



Illus 1 *The frontage of 68-74 High Street.*



Illus 2 *Date-stone over the doorway into the basement of the southern extension.*

Investigations into an early timber-frame roof in Brechin, Angus

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Introduction

During the course of a feasibility study on the building at 68-74 High St, Brechin the remnants of an earlier timber-framed structure surviving within the timber roof of the existing building was revealed. The roof itself is a rare survival in Scotland.

The building is located on the west side of Brechin High Street within an outstanding conservation area centred around the 13th century Brechin Cathedral and its 11th century round tower. The building was first drawn to the attention of the Tayside Building Preservation Trust (TBPT) in 1995. By then the building had sat empty for some 20 years. The building had been listed category B in 1963, and despite the fact that it was clearly at risk it was making an important contribution to the character of the conservation area (Illus 1). As the aims of the Trust are to restore and find appropriate new uses for buildings of architectural or historic interest at risk in Tayside, it agreed to undertake a feasibility study of the building. A study focusing on the building's history, its architecture, its potential for re-use and the costs of conversion commenced in 1998. This was undertaken by students of the Postgraduate Course on European Urban Conservation at Dundee University's Centre for Conservation and Urban Studies, with whom the Trust has a close relationship.

Surprisingly little was known about the building prior to this study and as work progressed it became apparent that physical survey and documentary research alone would not reveal its whole history. Consequently, the Trust commissioned an archaeological evaluation and a dendrochronological survey. A full survey of the redundant features in the roof was subsequently undertaken. The primary focus of this paper is to establish the construction date of the roof structure and it draws on the results of the archaeological evaluation and architectural survey to understand the history of the roof. As a direct result of the study, the building was revisited by Historic Scotland in 2000 and given a category A listing.

The building

The High Street elevation of the building is 2-storey, stone fronted with an asbestos roof, and has crowsteps and brick chimneys on each gable (Illus 1). The crowsteps are the only ones to survive on a domestic building in Brechin. The ground floor has been refaced in ashlar sometime in the mid 19th century when two

shops were created, providing a marked contrast with the floor above. Seven bays wide, the ground floor is separated from the first floor by a heavy band course. The upper floor is random rubble and clay mortar and has five irregularly placed windows two of which have been blocked up possibly at the time the shopfronts were inserted. In the centre of the building a door gives access to a pend which leads through to the rear of the property and a flight of steps down in to the garden. Excavations in the pend did not reveal any foundations, suggesting that the pend may always have existed as a thoroughfare, possibly as a vennel with two separate buildings on either side (SUAT 1999, 10.3) To the right of the pend is a door which leads directly to a flight of stairs which give access to the first floor.

In addition to the 19th century alterations it is clear that over time, other changes have been made to the appearance of the front of the building. Archaeological evidence indicates that the present building frontage line reflects that of the original frontage (SUAT 1999, 10.2) but the building now sits within a terrace whereas originally it might have been free standing. Before major street improvements during the 1770s the High Street, which was the main route to Aberdeen, was stepped with almost every individual building standing on a different level (Black 1867). At this time forestairs and outside walkways were removed and the street was levelled to create one gradual slope. The street was further levelled and tar macadamed in 1836. The ground floor shopfronts vary in level to follow the slope of the ground indicating that the changes were made after this date. Sometime in the mid 1960s, in the interest of public safety, a nepus gable (similar in construction to a dormer window) was removed from the front of the building and it is assumed that the asbestos sheeting, which may have replaced Carmylie stone slate, was put on the roof.

To the rear of the property the garden falls steeply down to Skinners Burn, following the lines of the old rigg system (Gourlay 1977, Map 2). Two free standing extensions were built out into the garden on either side of the pend. The southern extension, which has a basement wash-house, is separated from the adjoining building by a cat run. The basement still contains its 18th century copper boiler and a series of cupboards with good timber doors which probably came from the front building at the time the extension was added. The lintel above the door to the basement is engraved with the date '1717' (Illus 2). The date is offset but appears to be authentic and provides a *terminus ante quem* for the construction of the High Street frontage.

At the top of the steps to the pend a doorway has been blocked to form a window.

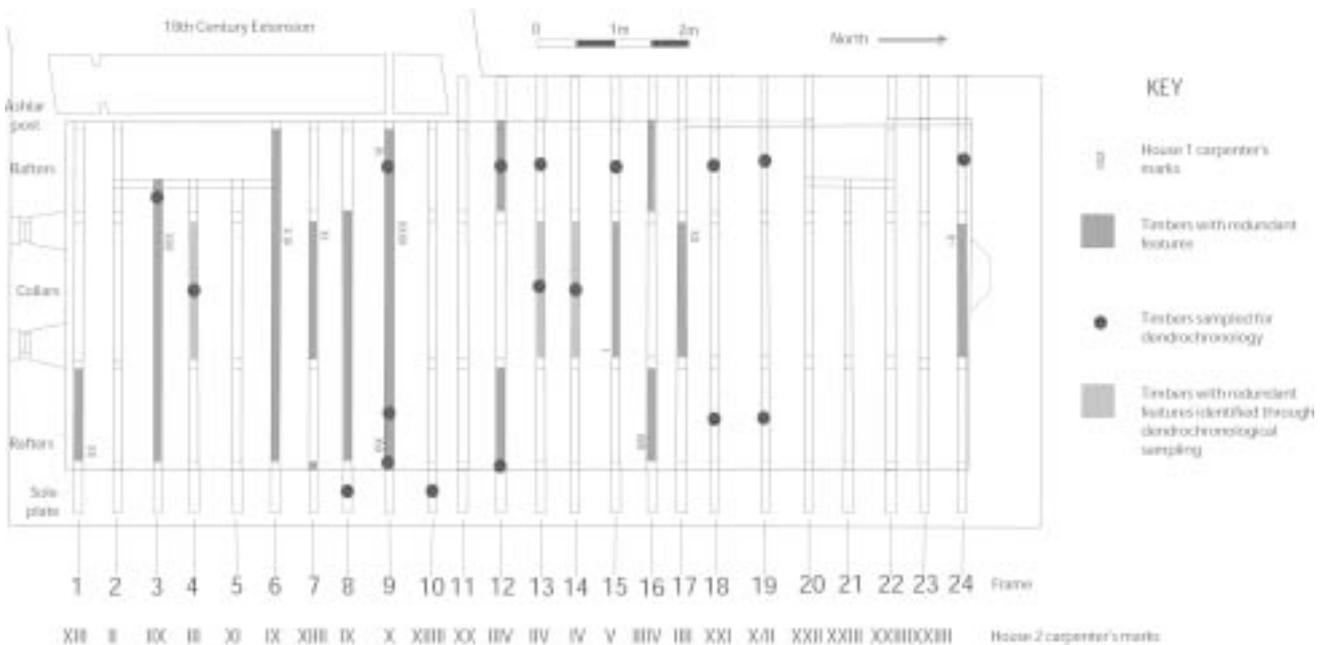
The northern extension is a much later single-storeyed workshop which may have been built by D H Edwards, a stationer and printer who occupied the front shop during the mid 1800s. There is evidence of two former gables higher up the rear wall of the main building which suggests that this is the last in a long line of alterations.

