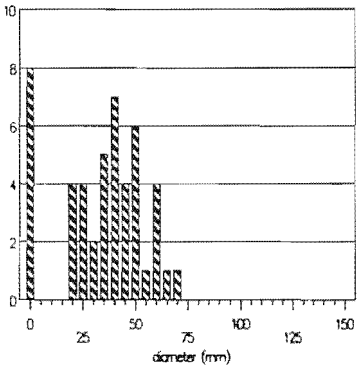
Sample	Wood number	Context	Period	Wall	Species	Age yr	Diam mm	Type	Notes
5039.00	5039	0.00	5B/3	0		0	31	Round	
1107.00	1107	1643.00	5B/3	0	Oak	0	42	Round	
0.00	0	1645.00	5B/3	0	Stake hole	0	40	Round	
1565.00	1565	1649.00	5B/3	0		0	43	Round	
1549.00	1549	1654.00	5B/3	0	Oak?	0	45	Round	
1517.00	1517	1661.00	5B/3	0		0	47	Round	
1507.00	1507	1663.00	5B/3	0		0	50	Round	
0.00	0	1834.00	5B/3	0	Stake hole	0	120	Distorted	
0.00	0	1835.00	5B/3	0	Stake hole	0	70	Round	
0.00	0	1836.00	5B/3	0	Stake hole	0	70	Round	
0.00	0	1837.00	5B/3	0	Stake hole	0	70	Round	
0.00	0	1838.00	5B/3	0	Stake hole	0	80	Round	
0.00	0	1839.00	5B/3	0	Stake hole	0	70	Round	
0.00	0	1840.00	5B/3	0	Stake hole	0	70	Round	
0.00	0	1841.00	5B/3	0	Stake hole	0	70	Round	
0.00	0	1842.00	5B/3	0	Burrow?	0	70	Round	
0.00	0	1846.00	5B/3	0	Stake hole	0	70	Round	
0.00	0	1847.00	5B/3	0	Stake hole	0	70	Round	
0.00	0	1848.00	5B/3	0	Stake hole	0	70	Round	
0.00	0	1849.00	5B/3	0	Stake hole	0	70	Round	
0.00	0	1850.00	5B/3	0	Stake hole	0	70	Round	

0.00	0	1851.00	5B/3	0	Stake hole	0	150		Round
0.00	0	2987.00	5B/3	0	Stake hole	0	40		
0.00	1853	3234.00	5B/3	0		0	25		Half-round

fence:

1057.02	0	1636.00	5	1636	Quercus	0	20	w	poor condition
1057.01	0	1636.00	5	1636	Quercus	5	30	w	
1057.09	0	1636.00	5	1636	Alnus	3	20	w	
1057.03	0	1636.00	5	1636	Quercus	4	22	w	half section, split wattle
1057.04	0	1636.00	5	1636	Quercus	6	30	w	
1057.10	0	1636.00	5	1636	Quercus	3	19	w	same as .08?, same "rot" pattern
1057.05	0	1636.00	5	1636	Corylus	13	23	w	
1057.08	0	1636.00	5	1636	Quercus	3	20	w	
1057.07	0	1636.00	5	1636	Corylus	13	31	w	
1057.06	0	1636.00	5	1636	Quercus	0	25	w	
1057.05	0	1636.00	5	1636	Corylus	13	23	w	
1002.00	0	1640.00	5	1636	Quercus	29	67	s	asym brnch. Vnarrow rings in centre
1003.00	0	1641.00	5	1636	Quercus	8	42	s	branch
1153.00	0	1643.00	5	1636	Quercus	5	40	s	
1143.00	0	1644.00	5	1636	Quercus	7	45	s	asym branch. Same tree as W1559?
1152.00	0	1646.00	5	1636	Betula	13	40	s	
1566.00	0	1647.00	5	1636	Quercus	3	34	s	no bark
1560.00	0	1650.00	5	1636	Quercus	8	36	s	
1556.00	0	1652.00	5	1636	Quercus	10	59	s	no bark
1553.00	0	1653.00	5	1636	Quercus	12	50	s	no bark, squared off on two sides
1548.00	0	1655.00	5	1636	Quercus	8	56	s	
1537.00	0	1657.00	5	1636	Alnus	0	0	m	horrible condition
1520.00	0	1659.00	5	1636	Quercus	5	35	s	no bark, tapered
1511.00	0	1662.00	5	1636	Quercus	5	46	s	wide rings
1507.00	0	1663.00	5	1636	Alnus	0	0	w	
1871.00	0	1667.00	5	1636	indet.	0	0	s	poor condition
1854.00	0	1670.00	5	1636	Alnus	0	34	w	
1624.00	0	1672.00	5	1636	Quercus	0	0	s	squared off, charcoal, sketch
1623.00	0	1673.00	5	1636	Quercus	7	0	s	incomplete radius
1141.00	0	1713.00	5	1636	Quercus	10	37	s	
1559.00	0	2815.00	5	1636	Quercus	8	33	s	branch
1862.00	0	2838.00	5	1636	Alnus	0	0	s	poor condition
1851.00	0	2839.00	5	1636	Quercus	0	0	s	
1506.00	0	2840.00	5	1636	Quercus	9	36	s	
1612.00	0	2988.00	5	1636	Quercus	0	0	s	
1061.00	0	6324.00	5	1636	Quercus	7	47	s	no bark
1062.00	0	6325.00	5	1636	Quercus	6	57	s	bark
1063.00	0	6326.00	5	1636	Quercus	6	40	s	no bark
1064.00	0	6327.00	5	1636	Quercus	6	52	s	no bark
1065.00	0	6328.00	5	1636	Quercus	8	45	s	bark
1066.00	0	6329.00	5	1636	Quercus	7	40	s	nobark
1067.00	0	6330.00	5	1636	Quercus	5	47	s	bark
1068.00	0	6331.00	5	1636	Quercus	6	62	s	partial bark
1069.00	0	6332.00	5	1636	Quercus	7	44	s	kneed branch, no bark
1070.00	0	6333.00	5	1636	Quercus	8	48	s	no bark
1071.00	0	6334.00	5	1636	Quercus	8	60	s	bark
1001.00	0	6335.00	5	1636	Quercus	7	46	s	bark

[1636]



This fence was constructed largely from oak with a little birch, hazel and alder. The stakes gave an average diameter of 46.4mm and the wattles 23.9mm, making the structure a substantial feature. The data for the stake-hole measurements, provided by the excavator, gave a mean diameter of 71.9mm, thus allowing either for considerable packing around the stakes or post-depositional collapse.

The mean age of the ageable oak stakes is 8 years (7.9yrs) - showing rapidly grown timber. This could indicate a managed area of woodland which had, perhaps, had the large oaks felled for constructional timber during the earlier periods, and which had rapidly regrown as coppice before being cut again for these stakes. Oak, like many hardwoods, does regrow from cut stumps.

The bark was absent from most of the strips. If this had been done prior to construction, rather than through subsequent decay, it is possible that it was used in the process of tanning leather.

STRUCTURE 1833

These are the walls of a structure or fences surrounding a bank of ovens during period 5B. The timber analysed was in rather poor condition and a mixture of alder and a little oak.

Sample	Wood number	Context	Period	Wall	Species	Age yr	Diam mm	Type	Notes
1662.00	1662	1626.00	5B/1	0		0	30		Round
0.00	1660	1888.00	5B/1	0		0	22		Round
1665.00	1665	1621.00	5B/1	0		0	25		Round
1663.00	0	1622.00	5B	1833	Alnus	0	0	m	1/4 part section, poor condition
1663.00	0	1622.00	5B	1833	Alnus	0	0	m	1/4 part section, poor condition
1830.00	0	1623.00	5B	1833	Quercus	7	64	s	wedge section
1666.00	0	1889.00	5B	1833	Alnus	0	0	m	1/4 part section, poor condition
1832.00	0	1891.00	5B	1833	indet	0	0	m	
1790.00	0	3169.00	5B	1833	Alnus	0	32	s	rotten at edge

STRUCTURE 1896

This lies to the north of the E-W running road and only its south-west corner lies within the excavation. Present during 5B/2-3.

Sample	Wood number	Context	Period	Wall	Species	Age yr	Diam mm	Type	Notes
0.00	1105	1710.00	5B/2	6360		0	54		Round
0.00	1102	1712.00	5B/2	6360		0	49		Round
0.00	0	1906.00	5B/2	6360	Stake hole	0	50		Round
0.00	0	1907.00	5B/2	6360	Stake hole	0	50		Round
0.00	0	1909.00	5B/2	6360	Stake hole	0	60		Round
0.00	1103	1910.00	5B/2	6360		0	38		Round
0.00	1104	1913.00	5B/2	6360		0	57		Round
0.00	1096	1914.00	5B/2	6361		0	50		Round
0.00	1097	1915.00	5B/2	6361		0	59		Round
0.00	1098	1917.00	5B/2	6361		0	53		Round
0.00	1101	1920.00	5B/2	6361		0	85		Round
0.00	1099	2164.00	5B/2	6361		0	53		Round
0.00	1100	2165.00	5B/2	6361		0	63		Round
0.00	1106	2186.00	5B/2	6361		0	46		Round

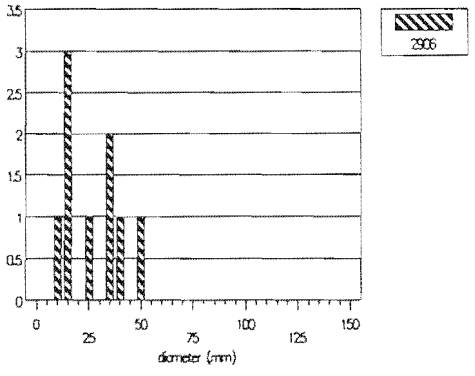
STRUCTURE 2006

This is a large structure in the angle between the N-S main road and E-W Intervallum Street. It lies in the north-west corner of the excavation and was present during the whole of period 5. It contained a complicated series of fences or walls around hearths and ovens.

