

Alison —

Cruck Paper

Copy marked with my comments

There are various ways we might develop this paper, which at the moment is just a summary of my understanding of our local crucks.

(1) You might find that your ideas are quite different and you want to deal with them differently. If this provokes you into writing up your version, that would be fine — this will have served its purpose.

(2) You might think there are some parts of the paper that need developing — especially the material on timber and framing — and other parts that could be dropped.

(3) To work the paper up fairly quickly into a form that could be published, we could omit some of the more speculative bits, and play down Cracoe (since we've not done fieldwork there.) I'm sure there is a sufficient core of material for a paper that could go to the YAJ or the VA journal — but I've tended to write about every aspect that I have ideas about, rather than concentrating on the aspects for which there is solid information.

(4) We could simply use this version of the paper to identify fieldwork that needs doing to fill gaps in our knowledge.

- Dixon Green: recently discovered cruck timber
- Silsden: alleged cruck building — does it really exist?
- Matchless House, Draughton — more measurements needed
- Cracoe: if we are going to discuss it so prominently, we should do some fieldwork there. The YVBSG has about five reports on Cracoe. We could revisit those buildings and see what else there is.
- School Wood, Addingham Moorside
- revisit and review the Drebley barn
- ~~Silke Dreble~~ what about your Smedale crucks I haven't seen? (Good Ho)

I would prefer you to say which of these options appeals to you most.

CRUCK BUILDINGS IN THE AIRE AND WHARFE VALLEYS

by ACA and ATP

Introduction: the prevalence of cruck framing

Put Silsden
first: reduce
emphasis on
Cracoe.

or 1557?

In October 1586, two men were appointed by "my lords Councill" at Skipton Castle to take a survey "both by measure and valuacon" of lands and houses at Cracoe. Nearly thirty years earlier, in 1559, a similar survey had been taken of Silsden Moor seven miles to the south, which like Cracoe, lies between the Aire and Wharfe valleys.¹

Both surveys are remarkable for their detailed descriptions of houses and barns, although these are often difficult to interpret. One example often quoted² from the Silsden Moor survey is an entry which reads: "Nicholas Ricroft hath erect a Fierhouse a laith of iij payre of crocks and one kilne of the lords comen".³ These buildings had been completed four years previously, probably in 1555, and were assessed for an annual rent of 18d. The kilne was presumably a lime kiln. However, one cannot be sure whether the "fierhouse" (or dwelling) and the "laith" (barn) were built as one unit, as sometimes happened, or whether they were separate structures. Nor does the information that there were three pairs of crucks establish the size of the laithe. *If each end wall was timber-framed and as in many cruck buildings in Southern England* incorporated a pair of crucks, the laithe would be a small two-bay barn no more than 10 or 11 metres long. However, if the end walls were built of stone, with crucks used only as internal trusses, the building would be of four bays, and twice the length. Elsewhere in the document is mention of "one house three payres of crocks... laithly erected" for which the same questions arise.

Can drying kilns
remain for 400 years?
Lime kiln because
they were improving
the land - but
also for mortar?

Descriptions of the Cracoe houses in the 1586 survey are more detailed, and make an interesting distinction between crucks made of "ash tymbre" (often in dwellings) and crucks of oak (in barns). However, there is the same uncertainty about lengths of buildings and construction of end walls. The two surveys together give the impression that a large number of cruck-framed buildings were being erected in the sixteenth century, and the question arises as to whether this was typical of other areas in the Pennines.

Have you found
any ash timbers?

2.

So few small buildings survive from before 1600 that at first sight it would seem difficult to answer questions about their construction and distribution. However, many houses and barns were rebuilt in a manner which preserved fragments of timber and walling. They ~~thus~~ provide a considerable body of archaeological evidence which it is the purpose of this paper to review.