There have been a number of internal alterations but interesting features remain. One original room on the first floor still retains clay plaster, salt box, swey and massive smoke blackened ceiling timbers plastered over

at a later date. The 1717 extension has retained good window shutters and timber doors but it is the roof space of the original High Street property which, divided into two rooms on either side of a narrow access stair, is of most significance. Interesting alterations have been made to the flues in each gable. They are defined by vertical joints which suggests they were inserted well after the construction of the building possibly to replace wooden flues which had to be removed following a town council edict of 1762. However, by far the building's most important feature is an ashlar post roof with a superb series of assembly, or carpenter's marks (Illus 3).



Illus 3 General view of the roof, showing the sequence of contemporary carpenter's marks on the collars.



Illus 4 Plan of the roof structure.

The roof

The roof consists of twenty-four timber frames, each with paired rafters, a collar beam, ashlar post and sole plate (Illus 4 and 5). All joints were pegged with large projecting trenails which would have been capable of drawing slightly offset boreholes together, ensuring very tight joints. For the purposes of recording and sampling the frames were numbered BR1–24 from south to north, and the components were identified by letter (R = rafter; C = collar; A = ashlar; SP = sole plate). The location within the frame was also recorded (W = west; E = east). Thus, BR19RE is the eastern rafter from Frame 19. The frames all bore large carpenter's marks which had been cut with a race knife and which spanned the width of the timber (Illus 3 and 4). The carpenter's marks did not have tags to differentiate between left and right rafters.

All components of the roof were oak (*Quercus* sp.) and although of relatively small scantling (110 x 130 mm on average) the timber was straight-grained, well-grown material. The timbers were primarily boxed heart baulks, the faces having been axe-dressed. Strips of bark often survived on the corners of the timbers, particularly in the northern section of the roof (Illus 6). Frame 18, which lies immediately above the partition wall, was heavily soot-stained, the pattern of the staining indicating that the sooting event had happened while the frame was *in situ* (Illus 7). This frame lies immediately above the soot-stained ceiling timbers of the first floor room (see above).

Evidence for a 'ghost' house

Evidence for re-use was noted on many of the timbers (Illus 4) in the form of redundant joints and duplicate carpenter's marks. These details were fully recorded in case it proved possible to reconstruct the type of building from whence they originally came (see site archive). For clarity the current roof is referred to as House 2, the 'ghost' house represented by the re-used timbers as House 1.

Redundant joints were found on eleven components. The majority of the joints were mortice-and-tenons (M and T). The empty mortices had been filled with blocks, presumably for aesthetic reasons (Illus 8). The mortices were larger and more neatly cut than those in House 2. The end faces of the mortice-holes lay at an angle to the surface of the timber, the upper of the faces lying at a steeper angle than the lower (Illus 9). The M and T joints were invariably found on the rafters, and where the rafters were complete (ie they had not been shortened to accommodate the extension roof) there were two joints on the same face (Illus 9). The joints were 1.36 m apart on average, the steeper angled face of the mortice hole always lying to the top (Illus 10).

One of the timbers bore evidence for a different type of joint. BR8C had five notches cut into two opposing