Sample	Wood number	Context	Period	Wall	Species	Age yr	Diam mm	Type	Notes
0.00	1626	2337.00	5/	0	Not ID	0	55		Round
0.00	1568	2775.00	5/	0	Not ID	0	40		Half-round
0.00	1567	2915.00	5/	0	Not ID	0	50		Round
0.00	1625	3008.00	5/	0	Oak	0	65		Round
0.00	1627	3009.00	5/	0	Oak	0	120		Round
0.00	1667	3034.00	5/	0	Not ID	0	15		Round
0.00	1668	3035.00	5/	0	Not ID	0	15		Round
0.00	1681	3067.00	5/	0	Not ID	0	35		Round
0.00	1685	3072.00	5/	0	Not ID	0	24		Round
0.00	1847	3211.00	5/	0	Oak	0	55		Round
0.00	1849	2817.00	5A/	2635	Not ID	0	30		Round
0.00	1551	2827.00	5A/	2635	Oak	0	55		Half-round
0.00	1719	3103.00	5A/1	2656	Oak	0	72		Round
0.00	1697	2907.00	5A/1	2907		0	55		Half-round
0.00	1699	2907.00	5A/1	2907		0	70		Half-round
0.00	1657	2923.00	5A/1	3033		0	85		Half-round
1744.00	0	2431.00	5	0	Alnus	0	72	s	mottled post trench of S.wall
East wall									
1481.04	0	2656.03	5	0	Alnus	0	14	w	poor condition
1481.03	0	2656.03	5	0	Alnus	0	11	w	forked and in poor cond
1481.02	0	2656.03	5	0	Alnus	0	17	w	poor condition
1481.01	0	2656.03	5	0	Alnus	0	11	w	

1481.05	0	2656.03	5	0	Alnus	0	16 w	poor condition
South wall								
1686.03	0	2657.00	5	0	Alnus	0	10 w	flattened and dried
1686.07	0	2657.00	5	0	Alnus	0	7 w	flattened and dried
1686.04	0	2657.00	5	0	Alnus	0	11 w	flattened and dried
1686.02	0	2657.00	5	0	Alnus	0	10 w	flattened and dried
1686.01	0	2657.00	5	0	Alnus	0	8 w	flattened and dried
1220.00	0	2444.00	5	2657	Quercus	6	60 s	wedge shaped
Internal wall								
1642.00	0	2795.00	5	2906	Corylus	11	39 s	
1640.00	0	2796.00	5	2906	Alnus	0	48 s	dried
1639.00	0	2797.00	5	2906	Alnus	0	35 s	dried
1634.00	0	2799.00	5	2906	Alnus	0	34 s	poor condition
1632.04	0	2906.00	5	2906	Alnus	4	15 w	
1632.01	0	2906.00	5	2906	Alnus	5	22 w	
1632.02	0	2906.00	5	2906	Alnus	0	12 w	
1632.03	0	2906.00	5	2906	Alnus	3	15 w	
1632.05	0	2906.00	5	2906	Alnus	3	10 w	
1638.00	0	2918.00	5	2906	Alnus	0	45 s	dried
1635.00	0	2919.00	5	2906	Alnus	4	30 s	poor condition
1641.00	0	3013.00	5	2906	Alnus	0	50 s	
1636.00	0	3014.00	5	2906	Alnus	0	46 s	

[2006]



Most of the material identified from this structure was alder but there was a little oak. As with much of period 5 the wood is not well preserved, being dry and split in many cases. This is considered to reflect the less waterlogged nature of the deposits.

1708.00	0	2431.01	5	3033	Alnus	0	0 m	plank, section sketched post trench
1658.00	0	2924.00	5	3033	Quercus	18	82 s	square cut in post trench
1682.01	0	2907.00	3B	4421	Alnus	0	13 s	phase 1; peg for threshold 4421
1502.00	0	2234.00	5	6318	Alnus	8	35 s	west wall

STRUCTURE 2025

This was a poorly defined structure in the south-east quadrant of the excavation during period 5A/3 and consisted mainly of stake-holes with only a few stakes remaining.

Sample	Wood number	Context	Period	Wall	Species	Age	Diam	Type	Notes
						yr	mm		
1191.00	0	2196.01	5A/3	0	Quercus	0	72	s	black in centre, uncountable over drain fill
1166.00	0	2247.00	5A	0	Betula	0	10	w	demol silt with timbers. relates to 3207?
phase 2, room 2B, clay and ash layer with wattles:									
1167.05	0	2288.00	5	0	Corylus	4	15	w	
1167.04	0	2288.00	5	0	Corylus	3	12	w	
1167.01	0	2288.00	5	0	Alnus	3	15	w	
1167.02	0	2288.00	5	0	Corylus	4	15	w	
1167.03	0	2288.00	5	0	Corylus	4	15	w	
articulated hurdle lying flat on ground bridging gulley A2196:									
1233.10	0	2416.00	5	0	Salix	4	5	w	
1233.09	0	2416.00	5	0	Corylus	2	9	w	
1233.08	0	2416.00	5	0	?Betula	7	15	w	
1233.07	0	2416.00	5	0	Quercus	5	15	w	
1233.06	0	2416.00	5	0	Betula	8	16	w	
1233.05	0	2416.00	5	0	Corylus	6	14	w	
1233.04	0	2416.00	5	0	Alnus	2	10	w	
1233.03	0	2416.00	5	0	Betula	7	9	w	
1233.02	0	2416.00	5	0	Alnus	2	9	w	
1233.01	0	2416.00	5	0	Quercus	3	8	w	no bark

0.00	1211	2414.00	5A/3	0	Not ID	0	25	Round
0.00	1419	2603.00	5A/3	0	Oak?	0	45	Round
0.00	1456	2711.00	5A/3	0	Oak	0	40	Fragmentary
0.00	1478	2755.00	5A/3	0		0	25	Round
0.00	1480	2757.00	5A/3	0	Oak	0	37	Round
0.00	2387	2473.00	5A/3	6356	Stake hole	0	30	
0.00	2228	2298.00	5A/3	6359		0	38	Round
0.00	1433	2300.00	5A/3	6359		0	44	Round
0.00	0	2301.00	5A/3	6359	Missing	0	30	Round
0.00	0	1965.00	5A/2	0	Stake hole	0	50	Round
1716.00	0	2618.00	5A	0	Alnus	0	0 s	
1717.00	0	2619.00	5A	0	Alnus	0	0 s	
1452.00	0	2630.00	5A	0	Alnus	5	43 s	
1453.00	0	2658.00	5A	0	Quercus	0	0 s	burnt, partial 1/4 sect,many rings
1739.00	0	3120.00	5A	0	Quercus	14	47 s	
1740.00	0	3121.00	5A	0	Alnus	7	30 s	

STRUCTURE 2082

An oven present during 5A/2 underlying the general positions of the 5B/1 ovens A1595 and 1596.

Sample	Wood number	Context	Period	Wall	Species	Age	Diam	Type	Notes
						yr	mm		
0.00	0	1966.00	5A/2	0	Stake hole	0	50	Round	
0.00	0	1967.00	5A/2	0	Stake hole	0	40	Round	

0.00	1693	1968.00	5A/2	0		0	47	Half-round
0.00	0	1970.00	5A/2	0	Stake hole	0	50	Pentagon?
0.00	0	1972.00	5A/2	0	Stake hole	0	55	Round
0.00	0	1999.00	5A/2	0	Stake hole	0	60	Round
0.00	0	2000.00	5A/2	0	Stake hole	0	50	Round
0.00	0	2001.00	5A/2	0	Stake hole	0	50	Round
0.00	0	2002.00	5A/2	0	Stake hole	0	50	Round
0.00	0	2003.00	5A/2	0	Stake hole	0	50	Round
0.00	0	2007.00	5A/2	0	Stake hole	0	60	Round
0.00	0	2010.00	5A/2	0	Stake hole	0	50	Round
0.00	0	2801.00	5A/2	0	Stake hole	0	50	Round
0.00	0	2802.00	5A/2	0	Stake hole	0	60	Round
0.00	2281	2803.00	5A/2	0		0	31	Round
0.00	2279	3633.00	5A/2	0		0	23	Round
0.00	2280	3634.00	5A/2	0		0	25	Round

2353 - ROAD COBBLES IN ORANGE SAND:

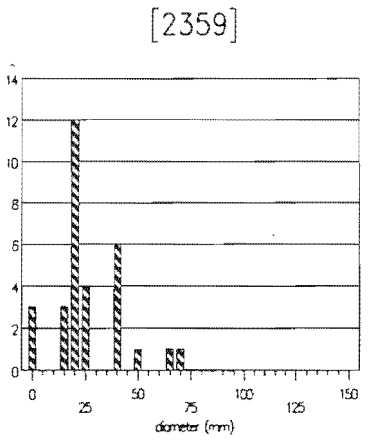
1967.00	0	2353.00	5A/3	0	Corylus	3	22 s
1967.00	0	2353.00	5A/3	0	Betula	3	18 s
1967.00	0	2353.00	5A/3	0	Corylus	3	34 s
1967.00	0	2353.00	5A/3	0	Corylus	3	22 s
1967.00	0	2353.00	5A/3	0	Corylus	5	22 s
1967.00	0	2353.00	5A/3	0	Betula	0	24 s
1967.00	0	2353.00	5A/3	0	Alnus	3	22 s
1967.00	0	2353.00	5A/3	0	Alnus	3	24 s
1967.00	0	2353.00	5A/3	0	Betula	3	22 s
1967.00	0	2353.00	5A/3	0	Corylus	5	30 s
1967.00	0	2353.00	5A/3	0	Betula	0	50 s