Most previous discussions of ^{Such} ~~this type of~~ evidence have concentrated on the re-use of cruck blades in later buildings.⁴ We wish to point out that other timbers have been preserved as well, especially purlins, and at some sites there is a good deal of related masonry. We propose to discuss this material for an area around Silsden where very few standing cruck buildings are known, but where it is striking that almost every farm on an old site shows some evidence of having once had some sort of cruck-framed building. This is true as much for parishes such as Addingham or Lothersdale as for Silsden. Thus it seems that the documents quoted earlier do not give an untypical view, and that cruck construction was at one time widespread in large areas of the Aire and Wharfe valleys, though less frequently used further south in Calderdale.

This latter comparison can be analysed by noting the number of sites at which fragments of cruck buildings have been found in relation to sites at which other kinds of early timber-framed building once existed. In the ^{to wharfs} ~~parishes~~ of Silsden and Addingham together, we have records of 17 sites with cruck fragments, 2 aisled barns, and 3 sites with fragments of "box framed" structures.⁵ By contrast, in a similar area in a tributary valley of Calderdale which one of us has surveyed, there are only 3 known sites with cruck fragments, 4 aisled barns, and 15 sites with remains of "box-framed" structures.⁶ This was a more prosperous area than the Aire and Wharfe valleys, and therefore it is not surprising to find that more elaborate types of timber framing were preferred.

The process of rebuilding

When interpreting re-used cruck timbers in later buildings within our Aire/Wharfe study area, one assumption we make is that cruck blades, purlins and other old timbers are likely to have come from near where they now survive, often precisely on the

need to investigate the one Silsden cruck listed.

to wharfs

to wharfs

This theme could make a paper in itself.

3.

same site, and were not transported from more distant places. While there are certainly exceptions (which are sometimes evident when timbers from two or more buildings can be identified in one later structure), there is ample physical evidence that when houses and barns were rebuilt, sites were not cleared, but old foundations and old materials were re-used.

omit. Not very relevant to our examples

Where a house and barn were connected to one another, the barn might be rebuilt while the house was left standing (or vice versa), in a process of "alternate rebuilding". This sometimes preserved the oldest masonry at the point where the two buildings joined.

Documents which ^{describe} ~~provide evidence of~~ the rebuilding process also make clear that timbers were re-used on or near the same site. When School Wood Farm on Addingham Moorside was rebuilt around 1680, new floor boards were bought in but the other timber required was either felled nearby, "or taken out of the wood and timber that was in the old house".⁷ At Low Field, Beamsley, when a cart-house was built in 1833, the land agent specified "Carpenter Work with a floor laying over the Whole which is supposed to come out of Old House".⁸

field work at School Wood?

When cruck buildings were replaced, one common way for timber to be re-used was for the curved part of a cruck blade to be utilized as the lintel over a barn door (e.g. Matchless House, Draughton; Low Cross Bank, Addingham⁹). Equally often, the curved part of a cruck blade would be cut away to leave a straight length that could be re-used as a purlin (Hole Farm, Silsden). Some cruck blades were re-used as tie-beams (Cross Green, Lothersdale; Water Gate Barn, Barden¹⁰), and there are examples of complete tie-beam trusses built up from suitably trimmed pieces of former cruck blades (Tithe Barn, Lothersdale; Park House, Eastby¹¹). Yet another form of re-use was for reasonably straight lengths of cruck blade to be converted into ceiling beams, supporting the upstairs floor in a house (Snowden Beck, Askwith¹²).

Figure 1 - illustration of re-use of cruck blades

Purlins from cruck buildings were often used again as purlins when the buildings were rebuilt. Their cruck-related origins can be recognized from the positions of "halvings" to which wind-braces once fitted. Some purlins, for example at Hole Farm,

Figure 2 - illustration of re-use of cruck purlins

You can probably improve and add to this section

4.

*please
can you
confirm this?*

Silsden Moor,¹³ have halvings only at one end, implying that the other end was embedded in a stone wall. This adds to the evidence from a few standing cruck buildings to the north of our area that most such buildings in this region had stone end-gable walls.