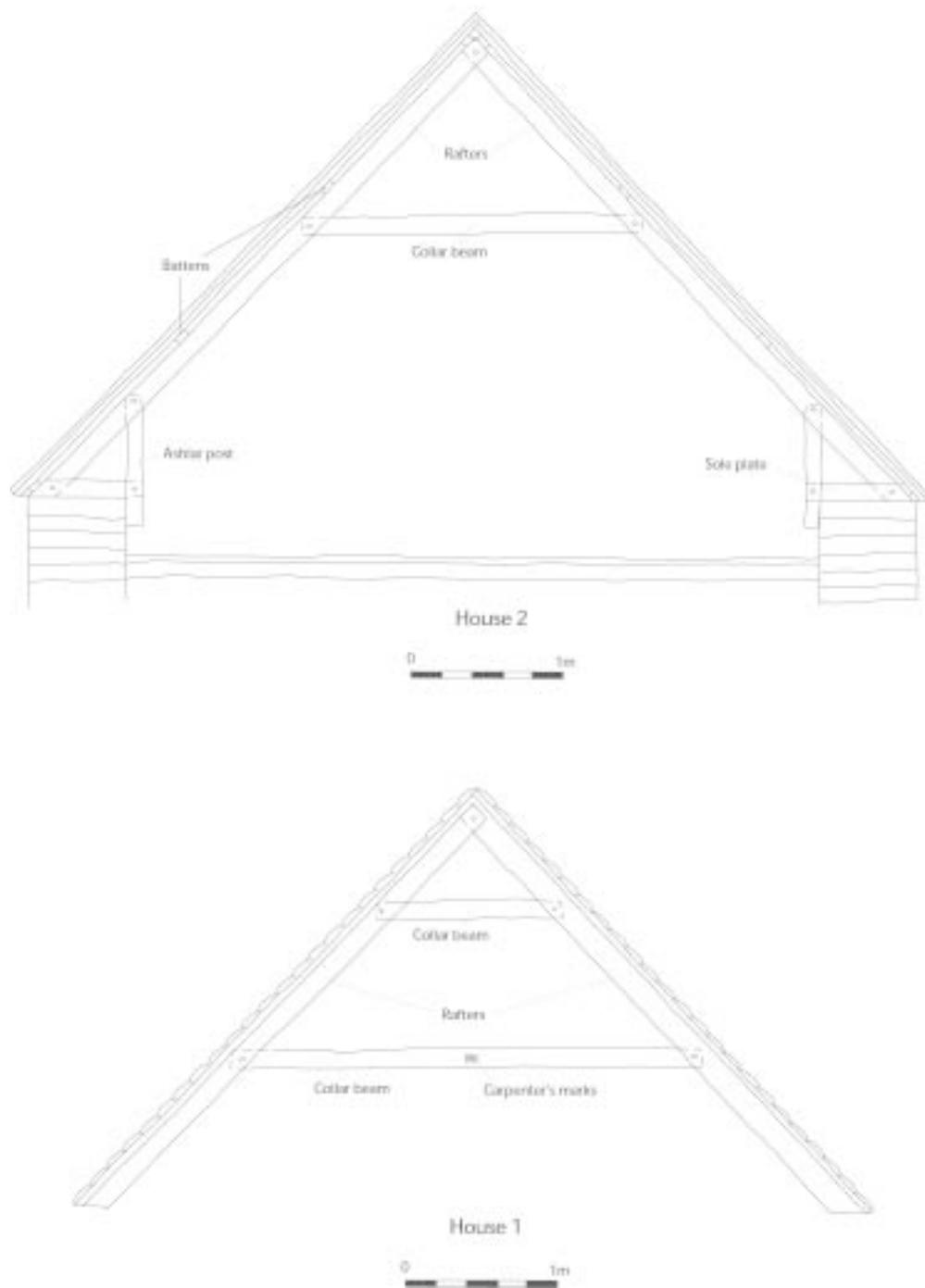
faces, two on one face and three on the other (Illus 10). The notches were of varying width and depth and, although parallel-sided, they lay at angles to the surfaces of the other faces. The largest of the notches clearly relates to the use of House 2, because the House 2 carpenter's marks are cut by it (Illus 9). It is therefore possible that the other notches also relate to the use of House 2. However, the timber is more decayed than others within the roof, suggesting a greater longevity, and also bears an irregular row of small, 10 mm diameter holes on the underside, two of which still have pegs *in situ*.

BR12RE has two MandT joints but one of the joints cuts through a large 25 mm hole, in which the peg is still *in situ* (Illus 10). This suggests that this timber had been re-used even in House 1. Another empty peghole 30 mm in diameter lies close by, in the same plane, and penetrates the width of the timber. There is also a row of smaller holes, c 15 mm in diameter, which lie in the same plane but only penetrate the timber to a depth of 50 mm. Two of these still contain pegs.

Several of the timbers also bore two sets of carpenter's marks, one set of which clearly relates to the construction of the House 2 roof (Illus 3 and 4). The other set had been cut using a chisel and were smaller, more deeply incised and more precisely executed (Illus 6 and 12). There are eleven examples of this type (Illus 4), seven located on collars, three on rafters which also bear redundant joints and one of a rafter with no other evidence of re-use. The marks on the collars are all located in exactly the same position, at the very end of the collar (ie Illus 12). None of the marks are identical; as identical marks were cut onto each component of a frame so that they could be assembled correctly the conclusion must be that the bulk of the timber used in House 1 was not used in House 2. Frame 24 bears an unusual mark, a V on its side (Illus 13). The largest number recorded is XXV.

In all, eleven of the twenty-four frames displayed physical signs of re-use on one or more components. It is perhaps significant that, with one exception these frames all lie in the southern two-thirds of the building. The presence of so much surviving bark on the corners of timbers in the northern third (Illus 6) suggests that the timbers in this area were deliberately felled for the construction of the House 2 roof. None of the smaller components of the frames, the ashlar posts and the sole plates, displayed evidence of re-use but as these are very short components, no longer than 0.7 m in most cases, it is quite feasible that these could have been trimmed off old timbers, removing all evidence of re-use. Two of the sole-plates bore a single hole on one side which did not penetrate the timber; these could relate to the actual erection of the roof and may not be evidence of re-use.

As dendrochronological analysis would be able to determine whether other timbers present were also re-used, the reconstruction of House 1 follows the presentation of the dendrochronological evidence.