STRUCTURE 2359

A fence-line with oak timber stakes and horizontal wattle of mixed species. It must lie somewhere along the E-W running road since it cuts A2813 which itself is cut by 1636, the road-side fence discussed above. 5B/2

Sample	Wood number	Context	Period	Wall	Species	Age yr	Diam mm	Type	Notes
1188.20	0	2359.00	5B/2	2359	Corylus	4	19	w	base of coppice stool? sketched
1188.10	0	2359.00	5B/2	2359	Corylus	3	15	w	
1188.12	0	2359.00	5B/2	2359	Corylus	4	18	w	
1188.09	0	2359.00	5B/2	2359	Corylus	5	14	w	
1188.11	0	2359.00	5B/2	2359	Corylus	4	19	w	
1188.08	0	2359.00	5B/2	2359	Alnus	3	14	w	
1188.16	0	2359.00	5B/2	2359	Corylus	4	18	w	
1188.07	0	2359.00	5B/2	2359	Alnus	3	22	w	
1188.18	0	2359.00	5B/2	2359	Alnus	5	19	w	
1188.14	0	2359.00	5B/2	2359	Alnus	4	17	w	
1188.04	0	2359.00	5B/2	2359	Alnus	4	17	w	branch
1188.17	0	2359.00	5B/2	2359	Alnus	5	21	w	
1188.13	0	2359.00	5B/2	2359	Corylus	4	20	w	
1188.06	0	2359.00	5B/2	2359	Alnus	5	24	w	

1188.02	0	2359.00	5B/2	2359	Betula	6	20	w	
1188.01	0	2359.00	5B/2	2359	Alnus	6	20	w	
1188.03	0	2359.00	5B/2	2359	Alnus	4	16	w	
1188.05	0	2359.00	5B/2	2359	Alnus	5	25	w	
1188.15	0	2359.00	5B/2	2359	Betula	3	17	w	
1538.00	0	2888.00	5B/2	2359	Alnus	0	38	s	
1588.00	0	2931.00	5B/2	2359	Quercus	8	40	s	tapered, no bark
1589.00	0	2932.00	5B/2	2359	Ilex	17	37	s	no bark,narrow rings 3 in (meas)
1584.00	0	2957.00	5B/2	2359	Corylus	12	62	s	
1609.00	0	2959.00	5B/2	2359	Alnus	0	36	s	branch,
1892.00	0	2965.00	5B/2	2359	Alnus	0	0	m	
1631.00	0	2975.00	5B/2	2359	Alnus	8	70	s	
1895.00	0	2977.00	5B/2	2359	Alnus	0	37	s	
1907.00	0	2982.00	5B/2	2359	Quercus	16	46	s	trimmed, v nar ring band, 2 centres
1905.00	0	2984.00	5B/2	2359	Alnus	10	36	s	
1899.00	0	3244.00	5B/2	2359	Ilex	0	0	s	wedge shaped, incomp radius, measured
1900.00	0	3245.00	5B/2	2359	Ilex	0	0	s	wedge shaped, incomp radius, measured



The wattles are mainly alder and hazel but with some birch and oak. Their average size was 12.2mm diameter and they were from 3-6 year old stems. The stakes were from the same species with, in addition, three of holly. Both alder and hazel wattles could have been taken from managed woodland since they both have such a narrow age range.

STRUCTURE 2366

This lies partially in the excavation to the north-western edge. Its most notable feature was a latrine from which several environmental samples have been analysed (Huntley, 1989). 5A

Sample	Wood number	Context	Period	Wall	Species	Age yr	Diam mm	Type	Notes
2273.00	0	3620.00		2570	Alnus	0	0	m	wedge wall
0.00	5064	2354.00	5A/1	0	Not ID	0	48		Round
0.00	2321	2392.00	5A/2?	0	Oak	0	62		Round

Internal E-W wall running between rooms 1 and 2:

0.00	2294	3621.00	5A/1	3606		0	50	Round
0.00	2295	3622.00	5A/1	3606		0	58	Plano-convex x2
0.00	2296	3623.00	5A/1	3606		0	47	Half-round
0.00	2298	3624.00	5A/1	3606		0	53	Round
0.00	2299	3641.00	5A/1	3606		0	18	Wattle
2363.05	0	2391.00		0	Alnus	5	19 w	
2363.03	0	2391.00		0	Alnus	3	7 w	
2363.01	0	2391.00		0	Alnus	6	18 w	

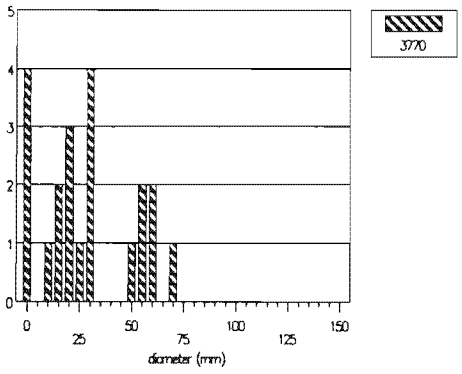
Internal wall running N-S between rooms 2 and 3:

2291.01	0	2570.00	2570	Alnus	4	12 w	
2291.03	0	2570.00	2570	Alnus	0	22 w	poor condition
2291.02	0	2570.00	2570	Alnus	0	0 w	poor condition

External fence, possibly associated with [2366] lying to the west of the building:

2472.08	0	3770.00	3770	Alnus	5	16 w	
2472.06	0	3770.00	3770	Alnus	4	13 w	
2472.07	0	3770.00	3770	Alnus	4	16 w	
2472.02	0	3770.00	3770	Alnus	3	13 w	
2472.01	0	3770.00	3770	Alnus	4	28 w	
2472.04	0	3770.00	3770	Alnus	3	7 w	
2472.09	0	3770.00	3770	Alnus	0	19 w	
2472.10	0	3770.00	3770	Alnus	8	21 w	
2473.00	0	3771.00	3770	Alnus	0	0 s	quarter cut, part section
2585.00	0	3772.00	3770	Alnus	8	60 s	wedge cross section
2582.00	0	3773.00	3770	Alnus	0	0 s	misc. chunk
2581.00	0	3774.00	3770	Alnus	0	0 s	pentangle section across quarter stem
2581.00	0	3774.00	3770	Alnus	8	60 s	wedge cross section
2580.00	0	3775.00	3770	Alnus	7	52 s	
2574.00	0	3776.00	3770	Alnus	0	68 s	irregular and mottled
2539.00	0	3777.00	3770	Alnus	0	0 s	rotten roundwood
2541.00	0	3778.00	3770	Alnus	6	52 s	trimmed roundwood, well grown
2583.00	0	3779.00	3770	Quercus	21	50 s	bark on, measured
2578.00	0	3780.00	3770	Alnus	4	28 s	
2540.00	0	3782.00	3770	Alnus	8	27 s	
2559.00	0	3783.00	3770	Alnus	0	26 s	

[2366]



Most of the wood identified from this structure is alder, whether it was used for stakes or wattles. The average size of the wattles was 16.6mm and of stakes 47.0mm. The alder was all between 3 and 8 years old suggesting that different areas of woodland were used for the two types of material. The stakes being from a source of rapidly grown timber and the wattles from more slowly grown wood.

STRUCTURE 2512

This is a rectangular building in the SW quadrant of the excavation and the southern part of which lay in the Charlesworth excavations. 5B/1

Sample	Wood number	Context	Period	Wall	Species	Age yr	Diam mm	Type	Notes
0.00	0	2533.00	5B/1	0	Stake hole	0	60		Round
0.00	0	2534.00	5B/1	0	Stake hole	0	60		Round
0.00	0	2543.00	5B/1	0	Stake hole	0	50		Round
0.00	0	2544.00	5B/1	0	Stake hole	0	50		Round
0.00	0	2545.00	5B/1	0	Stake hole	0	50		Round
0.00	0	2090.00	5B/1	6346	Stake hole	0	50		Round
0.00	0	2212.00	5B/1	6346	Stake hole	0	50		Round
0.00	1377	2511.00	5B/1	6346		0	55		Round
0.00	1005	1752.00	5B/1	6347	Oak	0	88		Round
0.00	1310	2498.00	5B/1	6347		0	27		Round
0.00	1051	1852.00	5B/1	6348		0	35		Point only
0.00	1402	2513.00	5B/1	6348		0	61		Half-round
0.00	1408	2524.00	5B/1	6348	Oak	0	130		Round
0.00	0	2528.00	5B/1	6349	Stake hole	0	60		Round
0.00	0	2529.00	5B/1	6349	Stake hole	0	70		Round
0.00	0	2530.00	5B/1	6349	Stake hole	0	60		Round
0.00	0	2531.00	5B/1	6349	Stake hole	0	70		Round
0.00	0	2532.00	5B/1	6349	Stake hole	0	80		Round
1081.00	0	1821.00	0	0	Alnus	0	0	m	misc. chunk, poor cond. line of posts
1082.00	0	1822.00	0	0	Alnus	0	0	m	triang sect, poor cond line of posts
1371.00	0	2506.00		0	Quercus	0	92	s	not good condition
1372.00	0	2507.00		0	Quercus	0	68	s	not good condition
1374.00	0	2508.00		0	Alnus	0	0	s	squared off, poor cond wall
1375.00	0	2509.00		0	Alnus	0	0	m	chunk, wedge shaped
1390.00	0	2520.00		0	Quercus	12	90	s	chunk, wedge shaped
1391.00	0	2521.00		0	Quercus	0	0	s	wedge shaped chunk
1394.00	0	2525.00		0	Quercus	0	85	s	1/2 section chunk, wedge shaped
1395.00	0	2527.00		0	Alnus	0	0	s	very poor condition walls of building
1406.00	0	2557.00		0	Alnus	0	0	s	walls of building
1410.00	0	2562.00		0	Quercus	0	94	s	quarter section chunk, wedge shaped
1373.00	0	3497.00		0	Alnus	0	0	m	not good condition
1376.00	0	2510.00		6346	Quercus	24	74	s	
1377.00	0	2511.00		6346	Alnus	0	46	s	
1392.00	0	2522.00		6348	Quercus	11	63	s	not good condition
1393.00	0	2523.00		6348	?Alnus	0	0	s	v poor cond wall
1402.00	0	1513.00	6B	0	Quercus	0	0	m	2513?; silt/soil layer.
1053.00	0	1852.00		0	Quercus	0	0	s	not good condition
1397.00	0	2213.00		0	Quercus	0	0	m	split stake, poor condition
1388.00	0	2362.00		0	Alnus	0	45	s	

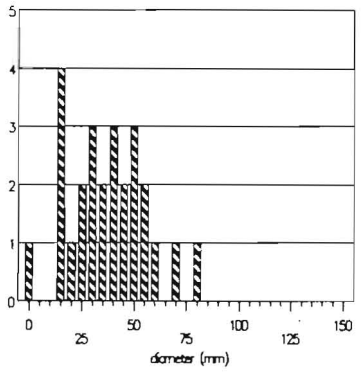
The stakes identified had a mean diameter of 73mm and were mainly of oak with a few of alder.