→ at what point along the length of

*I actually
have no
examples
of this in
Table 1. Can
you help?*

In some cases, it is possible to see ~~where~~ ^{it} a re-used purlin originally fitted onto its supporting cruck blades, and thus to estimate the spacing of the crucks, or bay-length. Table 1 collects together evidence on bay-length, internal width and the nature of gable walls from standing buildings, and also from evidence obtained from re-used purlins and fragments of masonry (padstones) in rebuilt structures.

*Table 1
is at the
end*

Types of cruck

*This section
needs
massive
improvements
in the
light of
your knowledge*

One obvious feature of many re-used cruck blades is that peg-holes for fixing two sets of purlins with wind-braces can be detected, often (but not always) with trenches in the back of the blade into which the purlins fitted. This provides a good deal of evidence as to the design of the cruck trusses commonly used. They were clearly not of the type in which the lower purlin was supported by an extended collar or a blocking piece. They were also most typically of an elbowed shape, since an elbowed cruck can have an upper, straight section inclined at the same angle as the rafters, and can then bend downwards at a steeper angle towards its footing on a padstone or plinth. The upper, straight section made it possible for both purlins to be supported directly by the cruck blade, and it was usually this part of the cruck which was cut out for re-use.

Where evidence for two sets of purlins is found on a cruck blade, the distance between centres of the purlins is often about 1.5 metres. The fact that this spacing is so commonly found relates to the most common internal width of cruck buildings of about 5 metres (Table 1). Purlins were normally arranged so that rafters were supported at approximately equal intervals. Thus if rafters were supported by two purlins whose centres were 1.5 metres apart, the total distance from the ridge to the wall-plate was 4.5 metres. Simple trigonometry

*data on this
is in Table 2.*

*Table 2 and
Table 1 ought
to be combined*

5.

shows that if the roof slope was 56° , this corresponds to a building 5 metres wide.

All cruck trusses in this region had a collar beam below the apex, but very few tie-beams are found among re-used timbers, perhaps because many of the cruck buildings were barns with open trusses. None of the cruck blades we have seen is from an arch-braced truss, such as one might expect from an open truss inside a house.

The top end of nearly all re-used cruck blades has been cut off, so the form of the apex cannot be deduced. The one exception is Norwood Cottage, Beamsley,¹⁴ where a single cruck blade was sawn along its length in the eighteenth century, turning it into a pair of principals. These were mounted on a tie-beam as an upper cruck, and a new apex was made which preserved the halvings and peg-holes from the top of the original truss, allowing us to deduce that the crucks were connected below the ridge-piece by a short collar. In this way, they formed what is known as an A-type apex,¹⁵ which is the kind found in every standing cruck building in the district (Table 1). This fits a pattern shown by distribution maps given by Alcock and by Harrison and Hutton.¹⁶ They indicate that A-type apexes are typical of many Pennine regions of Yorkshire while the different C-type is found on the North York Moors and in the southern Pennines.

It would seem, then, that cruck trusses in this area were fairly standard in dimensions and design. They were around 5 metres in span, were often open trusses without a tie-beam, but had a collar at medium height, and a further, very short collar immediately below the ridge-piece. Each cruck-blade carried two purlins, and the lower purlins were also linked to the cruck-blade by wind-braces, the seatings for which can often be seen.

The majority of cruck blades are of relatively slight proportions, although exceptionally heavy and good-quality crucks are re-used ^{at Eastby and} in a barn roof at Low Hall, Appletreewick.

Ambiguous.
A short collar immediately below the apex is essential to the standard "A-type" apex.

A longer collar beam set below the purlins (position Q in Table 2) is found in only some buildings

Figure 3 to illustrate A-type apex and other key features and types of cruck truss

But note and discuss variations in cruck's recorded in Table 2, at the end.

Comment on collar beams, spurs and tie-beams.

6.