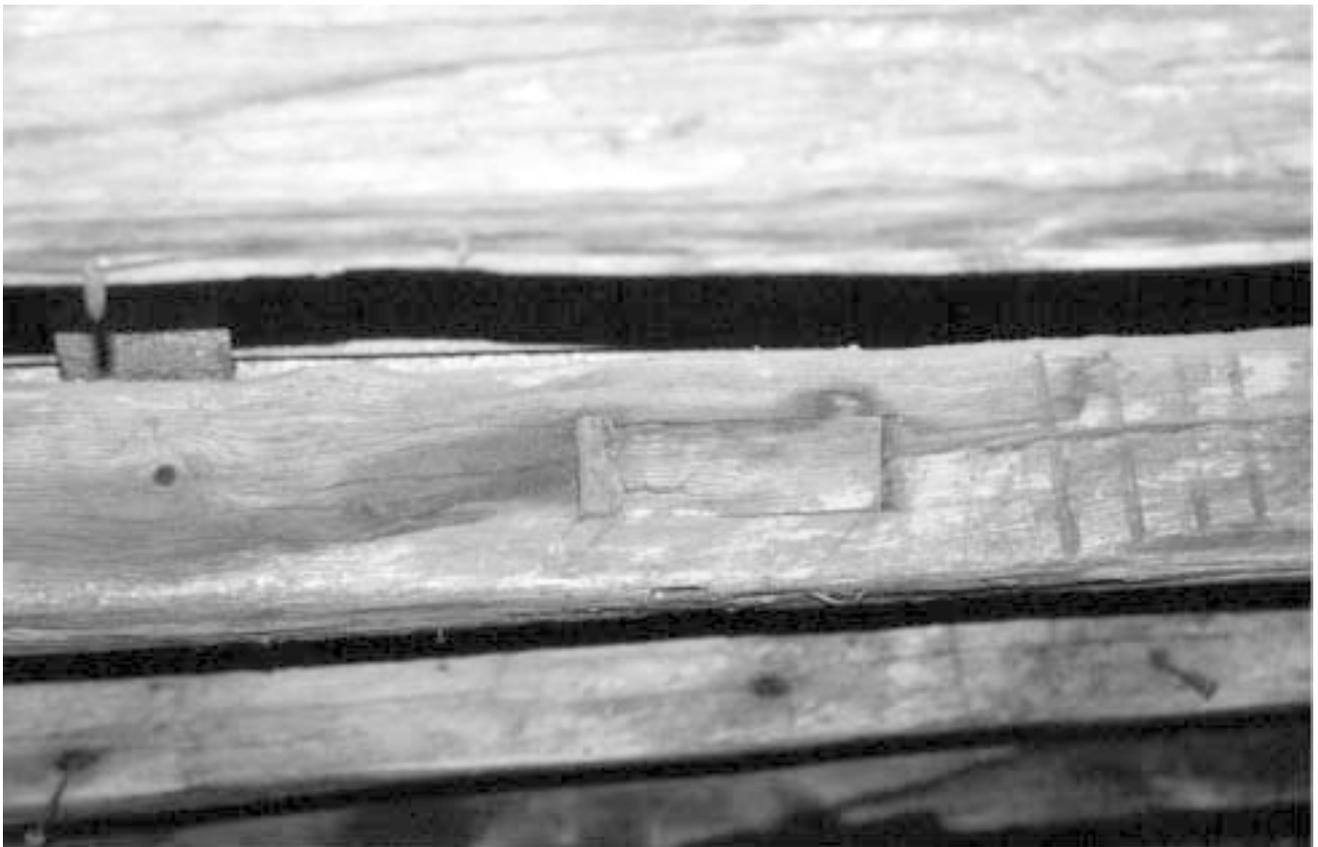
Illus 5 a Cross-section of a frame in House 2. **b** Cross-section of a frame in House 1.



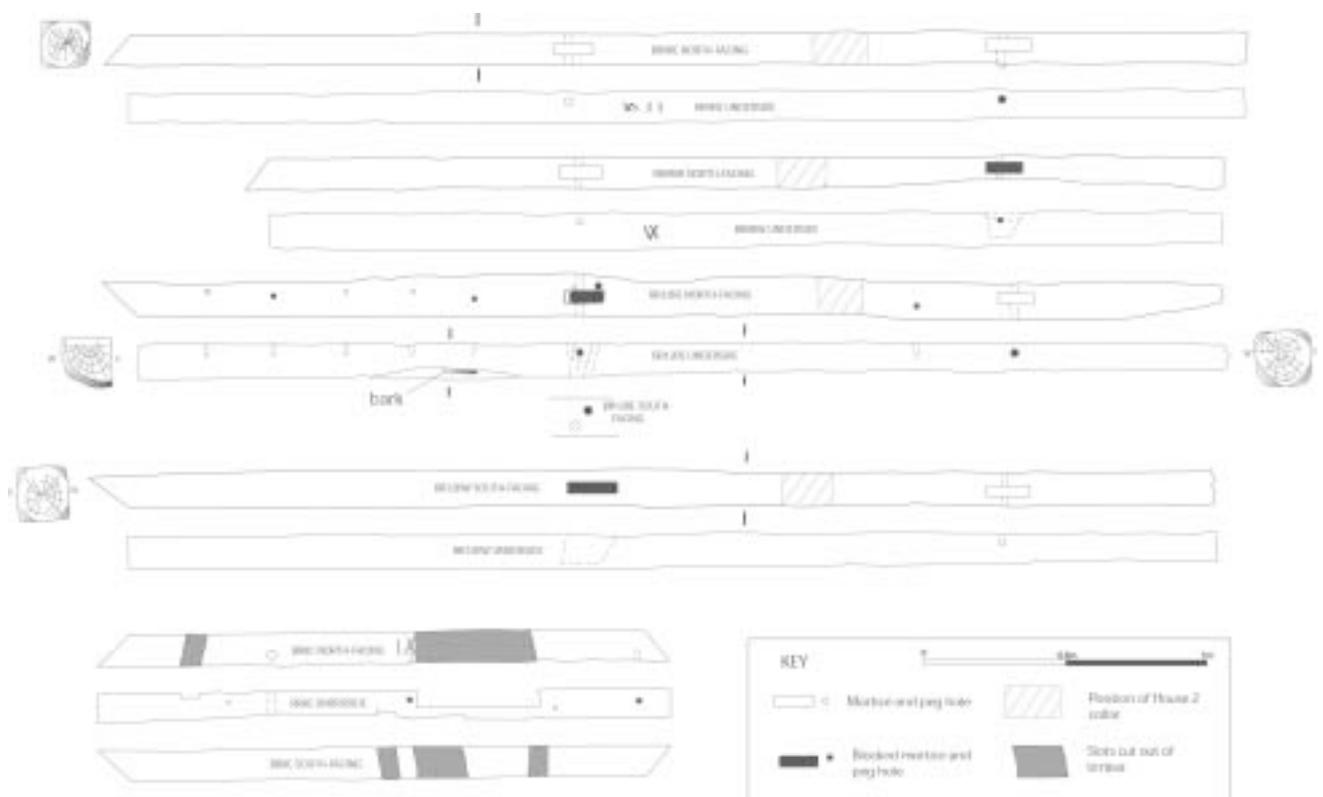
Illus 6 *The carpenter's mark on BR15C. The strips of bark on each corner of BR15RE are visible behind.*



Illus 7 *Soot staining on rafters and collar of Frame BR18.*



Illus 8 Upper joint on BR16RW, showing a blocked-up mortice. The House 2 carpenter's marks lie to the right of the mortice.