STRUCTURE 2645

A period 5A/1 oven lying to the south of the E-W road. It has a variety of soil deposits to the east where its opening is positioned. These are flanked by wooden fences, A6341 to the north and A6340 to the south.

Sample	Wood number	Context	Period	Wall	Species	Age yr	Diam mm	Type	Notes
0.00	2303	3654.00	5A/1	0		0	34		Round
0.00	2471	3786.00	5A/1	0		0	41		Round
part of circle forming oven support:									
0.00	1827	3195.00	5A/1		Oak	0	35		
2467.00	0	3154.00	5		Quercus	10	40	s	asym, rough edges incomplete?
1810.00	0	3176.00	5		Quercus	18	36	s	
1812.00	0	3178.00	5		Alnus	12	80	s	
1813.00	0	3179.00	5		Quercus	26	48	s	Measured
1814.00	0	3180.00	5		Quercus	17	58	s	asym. Measured
1815.00	0	3181.00	5		Fraxinus	8	30	s	
1821.00	0	3187.00	5		Quercus	9	66	s	
1822.00	0	3188.00	5		Crataegus-	0	55	s	
2476.00	0	3189.00	5		Alnus	8	49	s	
1823.00	0	3190.00	5		Crataegus-	0	50	s	
2474.00	0	3191.00	5		Quercus	19	40	s	
1824.00	0	3192.00	5		Quercus	7	45	s	
1825.00	0	3193.00	5		indet.	0	0	m	
1828.00	0	3196.00	5		Alnus	9	55	s	

[2645]



There is quite a range in diameters of stakes from this fence as well as a mixture of species including *Crataegus*-type. This suggests that the feature was built from available wood with little systematic selection.

Oven [2645] wattles:

1803.06	0	2645.00	5A/1	0	cf.Alnus	0	14	w	dried and horrible
1803.12	0	2645.00	5A/1	0	Quercus	3	11	w	
1803.05	0	2645.00	5A/1	0	Alnus	4	18	w	
1803.04	0	2645.00	5A/1	0	Betula	8	15	w	
1803.03	0	2645.00	5A/1	0	Quercus	7	30	w	
1803.02	0	2645.00	5A/1	0	Quercus	6	28	w	
1803.01	0	2645.00	5A/1	0	Quercus	7	25	w	
1803.11	0	2645.00	5A/1	0	Alnus	5	25	w	burnt through, ie charcoal
1803.08	0	2645.00	5A/1	0	Quercus	5	15	w	

fence 6340:

0.00	0	3153.00	5A/1	0	Stake hole	0	40		Round

fence 6341:

Sample	Wood number	Context	Period	Wall	Species	Age yr	Diam mm	Type	Notes
0.00	0	3155.00	5A/1	0	Stake hole	0	30		
0.00	0	3156.00	5A/1	0	Stake hole	0	40		
0.00	0	3157.00	5A/1	0	Stake hole	0	30		
0.00	0	3158.00	5A/1	0	Stake hole	0	80		
0.00	0	3159.00	5A/1	0	Stake hole	0	40		
0.00	0	3160.00	5A/1	0	Stake hole	0	30		
0.00	0	3161.00	5A/1	0	Stake hole	0	50		
0.00	0	3163.00	5A/1	0	Stake hole	0	30		
0.00	0	3164.00	5A/1	0	Stake hole	0	30		

FENCE 2845

This lies to the south of the E-W road next to an area of dumping. It underlies the 5B/3 fence A1636.

Sample	Wood number	Context	Period	Wall	Species	Age yr	Diam mm	Type	Notes
fence									
1539.00	0	1658.00	5	2845	Alnus	8	48	s	
1610.00	0	1674.00	5	2845	Quercus	6	27	s	
1508.00	0	2841.00	5	2845	Alnus	0	35	s	
1554.00	0	2880.00	5	2845	Betula	16	47	s	
1611.00	0	2986.00	5	2845	Quercus	0	24	m	
1613.00	0	2989.00	5	2845	Quercus	4	30	m	

STRUCTURE 3112

A drain immediately to the west of [2006], 5A/1

Sample	Wood number	Context	Period	Wall	Species	Age yr	Diam mm	Type	Notes
Drain cutting two phase 4B dump layers									
1770.00	0	3112.04	5	3112	Quercus	8	22	w	no bark
1771.00	0	3112.05	5	3112	Quercus	8	20	w	no bark
1772.00	0	3112.06	5	3112	Quercus	3	22	w	no bark
1773.00	0	3112.07	5	3112	Alnus	4	18	w	

1774.00	0	3112.08	5	3112	Alnus	6	20	w	
1775.00	0	3112.09	5	3112	Alnus	4	28	w	
1776.00	0	3112.10	5	3112	Quercus	14	30	w	no bark
1777.00	0	3112.11	5	3112	Quercus	7	29	w	asym and no bark
1778.00	0	3112.12	5	3112	Quercus	6	22	w	no bark
1779.00	0	3112.13	5	3112	Quercus	7	28	w	asym
1780.00	0	3112.14	5	3112	Quercus	5	17	w	no bark
1781.00	0	3112.15	5	3112	Quercus	3	20	w	shaped peg
1782.00	0	3112.16	5	3112	Quercus	6	18	w	no bark
1783.00	0	3112.17	5	3112	Salix	7	30	w	
1784.00	0	3112.18	5	3112	Alnus	0	0	w	part sqd off sect, no comp radius

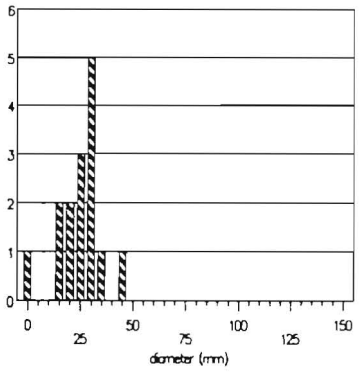
Most of the material identified was oak with a little alder. The average size of the wattles was 23.1mm and bark was absent from much of the oak.

FOUNDATION OF ROAD 3202

This consists of a brushwood deposit with untrimmed twigs lying in a N-S orientation, 5A/2.

1848.02	0	3208.00	5A/2	3202	Corylus	8	42	w	asym, forked branch
1848.10	0	3208.00	5A/2	3202	Quercus	2	12	w	twig
1848.01	0	3208.00	5A/2	3202	Alnus	6	11	w	
1848.04	0	3208.00	5A/2	3202	Alnus	0	21	w	forked branch
1848.11	0	3208.00	5A/2	3202	Alnus	8	21	w	branch, asym
1848.07	0	3208.00	5A/2	3202	Quercus	8	31	w	forked branch
1848.12	0	3208.00	5A/2	3202	Alnus	5	16	w	dark outer ring, same as 1848.11?
1848.09	0	3208.00	5A/2	3202	Alnus	9	29	w	wedge shaped
1848.14	0	3208.00	5A/2	3202	Alnus	5	29	w	dark outer ring, =1848.11?, wedge
1848.15	0	3208.00	5A/2	3202	Quercus	10	30	w	flattened branch
1848.08	0	3208.00	5A/2	3202	Quercus	13	27	w	forked branch
1848.03	0	3208.00	5A/2	3202	Quercus	0	0	m	sliver, trimmed flat
1848.06	0	3208.00	5A/2	3202	Quercus	8	26	w	forked branch
1848.05	0	3208.00	5A/2	3202	Quercus	0	16	w	forked branch
1848.13	0	3208.00	5A/2	3202	Alnus	5	23	w	dk out ring,=1848.11?, forked branch

[3202]



STRUCTURE 3207

This feature, along with 3769 (see later), forms a complicated series of gulleys and fences immediately to the east of [2005] and running along the edge of the N-S small road.

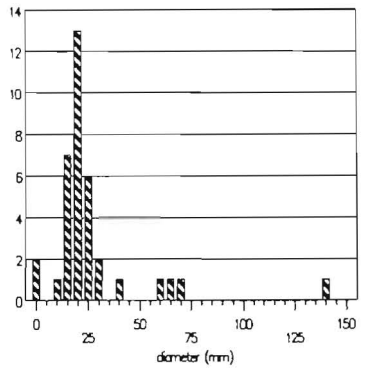
3769 is the earlier feature and is a broad, "U"-shaped gulley with a flat bottom and vertical sides. Fence 3203 ran along its eastern edge, *ie.* on the road-side and away from [2005].