Please correct and improve

Note 17 would acknowledge advice from Dan Miles

Examination of tree-rings in timbers at Hole Farm, Silsden, suggests that when this was built, timber was short and relatively young trees (some less than fifty years old) were being felled. Some trees were also used which had previously been regularly lopped, probably for firewood, as shown by sequences of distressed rings.¹⁷ These conditions make dating of the timbers by dendrochronology very difficult, but one sample from Hole Farm has been tentatively dated ^{in this way and shows} with a felling date in the 1590s. Somewhat more substantial cruck blades at Askwith are from trees with about 70 years of growth, and with a sapwood/heartwood boundary at ring 46.

Surviving stone walling

Two particularly clear examples of continuity between early cruck buildings and later, rebuilt structures are Walton Hole Farm, Silsden Moor, and two miles to the north, Matchless House, Draughton.¹⁸ Both buildings contain re-used cruck blades, and each has a transverse wall in which the steep roofline characteristic of a cruck building can be traced below later masonry. In the Draughton house, the ends of purlins belonging to this early phase of construction remain embedded in the wall, and longer lengths of purlin are re-used in the barn roof.

If it is assumed that the timbers and walling at Draughton belong together, then a fairly complete reconstruction is possible. The overall internal length of the existing house is 9.6 metres. Given the bay-lengths quoted in Table 1, this seems likely to have originated as a two-bay structure with stone end walls and just one pair of crucks giving intermediate support to the roof. If that were the case, then the large number of re-used timbers which survive in the adjoining barn (a much later structure) represent a nearly complete set of purlins with one principal (blade) from the cruck framing, while a fragment from the other principal has been used to lengthen a floor beam inside the house. The neatness with which this set of parts fit together with the walls make the idea that this was a two-bay house a particularly persuasive interpretation.

Figure 4 (a) refers

We need more measurements from Draughton to justify this statement

Another house which was formerly cruck framed and which may also have been of only two bays with one cruck truss is Park House, Eastby (internal length 10.2 metres).¹⁹

At this house and at Draughton, therefore, investigations of re-used crucks and associated walling indicate a type of house which is not explicitly indicated in the sixteenth century surveys of Silsden and Cracoe. However, at Silsden, it may be that crucks were only mentioned when there was an impressive number of them. Thus where the survey of 1559 notes that "James Ryley hath erect one little house", it could have been a house with just one pair of crucks and stone gable walls, or it could have been a stone-walled structure of only one bay and with no crucks.

At Walton Hole, Silsden Moor,²⁰ there is one transverse wall which reveals the profile of a former cruck building with some roof slates still in place. These show that the steep roof flattened to a more gentle pitch near the front of the building. This and another transverse wall include fragments of chimneys, and in a barn are parts of two cruck blades from two separate trusses re-used in a room above the barn porch. One interpretation of the development of this site suggests that these remains belong to a stone-walled house with two heated rooms attached to a cruck-framed barn of at least three bays. This type of house/barn combination might be regarded as an early "laithe-house".

As well as retaining stone walling from ~~gable (and transverse)~~ ^{end gable walls (or transverse walls)}, Matchless House, Park House and Walton Hole all have fragments of old masonry in their back walls, though front walls in all three cases were rebuilt later.

Two buildings which retain fairly complete sections of front and back walls from the cruck-built phase in their history are Crow Trees, Silsden Moor (where no cruck timbers survive),²¹ and Lothersdale Tithe Barn (where two pairs of crucks have been re-used to form tie-beam trusses).²² In both these buildings, padstones can be seen on which the crucks formerly stood, and the eaves line of the cruck buildings at both sites is discernible. So much survives at Lothersdale, indeed, that a fairly complete reconstruction is possible, but neither end wall can now be traced and it is impossible to say how long the original structure was.

Can we produce a drawing of the Eastby cruck? — Figure 5?

But note ambiguity in the 16th cent. documents. "House" can mean any building, including farm buildings e.g. "house for hay".

Figure 4b refers.

they are not a pair —

I need to finish my report on Walton Hole before being sure of this.

Another candidate for Figure 5

8.