Illus 9 Plans of re-used timbers BR9RE, BR9RW, BR12RE, BR 12RW and BR8C.



Illus 10 Redundant mortice in BR3RE; the sloping face of the mortice lies to the top of the joint. The ashlar post-construction of House 2 can be clearly seen.



Illus 11 BR8C, showing a large notch cutting House 2 carpenter's marks, which lie just to the left of the notch. The redundant pegholes on the underside of the collar are also visible.



Illus 12 Carpenter's marks on the north face of BR6C. The sapwood on the corners of the boxed heart baulk is clear.



Illus 13 Carpenter's marks on the south face of BR24C.

Dendrochronological analysis

Introduction

All the timber components of the roof were assessed in order to select the best candidates for dendrochronological analysis. Features such as the presence of sapwood, the waney edge and bark were noted and where possible, the length of the ring-pattern was estimated. In all, 18 roof timbers were sampled by coring. Although the best candidates for dendrochronological analysis were targeted care was taken to ensure that the sample was representative of the roof structure. Each type of component was sampled, as were some of the timbers displaying clear signs of re-use.

The joists supporting the floor of the attic were also oak, four of which were exposed in the ceiling of the northern, first floor room. These were the soot-blackened ceiling timbers described above. Samples of each joist were taken.

Results

The cores were mounted and their surfaces pared to reveal the ring-pattern. The ring-patterns of many of the

Table 1 *Dendrochronological samples.*

bold indicates that the timber bore evidence of re-use
italic indicates that the timber was not used in analysis

h/s ???	unm ???	Y	yes	
sample number	number of rings	sapwood rings	bark edge	calendar date
BR3RW	61	13	Y	AD 1410–1470
BR4C	78	20	Y	AD 1392–1469
BR8SPE	64			
BR9RW	65	13	Y	AD 1405–1469
BR9RE	95	1		AD 1359–1453
BR9AE	105	14	Y	AD 1366–1470
BR10SPE	74	17	Y	
BR12RW	88	9	Y	AD 1382–1469
BR12AE	89	7		
BR13RW	122	13	Y	
BR13C	98	14	Y	AD 1372–1469
BR14C	70	21	Y	AD 1400–1470
<i>BR15RW</i>	50			
<i>BR18RW</i>	115+	4+	Y	
BR18RE	99	37	Y	
BR19RW	97	+ 17 un	Y	
BR19RE	77	h/s?		
<i>BR24RW</i>	46			
BRJ1	68	16	Y	
BRJ2	107			
BRJ3	97	9		
<i>BRJ4</i>	61+			

samples were substantially longer than had been anticipated, often because they were slow-grown and sensitive (Table 1). However, several samples were rejected for further analysis. BR15RW and BR24RW were too short. An old shake in the timber had split the core of BRJ4 and although the number of rings was counted, the sequence was not used further. One of the longest sequences, BR18RW, had problematic bands of very compressed rings which made measurement difficult, increasing the likelihood of errors. Thus, of 22 sampled timbers, 18 were used in the full analysis.

Visual and statistical correlation of the measured sequences produced two very discrete groups, each containing eight sequences. The t-values for each group are presented in Tables 2a and 2b. (T-values describe the degree of correlation between two sequence. The higher the value the stronger the correlation; values below 3.5 are not considered significant, with values less than 3.0 not reported.)

Each group of sequences was averaged together to form two site chronologies, BRECHIN1 and BRECHIN2, 112 years and 125 years in length respectively (Illus 14 and 15). The two site chronologies did not match each other nor did any of the individual sequences within each chronology match the other chronology. The remaining two sequences, BRJ3 and BR8SPE, did not

cross-match against any of the other sequences or against the two site chronologies.

The two site chronologies were cross-matched against all available native Scottish oak master chronologies, but this did not produce any correlations. The two chronologies were then cross-matched against master chronologies from England, Ireland, the Baltic and Scandinavia. BRECHIN 1 correlated very well with master chronologies from Scandinavia (Table 3a), and with those Scottish site chronologies which contain imported timber of Scandinavian origin (Table 3b), dating it to the period AD 1359 – AD 1470. BRECHIN 2 could not be dated.

Discussion

BRECHIN1

With the exception of BR9RE all the components of BRECHIN1 retained the bark edge (Illus 14) and therefore the outermost ring should represent the year in which the tree was felled. The outermost year on BR9RW, BR12RW, BR13C, BR4C and BR14C is dated to AD 1469 while that for BR9AE and BR3RW is the following year, AD 1470. Although the outermost ring on BR14C is dated to AD 1469, the large springwood pores of the next season's growth are just beginning to form, indicating that it was felled early in the spring of AD 1470. It seems most probable that all the timbers were felled early in the spring of 1470, but some had not yet started to lay down the new season's growth.

All the samples from timbers with physical evidence of re-use are components of BRECHIN1 (Illus 143). This, together with their early date implies that all the other components of this site chronology were probably also re-used, despite the fact that they bore no obvious signs of re-use. Furthermore, the implication must be that all the other re-used timber in the roof is of the same date. Thus, House 1 was built in AD 1470.

BRECHIN1 has produced significant correlations with those Scottish site chronologies which have been 'dendroprovenanced' to the region of southern Sweden and Denmark (Table 3b) and also with many of the master chronologies from that region (Table 3a). However, the t-values are not so high that these countries can be definitively identified as the source area for the timber. BRECHIN1 correlates most strongly with chronologies from northern Denmark, but it is possible that some of these are based on timber imported from Norway, in particular 81m0004, the master chronology based on samples from church roofs in northern Jutland (Niels Bonde pers comm.).