3207 was initially recorded as being in 3203 but now seems more likely to have been within A2222-3, fences lining the west and east sides of the gulley.

The stakes for these two fences are a mixture of oak and hazel; the wattles were also mostly oak and hazel but with some alder and willow. Their average size was 17.9mm. The hazel had a narrow range of age and may have been coppiced material.

Sample	Wood number	Context	Period	Wall	Species	Age yr	Diam mm	Type	Notes
0.00	1870	3232.00	5A/2	0	Oak	0	140		Round
0.00	1926	2269.00	5A/2	2223	Oak	0	20		Sub-round
0.00	1183	2305.00	5A/2	2223	Missing	0	15		Round
1161.01	0	2222.00	5	0	Quercus	0	13	w	
1161.02	0	2222.00	5	0	Betula	4	11	w	horrible condition
1414.00	0	2303.00	5	0	Corylus	0	25	s	
1988.00	0	2256.00	5A/2	2222	Quercus	19	70	s	1/4 sect band close rings cfW1996
1990.00	0	2259.00	5	2222	Quercus	0	0	s	wedge shaped east side of drain
2246.00	0	2261.00	5A/2	2222	Quercus	0	56	m	wdge close rings cfW1996 drain side
1996.00	0	2265.00	5/2	2222	Quercus	15	38	s	prt squared off east side of drain
1972.00	0	3253.00	5A/2	2222	Quercus	0	0	s	rot band close rings cfW1996
1412.00	0	2271.00	5/2	2223	Corylus	5	17	s	west side of drain
1413.00	0	2273.00	5/2	2223	Corylus	9	24	s	west side of drain
1414.00	0	2303.00	5	2223	Corylus	0	25	s	west side of drain
1162.08	0	2223.00	5A/2	3207	Quercus	8	27	w	with bark drain side
1162.07	0	2223.00	5A/2	3207	Salix	7	14	w	drain side
1162.14	0	2223.00	5A/2	3207	Corylus	8	21	w	drain side
1162.06	0	2223.00	5A/2	3207	Corylus	8	20	w	drain side
1162.12	0	2223.00	5A/2	3207	Salix	6	19	w	drain side
1162.05	0	2223.00	5A/2	3207	Corylus	6	20	w	drain side
1162.16	0	2223.00	5A/2	3207	Corylus	10	19	w	drain side
1162.15	0	2223.00	5A/2	3207	Quercus	4	17	w	drain side
1162.13	0	2223.00	5A/2	3207	Corylus	5	19	w	drain side
1162.11	0	2223.00	5A/2	3207	Quercus	13	17	w	no bark drain side
1162.17	0	2223.00	5A/2	3207	Alnus	5	14	w	drain side
1162.04	0	2223.00	5A/2	3207	Corylus	6	22	w	drain side
1162.03	0	2223.00	5A/2	3207	Alnus	4	23	w	drain side
1162.02	0	2223.00	5A/2	3207	Corylus	6	15	w	drain side
1162.18	0	2223.00	5A/2	3207	Salix	8	17	w	drain side
1162.19	0	2223.00	5A/2	3207	Corylus	4	10	w	drain side
1162.10	0	2223.00	5A/2	3207	Corylus	5	20	w	drain side
1162.09	0	2223.00	5A/2	3207	Corylus	4	17	w	drain side
1162.01	0	2223.00	5A/2	3207	Alnus	0	14	w	drain side
1162.20	0	2223.00	5A/2	3207	Corylus	6	20	w	drain side
2247.00	0	3568.00	5A/2	6337	Alnus	0	61	s	prob pt 2222 stake, bark removed
2248.00	0	3569.00	5A/2	6337	Quercus	0	26	p	prob pt 2222 rd peg lge piece wood

[3207]



STRUCTURE 3564

This is a long, timber-lined drain running the length of the E-W road on its southern edge throughout Period 5A/1.

Sample	Wood number	Context	Period	Wall	Species	Age yrs	Diam mm	Type	Notes
Drain side									
1969.00	0	2453.00	5A/1	0	Corylus	4	20	s	
1969.00	0	2453.00	5A/1	0	Corylus	5	24	s	
1969.00	0	2453.00	5A/1	0	Corylus	5	28	s	
1969.00	0	2453.00	5A/1	0	Corylus	7	26	s	
2036.00	0	2453.00	5A/1	0	Alnus	5	26	s	
2036.00	0	2453.00	5A/1	0	Alnus	7	28	s	
2036.00	0	2453.00	5A/1	0	Corylus	4	32	s	
2036.00	0	2453.00	5A/1	0	Corylus	4	36	s	
2036.00	0	2453.00	5A/1	0	Corylus	5	36	s	
2036.00	0	2453.00	5A/1	0	Corylus	5	36	s	
2036.00	0	2453.00	5A/1	0	Alnus	3	12	s	
2036.00	0	2453.00	5A/1	0	Corylus	3	26	s	
2036.00	0	2453.00	5A/1	0	Corylus	4	32	s	
2036.00	0	2453.00	5A/1	0	Corylus	5	30	s	
2036.00	0	2453.00	5A/1	0	Betula	4	26	s	
2036.00	0	2453.00	5A/1	0	Corylus	2	12	s	
2021.00	0	2453.00	5A/1	0	Alnus	4	40	s	
2036.00	0	2453.00	5A/1	0	Corylus	3	30	s	
2036.00	0	2453.00	5A/1	0	Corylus	6	24	s	
2036.00	0	2453.00	5A/1	0	Corylus	7	50	s	
2036.00	0	2453.00	5A/1	0	Corylus	7	42	s	
2021.00	0	2453.00	5A/1	0	Corylus	4	32	s	
2036.00	0	2453.00	5A/1	0	Corylus	3	20	s	
2036.00	0	2453.00	5A/1	0	Corylus	4	30	s	
2021.00	0	2453.00	5A/1	0	Quercus	2	0	s	
2036.00	0	2453.00	5A/1	0	Corylus	3	30	s	
2036.00	0	2453.00	5A/1	0	Betula	3	16	s	

2036.00	0	2453.00	5A/1	0	Corylus	3	30 s
2036.00	0	2453.00	5A/1	0	Corylus	9	46 s
2021.00	0	2453.00	5A/1	0	Quercus	2	18 s
2036.00	0	2453.00	5A/1	0	Corylus	4	30 s
1969.00	0	2453.00	5A/1	0	Corylus	5	30 s
1933.00	0	2453.00	5A/1	0	Corylus	8	38 s
2036.00	0	2453.00	5A/1	0	Corylus	6	34 s
2021.00	0	2453.00	5A/1	0	Quercus	2	20 s
1933.00	0	2453.00	5A/1	0	Corylus	7	30 s
1933.00	0	2453.00	5A/1	0	Corylus	4	22 s
2036.00	0	2453.00	5A/1	0	Betula	6	30 s
2036.00	0	2453.00	5A/1	0	Corylus	7	44 s
2036.00	0	2453.00	5A/1	0	Corylus	6	32 s
1933.00	0	2453.00	5A/1	0	Corylus	4	18 s
1933.00	0	2453.00	5A/1	0	Betula	4	40 s
1969.00	0	2453.00	5A/1	0	Betula	3	26 s
1933.00	0	2453.00	5A/1	0	Corylus	5	24 s
1933.00	0	2453.00	5A/1	0	Alnus	7	34 s
1933.00	0	2453.00	5A/1	0	Corylus	8	28 s
1933.00	0	2453.00	5A/1	0	Corylus	7	38 s
1933.00	0	2453.00	5A/1	0	Corylus	3	20 s
1933.00	0	2453.00	5A/1	0	Alnus	5	20 s
1968.00	0	2453.00	5A/1	0	Quercus	3	34 s
2036.00	0	2453.00	5A/1	0	Betula	4	26 s
1968.00	0	2453.00	5A/1	0	Corylus	4	30 s
1968.00	0	2453.00	5A/1	0	Corylus	4	32 s
1968.00	0	2453.00	5A/1	0	Corylus	3	28 s
1968.00	0	2453.00	5A/1	0	Betula	4	50 s
1968.00	0	2453.00	5A/1	0	Corylus	5	70 s
1968.00	0	2453.00	5A/1	0	Quercus	3	22 s
2036.00	0	2453.00	5A/1	0	Corylus	2	16 s
1968.00	0	2453.00	5A/1	0	Corylus	5	28 s
1968.00	0	2453.00	5A/1	0	Betula	6	42 s
1968.00	0	2453.00	5A/1	0	Quercus	0	20 s
1968.00	0	2453.00	5A/1	0	Quercus	0	30 s
1968.00	0	2453.00	5A/1	0	Betula	6	42 s
1968.00	0	2453.00	5A/1	0	Betula	3	40 s
1968.00	0	2453.00	5A/1	0	Betula	5	32 s
1968.00	0	2453.00	5A/1	0	Alnus	5	40 s
1968.00	0	2453.00	5A/1	0	Betula	4	30 s
1933.00	0	2453.00	5A/1	0	Corylus	4	26 s
1968.00	0	2453.00	5A/1	0	Corylus	5	20 s
1968.00	0	2453.00	5A/1	0	Corylus	4	30 s
1933.00	0	2453.00	5A/1	0	Quercus	0	0 s
1969.00	0	2453.00	5A/1	0	Betula	4	42 s
1969.00	0	2453.00	5A/1	0	Quercus	3	40 s
1969.00	0	2453.00	5A/1	0	Betula	3	30 s
1933.00	0	2453.00	5A/1	0	Corylus	6	20 s
1969.00	0	2453.00	5A/1	0	Betula	5	38 s
1969.00	0	2453.00	5A/1	0	Quercus	3	32 s
1969.00	0	2453.00	5A/1	0	Quercus	6	44 s
1969.00	0	2453.00	5A/1	0	Corylus	8	40 s
1969.00	0	2453.00	5A/1	0	Betula	6	40 s
2021.00	0	2453.00	5A/1	2453	Quercus	3	30 w
2032.00	0	2453.00	5A/1	2453	Alnus	6	41 w
2021.00	0	2453.00	5A/1	2453	Quercus	4	32 w
1801.00	0	2453.00	5A/1	2453	Corylus	6	24 w
2021.00	0	2453.00	5A/1	2453	Corylus	7	48 w