Two kinds of stone walling are evident in buildings which were originally cruck framed. In the Lothersdale Tithe Barn and at Crow Trees, Silsden, walls are a uniform 610 mm thick above a wider plinth. This reflects late sixteenth and seventeenth century practice when two statute feet became a standard wall thickness in this area. The Lothersdale barn has triangular openings in its walls exactly similar to triangular openings in the walls of a seventeenth century barn with tie-beam trusses three miles to the east at ^{Cononley 23} ~~Glusburn~~.

A different kind of walling found in association with re-used crucks is to be seen at Park House, Eastby. Some walls here ^{is} ~~are~~ battered on ^{its} ~~their~~ inside face so that the thickness diminishes from 850 mm at ground floor level to 650 mm at first floor level. There is a similar wall at Dixon Green, Silsden, a building known from documents²⁴ to have been in existence in 1579. This and other evidence suggests that very thick battered walls belong to buildings of the middle sixteenth century and earlier, whilst walls of uniform 610 mm (two-feet) thickness are later. *A former gable end*

Documents point to cruck buildings being erected in this area in the fifteenth century and throughout the sixteenth. For example, there is reference to work being done on a cruck building at ^{Kirkby 25} ~~Malham~~ in 1454-5, and the Cracoe buildings listed in 1586 included some old enough to be falling down as well as some newly built. As previously mentioned, dendrochronology suggests a date in the 1590s for re-used crucks at Hole Farm, Silsden, and it is likely that cruck buildings continued into the seventeenth century, with the few known upper crucks in the area²⁶ dating from perhaps 1700. It will be observed, then, that the evidence from wall thicknesses just discussed can be useful in allowing later (post-1580) buildings to be distinguished from earlier representatives of the long period during which cruck structures were regularly erected.

Types of cruck building

It is clear that surviving fragments of cruck building found in the Wharfe and Aire valleys around Silsden represent buildings of several types, most notably two-bay houses, detached barns, and barns attached to houses in the "laithe house" manner. To complete the interpretation of this evidence, we finally need to notice one other type of structure. This is represented by a standing cruck building at Middleton near Ilkley which appears to have originated as a house with shippon and barn under one roof.²⁷

There are still four pairs of crucks within this building, and the cruck framing seems to have run continuously from the dwelling into the barn and shippon.

Outside our area, in tributary valleys of Calderdale, there are cruck buildings at Ripponden and Barkisland²⁸ which may also have had accommodation for cows or other non-domestic activity within the same structure as the dwelling. Both examples originally had three pairs of crucks, and their essential feature is that they were cruck-framed throughout with no solid stone wall dividing the dwelling from the non-domestic space. From the plans of both houses and of the Middleton house, it is clear that the hearth with its fire-back and probably a smoke-hood formed the division between the two parts of ^{the} building.

In none of these buildings is it possible to reconstruct the original plan in detail, so it is unclear whether they were long-houses in the strict sense of having a common entrance for both the dwelling and the shippon. But it is quite clear that they were very similar to long-houses, and at the same time different from early houses of the kind discussed in relation to Walton Hole, Silsden Moor. The key distinction is the solid walls within the latter which probably separated the dwelling from the barn or shippon. It is these which make it more appropriate to think of the original Walton Hole as a "laithe house" rather than a long-house.

Another example which could be either a long-house or a laithe house is Dixon Green, Silsden,²⁹ where the most credible interpretation

I'm not sure about "laithe houses". Walton Hole is the only clear example and may just be an oddity.

Figure 6 would be some comparative plans

More fieldwork needed at Dixon Green -- fragment of cruck

of

surviving fragments of walling and timber is that this started as a single-bay dwelling attached to a cruck barn. The gable-end wall of the dwelling survives and has already been mentioned as an exceptionally thick, battered wall. The wall between the house and the barn which contains the main chimney could also be early, though the evidence is less clear. The early single-bay house could thus have been entirely stone walled, with a roof supported on purlins spanning between the walls. The barn now attached to this house contains one fragment of cruck timber and may have contained more until it was re-roofed in the 1960s. The front wall of the barn was rebuilt in the seventeenth century to the low eaves line of the cruck building, the cart entrance still being clearly recognizable.