BRECHIN2

This 125-year site chronology is currently undated. An extensive network of local tree-ring chronologies is now available across most of Europe and the British Isles and the failure to date BRECHIN2 against any of these chronologies prompts the suggestion that the timbers

Table 2a *T-values for BRECHIN 1.*

	BR9AE	BR3RW	BR9RW	BR12RW	BR13C	BR4C	BR14C	BR9RE
BR9AE	/							
BR3RW	6.3	/						
BR9RW	x	x	/					
BR12RW	x	x	x	/				
BR13C	5.3	x	4.3	3	/			
BR4C	4.6	5.5	x	x	x	/		
BR14C	6.5	8	x	x	3.4	5	/	
BR9RE	x	x	5.2	5.4	5.7	x	x	/

Table 2b *T-values for BRECHIN 2.*

	BR18RE	BRJ1	BR13RW	BR12AE	BR19RE	BR10SPE	BRJ2	BR19RW
BR18RE	/							
BRJ1	3.6	/						
BR13RW	4.4	x	/					
BR12AE	3.2	5.2	10.3	/				
BR19RE	5	x	x	x	/			
BR10SPE	5.4	x	x	x	3.9	/		
BRJ2	x	x	3.4	4.4	x	x	/	
BR19RW	7.5	4.6	4.8	6	4.4	x	5.8	/

Table 3a *Correlations with foreign master chronologies.*

master chronology		t-value
2x900001 (830–1997)	Sealand (Denmark)	8.98
4030m003 (1372–1509)	Svednborg, Fyn (Denmark)	8.32
81m00004 (1350–1480)	churches in N Jutland (Denmark)	8.23
sm000013 (1301–1561)	Halmstad (Sweden)	8.20
sm000005 (1274–1974)	Scania-Blekinge (Sweden)	6.21
sm000012 (1125–1720)	Western Sweden	5.77
wh-sen-1 (1375–1616)	(?Norwegian)	5.41
nb700000 (1345–1538)	Helsingor (Denmark)	4.84
6m100001 (1322–1776)	East Jutland (Denmark)	3.62
8m100002 (1287–1818)	North Jutland (Denmark)	3.27
9m456781 (109 BC – AD 1986)	West Jutland (Denmark)	2.58

on which it is based are probably native Scottish oak. This is because tree-ring coverage in Scotland is still very patchy, both chronologically and geographically (Crone and Mills 2002). Coverage is particularly thin for east coast Scotland throughout the 16th and 17th centuries, a timespan which is currently represented by only two chronologies from central and south-west Scotland (ibid, Illus 2). If BRECHIN2 were indeed Scottish, then this would also explain the lack of correlation with BRECHIN1 given the foreign origin of that chronology.

Table 3b *Correlations with imported timber chronologies.*

master chronology		t-value
Garroof2 (1350–1458)	Guthrie Aisle roof, Angus	8.19
Grthall (1382–1571)	Great Hall, Stirling Castle	7.58
Midhope (1265–1505)	Midhope Castle, West Lothian	7.36
Ftmas2 (1318–1572)	Fenton Tower, East Lothian	7.31
Bedmast1 (1355–1538)	Queen's bedchamber, Stirling Castle	6.10
OSU1new (1391–1520)	Old Student Union, St Andrews	5.02
Edincas2 (1358–1509)	Great Hall, Edinburgh Castle	5.01
kbed2_3 (1363–1500)	King's bedchamber, Stirling Castle	4.92
Ftmas1 (1366–1547)	Fenton Tower, East Lothian	4.88
PanIK139 (1366–1569)	Mary of Guise's Palace, Edinburgh	4.69
Duntarvie (1385–1529)	Duntarvie Castle, West Lothian	4.56

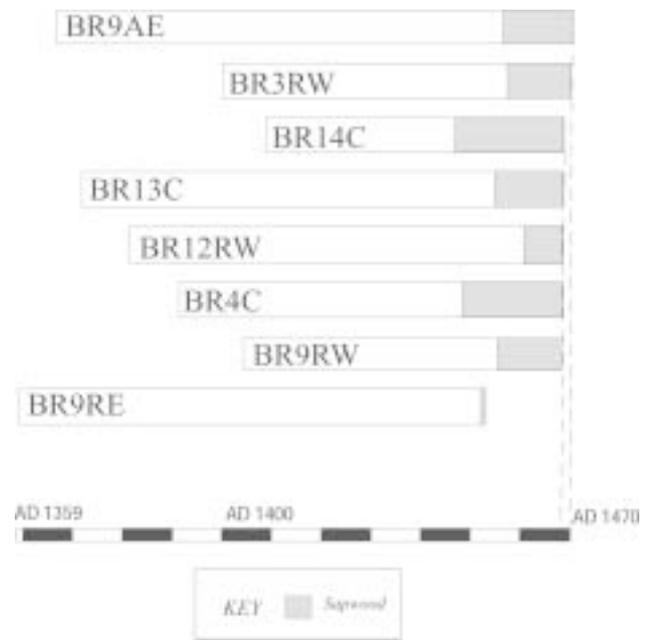
None of the timbers in this chronology displayed any signs of re-use and although, as BRECHIN1 has demonstrated, this does not necessarily mean that they were not re-used in this building, it supports the premise that the timbers in this chronology are contemporary with the construction of House 2. The bark edge survived on four of the timbers in the chronology, indicating that at least two rafters, one sole plate and one floor joist were all felled in the same year (Illus 15). If the absence of evidence for re-use is accepted as such, then the floor and the roof are contemporary.