1801.00	0	2453.00	5A/1	2453	Corylus	5	46 w
1801.00	0	2453.00	5A/1	2453	Quercus	3	26 w
1801.00	0	2453.00	5A/1	2453	Quercus	3	32 w
1801.00	0	2453.00	5A/1	2453	Corylus	4	20 w
1801.00	0	2453.00	5A/1	2453	Alnus	2	20 w
1801.00	0	2453.00	5A/1	2453	Quercus	2	30 w
1801.00	0	2453.00	5A/1	2453	Corylus	7	42 w
1801.00	0	2453.00	5A/1	2453	Quercus	3	22 w
1801.00	0	2453.00	5A/1	2453	Quercus	3	20 w
2021.00	0	2453.00	5A/1	2453	Corylus	7	50 w
1801.00	0	2453.00	5A/1	2453	Quercus	4	26 w
2021.00	0	2453.00	5A/1	2453	Corylus	4	20 w
1801.00	0	2453.00	5A/1	2453	Corylus	6	32 w
1801.00	0	2453.00	5A/1	2453	Corylus	5	24 w
2021.00	0	2453.00	5A/1	2453	Quercus	4	46 w
2021.00	0	2453.00	5A/1	2453	Corylus	4	40 w
1801.00	0	2453.00	5A/1	2453	Corylus	4	30 w
1801.00	0	2453.00	5A/1	2453	Corylus	4	30 w
1801.00	0	2453.00	5A/1	2453	Corylus	6	50 w
1801.00	0	2453.00	5A/1	2453	Alnus	2	10 w
1801.00	0	2453.00	5A/1	2453	Corylus	5	36 w
1801.00	0	2453.00	5A/1	2453	Quercus	0	80 w
1801.00	0	2453.00	5A/1	2453	Corylus	7	30 w
2032.00	0	2453.00	5A/1	2453	Alnus	7	40 w
2021.00	0	2453.00	5A/1	2453	Corylus	4	44 w
2021.00	0	2453.00	5A/1	2453	Corylus	4	24 w
2032.00	0	2453.00	5A/1	2453	Alnus	6	40 w
2032.00	0	2453.00	5A/1	2453	Alnus	6	38 w
2032.00	0	2453.00	5A/1	2453	Alnus	8	50 w
2032.00	0	2453.00	5A/1	2453	Alnus	5	23 w
2032.00	0	2453.00	5A/1	2453	Alnus	5	30 w
2032.00	0	2453.00	5A/1	2453	Alnus	6	42 w
1801.00	0	2453.00	5A/1	2453	Quercus	3	22 w
2032.00	0	2453.00	5A/1	2453	Alnus	5	22 w
2032.00	0	2453.00	5A/1	2453	Alnus	7	30 w
1801.00	0	2453.00	5A/1	2453	Corylus	10	38 w
2032.00	0	2453.00	5A/1	2453	Quercus	5	22 w
2032.00	0	2453.00	5A/1	2453	Corylus	6	40 w
2032.00	0	2453.00	5A/1	2453	Quercus	2	2 w
2032.00	0	2453.00	5A/1	2453	Betula	0	28 w
1801.00	0	2453.00	5A/1	2453	Quercus	2	10 w
1801.00	0	2453.00	5A/1	2453	Quercus	4	20 w
2021.00	0	2453.00	5A/1	2453	Alnus	3	30 w
2021.00	0	2453.00	5A/1	2453	Corylus	3	40 w
1801.00	0	2453.00	5A/1	2453	Quercus	3	22 w
1801.00	0	2453.00	5A/1	2453	Corylus	4	22 w

south side drain

2033.00	0	2454.00	5A/1	0	Corylus	6	32 s
2033.00	0	2454.00	5A/1	0	Corylus	6	32 s
2033.00	0	2454.00	5A/1	0	Betula	6	34 s
2033.00	0	2454.00	5A/1	0	Betula	6	42 s
2033.00	0	2454.00	5A/1	0	Corylus	2	12 s
2033.00	0	2454.00	5A/1	0	Corylus	6	30 s
2033.00	0	2454.00	5A/1	0	Corylus	6	0 s
2033.00	0	2454.00	5A/1	0	Corylus	5	16 s
2033.00	0	2454.00	5A/1	0	Alnus	6	34 s
2033.00	0	2454.00	5A/1	0	Betula	7	34 s

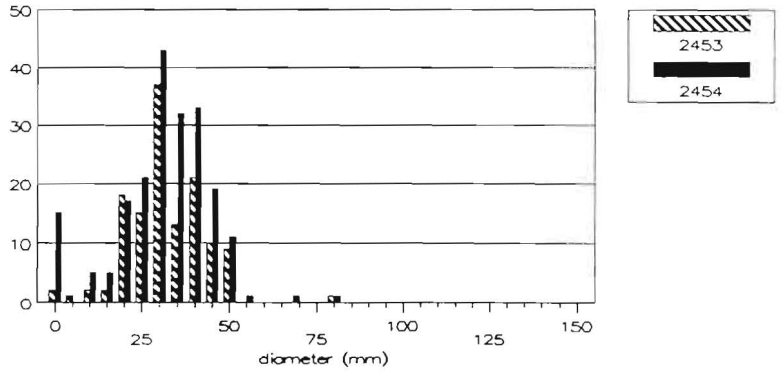
1927.00	0	2454.00	5A/1	0	Quercus	0	50 s
1927.00	0	2454.00	5A/1	0	Alnus	4	26 s
2024.00	0	2454.00	5A/1	0	Corylus	4	28 s
2024.00	0	2454.00	5A/1	0	Corylus	5	30 s
1927.00	0	2454.00	5A/1	0	Alnus	5	22 s
2024.00	0	2454.00	5A/1	0	Corylus	4	30 s
2024.00	0	2454.00	5A/1	0	Corylus	6	42 s
2024.00	0	2454.00	5A/1	0	Betula	2	22 s
2024.00	0	2454.00	5A/1	0	Corylus	6	44 s
2024.00	0	2454.00	5A/1	0	Corylus	4	48 s
2024.00	0	2454.00	5A/1	0	Corylus	6	48 s
2024.00	0	2454.00	5A/1	0	Corylus	7	48 s
2024.00	0	2454.00	5A/1	0	Betula	0	50 s
2024.00	0	2454.00	5A/1	0	Corylus	4	40 s
2024.00	0	2454.00	5A/1	0	Corylus	5	28 s
2024.00	0	2454.00	5A/1	0	Corylus	3	26 s
2024.00	0	2454.00	5A/1	0	Corylus	4	34 s
2024.00	0	2454.00	5A/1	0	Corylus	5	28 s
2022.00	0	2454.00	5A/1	0	Betula	6	41 s
2024.00	0	2454.00	5A/1	0	Corylus	6	51 s
2022.00	0	2454.00	5A/1	0	Alnus	6	31 s
2022.00	0	2454.00	5A/1	0	Alnus	5	44 s
2022.00	0	2454.00	5A/1	0	Betula	5	40 s
2022.00	0	2454.00	5A/1	0	?Betula	0	42 s
2022.00	0	2454.00	5A/1	0	Betula	6	40 s
2022.00	0	2454.00	5A/1	0	Betula	6	32 s
2033.00	0	2454.00	5A/1	0	Betula	8	50 s
1927.00	0	2454.00	5A/1	0	Corylus	6	40 s
2033.00	0	2454.00	5A/1	0	Corylus	6	30 s
2022.00	0	2454.00	5A/1	0	Alnus	4	21 s
1937.00	0	2454.00	5A/1	0	Quercus	2	20 s
1937.00	0	2454.00	5A/1	0	Corylus	2	22 s
1937.00	0	2454.00	5A/1	0	Alnus	2	30 s
1937.00	0	2454.00	5A/1	0	Corylus	2	28 s
1937.00	0	2454.00	5A/1	0	Corylus	2	28 s
1937.00	0	2454.00	5A/1	0	Quercus	2	40 s
1937.00	0	2454.00	5A/1	0	Betula	2	42 s
1937.00	0	2454.00	5A/1	0	Corylus	5	25 s
1937.00	0	2454.00	5A/1	0	Corylus	5	48 s
1932.00	0	2454.00	5A/1	0	Betula	4	24 s
1927.00	0	2454.00	5A/1	0	Alnus	6	30 s
1927.00	0	2454.00	5A/1	0	Alnus	6	32 s
1927.00	0	2454.00	5A/1	0	Alnus	5	28 s
1927.00	0	2454.00	5A/1	0	Quercus	0	26 s
1927.00	0	2454.00	5A/1	0	Alnus	8	38 s
1927.00	0	2454.00	5A/1	0	Quercus	2	40 s
1927.00	0	2454.00	5A/1	0	Corylus	6	34 s
1927.00	0	2454.00	5A/1	0	Corylus	6	32 s
1927.00	0	2454.00	5A/1	0	Alnus	7	38 s
1927.00	0	2454.00	5A/1	0	Alnus	0	36 s
1927.00	0	2454.00	5A/1	0	Alnus	0	38 s
1927.00	0	2454.00	5A/1	0	Corylus	9	38 s
1927.00	0	2454.00	5A/1	0	Corylus	6	34 s
1927.00	0	2454.00	5A/1	0	Quercus	0	0 s
1927.00	0	2454.00	5A/1	0	Corylus	5	30 s
1927.00	0	2454.00	5A/1	0	Alnus	4	30 s
1927.00	0	2454.00	5A/1	0	Alnus	11	26 s
1927.00	0	2454.00	5A/1	0	Quercus	2	36 s