Cracoe houses

At Cracoe, the survey of 1586 makes it clear that houses and barns were usually of different construction ^{from each other, e.g. oak vs. ~~oak~~} and often were built of different kinds of timber. Fragments of at least one of the buildings described in the survey have survived at Coxon's Farm, which may be identified either with John Cockson's farm in the survey, or with Richard Cockson's.

Both these members of the Cockson family possessed fire-houses with three pairs of cruck, that is, of the same length as the two Calderdale houses mentioned above, and a little smaller than the building with four cruck trusses at Middleton. It is therefore tempting to surmise that the two Cockson houses were of the same general long-house type.

In their analysis of the surviving buildings at Coxon's Farm, Cracoe, Harrison and Hutton³⁰ indicate their belief that this corresponds in its earliest part to one of the buildings mentioned in the 1586 survey. They imply that it may have been a long-house, in which the dwelling occupied only one bay, and was separated from the agricultural part of the building by a cross-passage (or hearth passage) aligned with the back of the fireplace, having doors at the front and the back of the building.

One problem with the long-house interpretation of Coxon's Farm is that both Cocksons in 1586 each had a barn and a

We need to think carefully how much emphasis to give to Cracoe. We've not done fieldwork there - but it offers such good material.

"haye house" in addition to the "fire house". The local custom was for cattle to be accommodated in a shippon formed at one end of a barn (or in the aisle if there was one). The former cruck barn at Crow Trees, Silsden Moor, has doorways for such a shippon. Thus if the Cocksons' fire houses were really something like long-houses, it seems surprising if the non-domestic end was used for cattle. The 1586 document estimated that the Cocksons had grazing for sixteen cattle each, but does not mention shippons at all.

Perhaps we need a distinct section in the paper on barns.

One clue comes when we consider what was meant by "haye houses" in the 1586 survey. At Stephen Kytchen's farm there is reference to a "house for hay of three paire of Crokes" and at William Howson's farm, "one house standing in the feild of two paire crockes ashe tymbre". Both these sound very much like field barns. It may well be, indeed, that neither "haye houses" nor barns were located near the dwelling, and that although these buildings may have had accommodation for cattle, the dwelling took the form of a long-house so that it was possible to keep some cattle and some hay near home.

i.e. all barns and hay houses in the document may be field barns and the lower end of fire houses may have been the only agricultural accommodation near the dwelling

The probable existence of cruck-framed field barns at Cracoe is of considerable interest since most existing field barns in this area are of eighteenth or nineteenth century date, and there is little evidence as to earlier structures. However, one eighteenth century field barn at Addingham, known as Paradise Laithe, contains re-used cruck timbers,³¹ and it is tempting to think of them as having come from a cruck-framed "hay-house" on the same site.

Definite cruck timber in one aisle as well as possible cruck blades re-used as aisle posts

Conclusion

To sum up, we have found archaeological evidence for four or five types of cruck building in the Aire and Wharfe valleys, in an area south of Cracoe and centred on Silsden. (Table 3). Although interpretation of much of the evidence is necessarily tentative, most of these building types can be paralleled by houses or barns mentioned in the sixteenth century surveys of Cracoe and Silsden Moor.

REFERENCES

(Note that YVBSG denotes reports on buildings by members of the Yorkshire Vernacular Buildings Study Group. These are deposited with the Yorkshire Archaeological Society and the National Monuments Record, where they may be inspected.)