Reconstruction of House 1

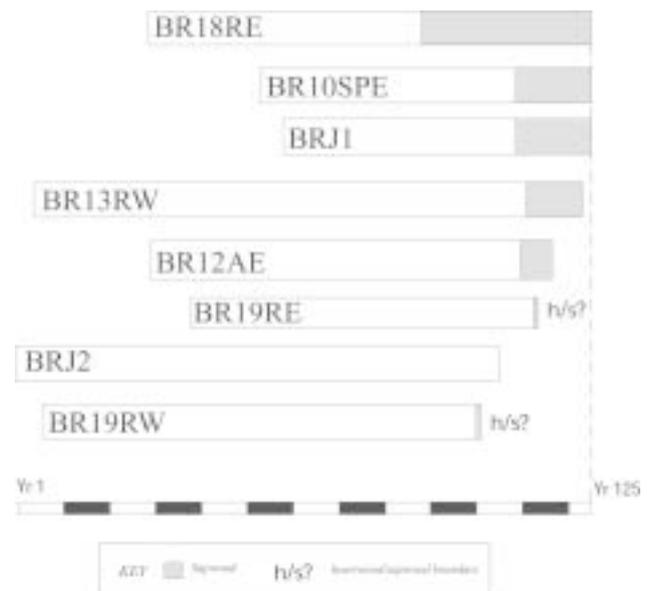
The dendrochronological analysis has demonstrated that the timbers used in House 1 were felled in AD 1470 and as they appear to have been worked while green, the house was probably erected that year. Analysis of the redundant joints, together with appraisal of the scantling of the rafters suggests that these timbers had also functioned as rafters in the roof of House 1. The paired joints indicate that this roof would have had double collar beams (Illus 5b). It is difficult to estimate the pitch of the House 1 roof; the angled ends of the mortices were designed as much to aid assembly of the frame as to house the tenon so they cannot be used as reliable guides to the original pitch. If we assume that the pitch was similar to that of House 2, which has a standard pitch of 45°, then the lower collar would have had a span of 3 m while the upper collar would have had a span of 1.2 m. The House 2 collar beams are all 2.05 m across. As described above, seven of the collar beams bear House 1 assembly marks while dendrochronological analysis has demonstrated that a further three also belong to House 1. None of these collar beams bear any evidence of jointing and the assembly marks all lie in identical positions at the very end of the beam. Given that the other re-used timbers were rafters, it seems most likely that the House 2 collars had been cut down from the lower collars of the House 1 roof.

The pitch of the roof and the use of two collar beams would presumably reflect the type of roofing material used but we have little evidence for the type used on late 15th century structures. Thatching of some sort would be a safe guess, but plain, glazed tiles have also been found in archaeological contexts of 13th and 14th century date in Scotland (Walker 2001). There is some evidence which might contribute towards identifying the type of roofing used on House 1. Where it was possible to see the 'upper' surfaces of the House 1 rafters, ie the opposing face to that bearing the redundant joints, a line of nail holes was observed, set at intervals varying from 0.23 to 0.30 m apart, the spacing getting less towards the ridge of the roof. These were common to all the observed faces and cannot have had any function within House 2, as they lay either along the sides or underside of the rafter. Battens were probably nailed to the rafters, and the irregular spacing suggests that they were probably designed to support grey slate tiles (Bruce Walker pers comm). Grey slate from the nearby Carmyllie quarries would have been readily available to the townspeople of Brechin.

It is not possible to push the reconstruction of House 1 much beyond what has been described above. We can only guess as to whether the roof sat on a stone wall, as House 2 does, or over a timber wall-frame. The largest assembly mark identified was XXV, suggesting that there were at least twenty-five frames within the roof structure, only one frame larger than the House 2 roof.



Illus 14 Bar diagram showing the chronological relationships within BRECHIN1.



Illus 15 Bar diagram showing the chronological relationships within BRECHIN2.

Documentary evidence for the construction of House 2

The tree-ring date of AD 1470 provides a *terminus post quem* for the construction of House 2 while the date of '1717' engraved over the basement door to the southern extension provides a *terminus ante quem*. It is unlikely that House 1 would have been dismantled rapidly after construction. If at least half a century is allowed for its occupation then we can surmise that House 2 was built some time between the middle of the 16th century and the end of the 17th century. Documentary sources were examined to see whether the construction date could be narrowed down further.

The documentary evidence comes largely from Volumes 1 -3 of the Burgh Register of Sasines for Brechin (1648 - 1771; NAS, B8/1/1-3) and the Title Deeds (held by Thorntons, WS, Forfar) the earliest of which is dated 28 April 1770. The volumes between 1702 and 1748 are missing. In the following text dates in brackets are the dates of registration in the Burgh Register of Sasines.

The earliest existing property deed for this building is dated 8 March 1750 (22 March 1750) when, in accordance with a marriage contract dated 12 April 1748, Euphane Glasfurd was liferented in '*all and haill That Tennement of Land back and fore, high and laigh with houses, biggings and haill office houses belonging thereto and yeard at the back thereof*' by her husband, John Low, merchant and bailie of Brechin. Low was dead by 4 December 1751 (17 December 1751), when the neighbouring property to the south was inherited by William Fairweather, carpenter in Dundee, from his great-uncle, Alexander Fairweather, litster (dyer) and burgess of Brechin. This sasine records the names of two previous owners before Low: Alexander Watt and the laird of Finavon. The dates of these owners are unknown, but Watt, a glover, was already dead by 7 May 1683 (15 May 1683), when sasine of the adjoining property to the north, called Gairdner's Land, was granted to James Moug younger, wright, burgess of Brechin on a disposition by the Hospital of Brechin. The Hospital had acquired the property in 1671, when the magistrates had appraised it from William Gairdner, burgess of Brechin under powers granted by an act of the Scots Parliament concerning ruinous houses in royal burghs. Moug rebuilt his property, described as 'now waste and ruined and demolished', and on 10 July 1685 (5 August 1685) it was described as 'his new stone tenement of land heigh and laigh, under and above, lately acquired and of new built by him', being 31 feet in length and 14 and a half feet in breadth. Moug had a 'liberty of gaveling', that is, of erecting a gable wall with the adjacent properties. Moug's sasines give the name of a previous owner of 68-74 High Street before Watt, Mr Alexander Norie.

When Low's five daughters succeeded as his heiresses portioners on 22 February 1752, it was recorded that Low had been granted sasine of the property on 20 February 1722. It was also stated that the property was held by burgage tenure, and:

for the yearly payment to the Town Treasurer of Brechine, for the Common use and behoof of the said Burgh, of Six Shillings Scots money Att the Terms of Whittsunday and Martinmas by equall portions, being a feu formerly payable furth of the said lands to the Bishops of Brechine, and to which the Town now has right, And for payment to the Treasurer of the poor of the said Burgh of Brechine in Name and to the behoof of the Said poor as Succeeding in place of the heirs of the Deceast John Chapman the sum of thirteen shilling four pennies money foresaid, which was formerly paid to the said Deceast John Chapman and his predecessors furth of the said lands yearly at the foresaid terms.