1927.00	0	2454.00	5A/1	0	Quercus	8	0	s	
1927.00	0	2454.00	5A/1	0	Alnus	7	32	s	
1927.00	0	2454.00	5A/1	0	Betula	6	32	s	
1927.00	0	2454.00	5A/1	0	Alnus	7	40	s	
1927.00	0	2454.00	5A/1	0	Quercus	0	0	s	
1927.00	0	2454.00	5A/1	0	Alnus	6	42	s	
1927.00	0	2454.00	5A/1	0	Betula	4	44	s	
1927.00	0	2454.00	5A/1	0	Corylus	6	38	s	
1927.00	0	2454.00	5A/1	0	Corylus	6	40	s	
2033.00	0	2454.00	5A/1	0	Corylus	6	36	s	
2033.00	0	2454.00	5A/1	0	Betula	7	36	s	
2033.00	0	2454.00	5A/1	0	Corylus	6	32	s	
2033.00	0	2454.00	5A/1	0	Corylus	2	20	s	
2033.00	0	2454.00	5A/1	0	Quercus	0	0	s	
1937.00	0	2454.00	5A/1	0	Corylus	3	32	s	
1937.00	0	2454.00	5A/1	0	Corylus	4	22	s	
1937.00	0	2454.00	5A/1	0	Quercus	2	42	s	
1937.00	0	2454.00	5A/1	0	Corylus	4	38	s	
1937.00	0	2454.00	5A/1	0	Corylus	3	28	s	
1937.00	0	2454.00	5A/1	0	Quercus	2	34	s	
1937.00	0	2454.00	5A/1	0	Corylus	2	28	s	
1937.00	0	2454.00	5A/1	0	Betula	6	42	s	
1937.00	0	2454.00	5A/1	0	Quercus	2	32	s	
1937.00	0	2454.00	5A/1	0	?Alnus	2	40	s	
1937.00	0	2454.00	5A/1	0	Corylus	6	50	s	
1937.00	0	2454.00	5A/1	0	Quercus	2	32	s	
1937.00	0	2454.00	5A/1	0	Quercus	3	42	s	
1937.00	0	2454.00	5A/1	0	Corylus	3	30	s	
1937.00	0	2454.00	5A/1	0	Quercus	2	34	s	
1937.00	0	2454.00	5A/1	0	Alnus	2	44	s	
1937.00	0	2454.00	5A/1	0	Corylus	3	26	s	
1937.00	0	2454.00	5A/1	0	Betula	4	24	s	
1802.00	0	2454.00	5A/1	2454	Alnus	2	20	s	
1802.00	0	2454.00	5A/1	2454	Alnus	5	24	s	
1802.00	0	2454.00	5A/1	2454	Corylus	6	42	s	
1802.00	0	2454.00	5A/1	2454	Corylus	4	0	s	
1802.00	0	2454.00	5A/1	2454	Alnus	4	24	s	
1802.00	0	2454.00	5A/1	2454	Quercus	4	26	s	
1932.00	0	2454.00	5A/1	2454	Quercus	2	0	s	
1932.00	0	2454.00	5A/1	2454	Betula	0	0	s	
1932.00	0	2454.00	5A/1	2454	Quercus	2	0	s	
1932.00	0	2454.00	5A/1	2454	Quercus	0	0	s	
1932.00	0	2454.00	5A/1	2454	Betula?	0	20	s	
1932.00	0	2454.00	5A/1	2454	Corylus	3	20	s	
1932.00	0	2454.00	5A/1	2454	Betula	2	18	s	
1932.00	0	2454.00	5A/1	2454	Quercus	2	0	s	b
1932.00	0	2454.00	5A/1	2454	Quercus	2	8	s	b
1932.00	0	2454.00	5A/1	2454	Quercus	2	0	s	
1932.00	0	2454.00	5A/1	2454	Betula	5	38	s	
1932.00	0	2454.00	5A/1	2454	Betula	5	38	s	
1932.00	0	2454.00	5A/1	2454	Betula	5	40	s	
1802.00	0	2454.00	5A/1	2454	Corylus	7	44	s	
1802.00	0	2454.00	5A/1	2454	Quercus	2	32	s	
1802.00	0	2454.00	5A/1	2454	Quercus	3	32	s	
1802.00	0	2454.00	5A/1	2454	Quercus	4	24	s	
1802.00	0	2454.00	5A/1	2454	Alnus	2	8	s	
1802.00	0	2454.00	5A/1	2454	Corylus	4	40	s	
1802.00	0	2454.00	5A/1	2454	Corylus	3	40	s	

1802.00	0	2454.00	5A/1	2454	Alnus	2	20	s	
1802.00	0	2454.00	5A/1	2454	Quercus	3	32	s	
1802.00	0	2454.00	5A/1	2454	Quercus	3	32	s	
1802.00	0	2454.00	5A/1	2454	Betula	6	42	s	
1802.00	0	2454.00	5A/1	2454	Betula	2	10	s	
1802.00	0	2454.00	5A/1	2454	Corylus	4	36	s	
1802.00	0	2454.00	5A/1	2454	Corylus	0	26	s	
1802.00	0	2454.00	5A/1	2454	Quercus	3	30	s	
1802.00	0	2454.00	5A/1	2454	Betula	0	26	s	
1802.00	0	2454.00	5A/1	2454	Corylus	0	32	s	
1802.00	0	2454.00	5A/1	2454	Alnus	0	0	s	
1802.00	0	2454.00	5A/1	2454	Corylus?	7	30	s	
1802.00	0	2454.00	5A/1	2454	Quercus	4	28	s	
1802.00	0	2454.00	5A/1	2454	Corylus	4	34	s	
1802.00	0	2454.00	5A/1	2454	Betula	0	48	s	
1802.00	0	2454.00	5A/1	2454	Corylus	4	14	s	
1802.00	0	2454.00	5A/1	2454	Alnus	5	20	s	
1802.00	0	2454.00	5A/1	2454	Alnus	5	26	s	
1802.00	0	2454.00	5A/1	2454	Alnus	3	20	s	
1802.00	0	2454.00	5A/1	2454	Alnus	4	20	s	
1802.00	0	2454.00	5A/1	2454	Corylus	3	26	s	
1802.00	0	2454.00	5A/1	2454	Alnus	4	28	s	
1802.00	0	2454.00	5A/1	2454	Corylus	5	26	s	
1802.00	0	2454.00	5A/1	2454	Quercus	3	0	s	
1802.00	0	2454.00	5A/1	2454	Quercus	2	16	s	
1802.00	0	2454.00	5A/1	2454	Quercus	2	30	s	
1802.00	0	2454.00	5A/1	2454	Alnus	0	30	s	
1802.00	0	2454.00	5A/1	2454	Corylus	3	26	s	
1802.00	0	2454.00	5A/1	2454	Quercus	5	22	s	
1802.00	0	2454.00	5A/1	2454	Corylus	4	38	s	
1802.00	0	2454.00	5A/1	2454	Quercus	3	16	s	
1802.00	0	2454.00	5A/1	2454	Quercus	3	22	s	
1802.00	0	2454.00	5A/1	2454	Quercus	2	22	s	
1802.00	0	2454.00	5A/1	2454	Quercus	2	26	s	
1802.00	0	2454.00	5A/1	2454	Quercus	2	24	s	
1802.00	0	2454.00	5A/1	2454	Quercus	4	44	s	
1802.00	0	2454.00	5A/1	2454	Alnus	0	24	s	
1802.00	0	2454.00	5A/1	2454	Quercus	2	12	s	
1802.00	0	2454.00	5A/1	2454	Corylus	3	20	s	
1802.00	0	2454.00	5A/1	2454	Alnus	6	26	s	
1802.00	0	2454.00	5A/1	2454	Quercus	6	36	p	peg
1802.00	0	2454.00	5A/1	2454	Betula	5	26	s	
1802.00	0	2454.00	5A/1	2454	Alnus	0	80	s	
1802.00	0	2454.00	5A/1	2454	Betula	2	22	s	
1802.00	0	2454.00	5A/1	2454	Quercus	2	18	s	
1802.00	0	2454.00	5A/1	2454	Quercus	4	18	s	
1802.00	0	2454.00	5A/1	2454	Quercus	3	26	s	
1802.00	0	2454.00	5A/1	2454	Quercus	4	34	s	
1802.00	0	2454.00	5A/1	2454	Quercus	4	0	s	
1802.00	0	2454.00	5A/1	2454	Quercus	6	32	s	
2037.00	0	2454.00	5A/1	2454	Corylus	3	7	w	
2037.00	0	2454.00	5A/1	2454	Corylus	7	32	w	
2037.00	0	2454.00	5A/1	2454	Quercus	3	12	w	
2037.00	0	2454.00	5A/1	2454	Corylus	7	40	w	
2037.00	0	2454.00	5A/1	2454	Quercus	4	30	w	
2037.00	0	2454.00	5A/1	2454	Corylus	6	41	w	
2037.00	0	2454.00	5A/1	2454	Corylus	3	20	w	
2037.00	0	2454.00	5A/1	2454	Corylus	6	38	w	

2037.00	0	2454.00	5A/1	2454	Corylus	3	22 w	
2037.00	0	2454.00	5A/1	2454	Corylus	8	42 w	
2037.00	0	2454.00	5A/1	2454	Corylus	7	40 w	
2037.00	0	2454.00	5A/1	2454	Corylus	5	23 w	
2037.00	0	2454.00	5A/1	2454	Corylus	8	50 w	
2037.00	0	2454.00	5A/1	2454	Corylus	6	32 w	
2037.00	0	2454.00	5A/1	2454	Quercus	3	12 w	
2037.00	0	2454.00	5A/1	2454	Corylus	3	8 w	
2037.00	0	2454.00	5A/1	2454	Corylus	4	31 w	
2037.00	0	2454.00	5A/1	2454	Corylus	10	32 w	
2037.00	0	2454.00	5A/1	2454	Corylus	5	36 w	
2037.00	0	2454.00	5A/1	2454	Corylus	8	38 w	
2037.00	0	2454.00	5A/1	2454	Quercus	3	22 w	
2037.00	0	2454.00	5A/1	2454	Corylus	5	46 w	
2037.00	0	2454.00	5A/1	2454	Corylus	8	36 w	
2037.00	0	2454.00	5A/1	2454	Corylus	5	30 w	
2037.00	0	2454.00	5A/1	2454	Quercus	3	30 w	
2037.00	0	2454.00	5A/1	2454	?Corylus	7	23 w	
2037.00	0	2454.00	5A/1	2454	?Corylus	7	30 w	
1966.00	0	3297.00	5a/1	2454	Quercus	20	40 s	A2453/4. Rings measured;
1965.00	0	3298.00	5A/1	2454	Alnus	8	41 s	A2453/4
1962.00	0	3300.00	5A/1	2454	Quercus	11	39 s	A2453/4. Rings measured
1940.00	0	3302.00	5A/1	2454	Alnus	12	43 s	A2453/4
1943.00	0	3303.00	5A/1	2454	Alnus	20	50 s	A2453/4
1942.00	0	3304.00	5A/1	2454	Alnus	7	42 s	A2453/4
1933.00	0	2453.00	5A/1	0	Corylus	5	18 s	

[3564]



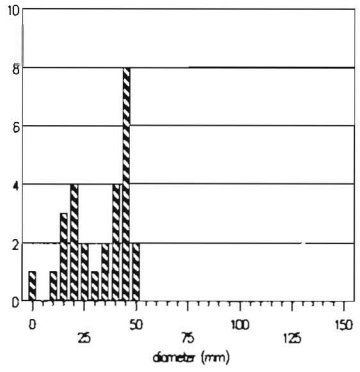
Hazel is the most common species recorded but there are also quantities of oak, alder and birch present. The size ranges of material from either side of the drain are almost identical, suggesting contemporary construction. There is no clear distinction between wattles and stakes with respect to size.

STRUCTURE 3769

For its stratigraphic relationships see 3207 above. Fence 3203 was set on the east side of this broad gulley.

Sample	Wood number	Context	Period	Wall	Species	Age yr	Diam mm	Type	Notes	
0.00	1945	3371.00	5A/1	3203	Oak	0	46		Round	
0.00	1946	3372.00	5A/1	3203		0	38		Round	
0.00	1947	3373.00	5A/1	3203		0	41		Round	
0.00	1948	3374.00	5A/1	3203		0	25		Half-round	
0.00	1949	3375.00	5A/1	3203		0	41		Round	
0.00	1951	3377.00	5A/1	3203	Oak	0	42		Round	
0.00	1952	3378.00	5A/1	3203	Oak	0	43		Round	
0.00	1953	3379.00	5A/1	3203		0	36		Round	
0.00	1954	3380.00	5A/1	3203		0	41		Round	
0.00	1955	3381.00	5A/1	3203	Oak	0	36		Round	
0.00	1956	3382.00	5A/1	3203	Oak	0	41		Round	
0.00	1957	3383.00	5A/1	3203	Oak	0	30		Round	
0.00	1958	3384.00	5A/1	3203		0	42		Round	
0.00	1959	3385.00	5A/1	3203		0	43		Round	
0.00	1960	3386.00	5A/1	3203		0	34		Round	
0.00	1961	3387.00	5A/1	3203	Oak	0	39		Round	
1843.07	0	3203.00	5A/1	0	Quercus	6	16	w		drain side.
1843.08	0	3203.00	5A/1	0	Quercus	7	20	w		drain side.
1843.05	0	3203.00	5A/1	0	Quercus	4	15	w		drain side.
1843.04	0	3203.00	5A/1	0	Quercus	6	11	w		drain side.
1843.06	0	3203.00	5A/1	0	Quercus	8	25	w		drain side.
1843.01	0	3203.00	5A/1	0	Quercus	7	31	w	branch	drain side.
1843.03	0	3203.00	5A/1	0	Betula	8	13	w		drain side.
1843.10	0	3203.00	5A/1	0	Quercus	0	8	w		drain side.
1843.09	0	3203.00	5A/1	0	Quercus	15	20	w		drain side.
1843.02	0	3203.00	5A/1	0	Quercus	18	20	w	narrow rings	drain side.
1924.00	0	3254.00	5	3203	Alnus	0	0	w	over drain fill. see 3203 context info	
4337.00	0	3376.00	5A/1	3203	indet.	0	0	m		drain 3203

[3769]



The wood was predominantly oak and the wattles gave exactly the same mean size range (17.9mm) as those from 3207, the earlier feature lying in this position. Both features had mostly oak stakes, however the wattles of the earlier feature were mainly hazel whereas those of 3203 are oak.

FENCE 6338

This lay at right angles to the E-W road along its southern edge. 5A/1

Sample	Wood number	Context	Period	Wall	Species	Age yr	Diam mm	Type	Notes
0.00	2222	3533.00	5A/1	6338		0	32	Round	
0.00	2223	3534.00	5A/1	6338		0	48	Round	
0.00	2224	3535.00	5A/1	6338		0	45	Round	
0.00	2226	3536.00	5A/1	6338		0	28	Round	
0.00	2192	3537.00	5A/1	6338		0	13	Round	
0.00	2225	3554.00	5A/1	6338		0	40	Round	
0.00	2227	3555.00	5A/1	6338		0	22	Round	
0.00	2304	3659.00	5A/1	6338		0	30	Round	
0.00	2305	3662.00	5A/1	6338		0	22	Round	
0.00	2306	3663.00	5A/1	6338		0	10	Round	

FENCE 6339

lay in front of oven 2082

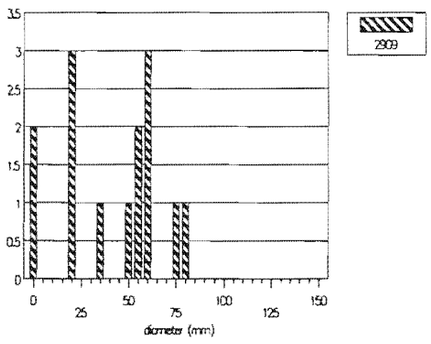
Sample	Wood number	Context	Period	Wall	Species	Age yr	Diam mm	Type	Notes
0.00	0	2364.00	5A/2	6339	Stake hole	0	70	Round	
0.00	0	2579.00	5A/2	6339	Stake hole	0	50	Round	
0.00	0	2580.00	5A/2	6339	Stake hole	0	60	Round	
0.00	0	2581.00	5A/2	6339	Stake hole	0	30	Round	
0.00	0	2582.00	5A/2	6339	Stake hole	0	50	Round	
0.00	0	2583.00	5A/2	6339	Stake hole	0	50	Round	
0.00	0	2584.00	5A/2	6339	Stake hole	0	40	Round	
0.00	0	2585.00	5A/2	6339	Stake hole	0	40	Round	
0.00	0	2586.00	5A/2	6339	Stake hole	0	40	Round	
0.00	0	2587.00	5A/2	6339	Stake hole	0	40	Round	
0.00	0	2588.00	5A/2	6339	Stake hole	0	70	Round	
0.00	0	2589.00	5A/2	6339	Stake hole	0	50	Round	
0.00	0	2590.00	5A/2	6339	Stake hole	0	40	Round	
0.00	0	2591.00	5A/2	6339	Stake hole	0	40	Round	
0.00	0	2598.00	5A/2	6339	Stake hole	0	70	Round	
0.00	0	2641.00	5A/2	6339	Stake hole	0	60	Round	

STRUCTURE 6345

This is a fenced area of brushwood and wattling to the west of oven 2082. It is bounded to its east by a line of stakes (6344) and across its northern edge by fence 2909.

Sample	Wood number	Context	Period	Wall	Species	Age yr	Diam mm	Type	Notes
east wall/fence:									
0.00	1083	1823.00	5A/2	6344	Oak	0	48		Round
0.00	1643	3004.00	5A/2	6344		0	115		Round
0.00	1633	3005.00	5A/2	6344		0	100		Round
northern fence:									
1629.01	0	2909.00	5A	2909	Alnus	4	16	w	
1629.02	0	2909.00	5A	2909	Alnus	4	20	w	
1629.03	0	2909.00	5A	2909	Alnus	3	17	w	
1644.00	0	3018.00	5A	2909	Alnus	0	60	s	half section
1645.00	0	3019.00	5A	2909	Alnus	0	0	s	shaped peg
1646.00	0	3020.00	5A	2909	Alnus	0	50	s	
1647.00	0	3021.00	5A	2909	Quercus	0	56	s	poor condition, dried and split
1648.00	0	3022.00	5A	2909	Alnus	0	35	s	
1649.00	0	3023.00	5A	2909	Alnus	0	0	s	squared off, 35 x 20
1650.00	0	3024.00	5A	2909	Alnus	0	55	s	
1651.00	0	3025.00	5A	2909	Alnus	0	56	s	
1652.00	0	3026.00	5A	2909	Alnus	7	72	s	partial quarter section
1653.00	0	3027.00	5A	2909	Alnus	0	80	s	
1654.00	0	3028.00	5A	2909	Alnus	8	54	s	branch
1655.00	0	3030.00	5A	2909	Alnus	37	175	s	part sect, age=minimum poss. sketch

[6345]



Index to buildings in Section 4