Chapman was presumably a previous owner of the property, though when is not known. Sir John Chapman, chaplain, is mentioned in 1508 (*RMS*, ii, no 3258; *Brechin Episcopal Docs*, no 131). ('Sir' was the designation of a clergyman who was not a Master of Arts.) In 1516 John Chapman had property on the west side of Brechin, and he was presumably the same as John Chapman alias Richardson, whose son Richard had sasine of a property also on the west side of Brechin in 1531 (*Brechin Episcopal Docs*, nos 144 and 160; *Brechin Registrum*, ii, 183 gives the latter property as on the east side of Brechin). In 1602 Richard Chapman, citizen of Brechin had sasine as heir to his grandfather, Richard Chapman, in five annual rents in Brechin, including an '*annual rent of 13s-4d Scots money from that tenement of land called of old Lyellis land on the west side of the City of Brechin between the lands of St Christopher to the north and the lands of Alexander Ramsay to the south*' (*Brechin Registrum*, ii, 232; *Brechin Episcopal Docs*, no 207 reads 'Colles land' for Lyell's land). It is possible that this is the High Street property; certainly the identical sum cited in both Low's daughters' sasine in 1752 and Chapman's sasine, a rent of 13s-4d, suggests that they are referring to the same building.

St Christopher's altar had been endowed in 1450 by John Smart, citizen of Brechin with rents from two properties in Brechin, including one on the west side of High Street (*Brechin Episcopal Docs*, no 276). In 1483 there is mention of 'the large fore house commonly called Richard Chapman's *foyr sklatt houss*', whose inhabitants owed rents to the late Richard [son of] William, who had founded the altar of St Ninian in Brechin Cathedral, although no location for the house is given (*ibid*, no 100; *Brechin Registrum*, ii, 116). A 'slate house' was a stone building with a slate roof, the very description as 'slate house' implying that it was a rare type of construction, probably owned by one of the wealthier burgesses. In 1574 James Chapman, burgess of Brechin was patron of the altar of St Ninian (*RMS*, v, no 863). (The tenement of St Ninian was on the east side of High Street). This James Chapman may have been the son of Richard, alive in 1531, and the father of Richard, alive in 1602.

The documentary records thus refer to a property on the site in the early 17th century, '*Lyellis land*' but we

have no information about its date of construction, nor do we know whether it is the building that now stands on the spot.

Discussion

In summary we have evidence for an earlier building, House 1 built in 1470, remnants of which survive within the existing House 2 structure. These remnants also came from a roof structure, which was probably at least 25 frames in length and had a double collar beam structure. Where did the re-used timbers come from? Is it possible that House 1 stood on the same stance as House 2 and when the former was dismantled, the roof timbers were simply re-used in the rebuilding? Earlier foundations were found under the northern extension and in the pen during the archaeological evaluation but these features could not be dated (SUAT 1999). If House 1 had stood on the same stance this begs the question as to why all the other elements of the House 1 roof were not used within the House 2 roof. Had it fallen into disrepair, the timbers becoming too decayed to use, or had it been destroyed possibly in one of the fires that ravaged Brechin in the 17th century? In 1644 Montrose's army laid waste to the town and sixty houses were burned while in 1672 an accidental fire destroyed houses (Gourlay and Turner 1977, 4). It has to be said that, other than the heavily sooted Frame 18 (see above) none of the re-used timbers display any evidence of burning but this scenario does provide a late 17th century window for the construction of House 2 which fits comfortably with the 1717 date stone on the southern extension. One other possibility is that the timbers may have been salvaged from the demolition of Gairdner's Land shortly before 1685 when Moug erected his new stone house on the plot of land adjacent to 68-74, High St.

Of course, the key to the precise date of House 2 clearly lies with BRECHIN2 which, it has been argued above, is a native Scottish chronology of timbers contemporary with the construction of the High St building. If these inferences are correct, the BRECHIN2 timbers represent an extremely rare survival of a post-medieval, native oak roof in Scotland, therefore enhancing the conservation value of the building. BRECHIN2 is a relatively long, and internally robust, chronology which should be susceptible to dating given the eventual development of appropriate master chronologies.

BRECHIN1 adds to the increasing list of buildings in Scotland containing imported timber. As is clear from Table 3b, most of these buildings were high-status, but that may simply be an artefact of survival. If House 1 was on the same stance as House 2 then its location so close to the Cathedral precincts would suggest that its owner was both wealthy and influential, a man who could afford to use imported oak.

The re-use of timbers in vernacular buildings may often bedevil the accurate dating of their construction

but they can provide evidence of earlier urban development (Mills 2000). In assessing Brechin the Scottish Burgh Survey highlighted the lack of information about the construction of town buildings and the type of materials used, particularly during the early development of the burgh (Gourlay and Turner 1977, 11). The investigations at 68-74, High St have revealed valuable information about roof construction and roofing materials in the late 15th century. The House 2 roof is in itself a remarkably rare survival in Scotland, where the only known timber roofs of pre-1700 date tend to be found in churches, palaces and castles. That it has survived behind such an unprepossessing frontage (Illus 1) raises hopes that more such survivals may be found in Scotland's burghs. However, at the risk of blowing trumpets it was the presence of a locally active Building Preservation Trust with access to the resources needed to carry out the investigations that led to its survival and new listing. Many unprepossessing, but culturally valuable buildings may be disappearing in those areas without that presence.

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The site archive has been deposited with the National Monuments Record, RCAHMS.

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Abstract

The building at 68-74 High St, Brechin retains an intact timber-framed roof which was constructed sometime before 1717. Dendrochronological analysis of the oak timbers and subsequent study of the redundant joints visible on many of the timbers revealed that an earlier roof, House 1 dated to 1470 AD, had been dismantled and some of the timbers re-used in the present roof, House 2. The timber used in House 1 had been imported from Scandinavia and the roof was probably tiled. Documentary sources were examined to elucidate the history of the building. House 1 may be the 'slate house' mentioned in the late 15th century. There was a property on the site in the early 17th century but without dendrochronological dates House 2 remains undated.

Keywords

dendrochronology
documentary research
medieval roofs
imported timber