1. Both surveys are preserved in the Clifford Estate Papers, held by the Yorkshire Archaeological Society. We have used transcripts prepared by Kate Mason, to whom we are greatly indebted. The two documents are:
 - (1) "Sillesden Improvements without licence," 1559, DD 121/31/1;
 - (2) "A survey tayken at Cracowe," 1586, DD 121/31/10.
2. See M. W. Barley, The English Farmhouse and Cottage, London: Routledge and Kegan Paul, 1961, pp. 117, 118, who takes the Silsden and Cracoe surveys together as either "1586 or 1603"; also N. W. Alcock, Cruck Construction, London: CBA Research Report No. 42, 1981, p. 29, who dates the surveys to 1557 and 1586, but locates both at Cracoe.
3. Ricroft's house and laith was probably located at either Upper Hay Hills (Se 035478) or in a field named Laithe Close, where there is no longer a building, according to Bette Hill and Mary Crossley. Barley, The English Farmhouse and Cottage, p. 118, mentions Ricroft's barn but assumes that three pairs of crucks in these documents mean buildings of three bays.
4. N. W. Alcock, Cruck Construction, lists only re-used crucks, not other components of cruck buildings. Barbara Hutton discusses re-used crucks in relation to early walling in her report on Matchless House, Draughton, YVBSG report no. 987.
5. The aisled barns are in Silsden (SE 040465) and Holden Gate (SE 066441). Fragments of box-framed buildings have been found in Addingham at Low Cross Bank, Sugar Hill and Fir Cottage. In addition, Addingham Manor House contains a heavy timber partition and truss in the box-frame tradition, and there are important box-framed buildings just beyond the Addingham boundary at Hollin Hall, Ilkley, and West Hall.
6. This area includes Barkisland, Norland and Elland. The main source for figures on "box-framed" buildings is A. Pacey, Elland Buildings, 1964, (unpublished typescript in Elland Public Library and VAG Off-print Library). The main source for crucks is Alcock, Cruck Construction. Both sources have been supplemented by recent discoveries and checked against Colum Giles, Rural Houses of West Yorkshire, London: HMSO for RCHM, 1986.
7. "Evidence of Thomas Holdsworth of Addingham", Ermysted's Grammar School Deeds, Skipton, Lawsuit of 1706, transcript by Kate Mason; also quoted in Kate Mason, "Laithes: the Barns of Craven", Folk Life, 27, 1989, p. 85.
8. Thomas Parker, land agent, MS. Day Book, entry for 10 April 1833, private collection, Mrs. D. M. Shepherd.
9. YVBSG reports 987 and
10. YVBSG report 697 (Water Gate; no report deposited for Cross Green).
11. YVBSG reports 539 and 1267.
12. YVBSG report 380.

(to be continued)

Table 1

Dimensions of some cruck-framed buildings and evidence regarding the construction of end gable walls.

(YVBSG denotes the number of a report by the Yorkshire Vernacular Buildings Study Group from which data can be checked.)

Building	Gable end wall	Lengths of centre bays (metres)	Lengths of end bays (metres)	Internal width (metres)	Apex type
<u>STANDING BUILDINGS</u>					
Red Gables, Middleton (YVBSG 1259)	both ends altered	4.3 4.9 4.5	altered	5.0	A
Duke's Barn, Bolton Abbey (YVBSG 696)	stone (one end altered)	5.8 5.3 now	5.8 originally, originally, 5.5 now	5.5	A
Corn Barn, Drebley (YVBSG 597)	stone	4.7 4.9	3.0 3.0	6.5	A
Small Barn, Drebley (YVBSG 598)	stone (one end altered?)	4.0 5.0	2.5 altered	5.5	A
Barden Scale Barn (now destroyed; data from Alcock, Walton)	stone	4.9	5.4 3.7	7.0	A
<i>Better data, plans, etc., from Halifax museums??</i>					
<u>DIMENSIONS DEDUCED FROM FRAGMENTS OF WALLING AND RE-USED TIMBER</u>					
Lothersdale Tithe Barn (YVBSG 1267)	end walls both rebuilt	n.d.	n.d.	5.6	n.d.
Park House, Eastby (YVBSG 539)	stone, battered	probably 2 bays only	5.1 5.1 if 2 bays	5.0	n.d.
Crow Trees, Silsden Moor (YVBSG 1322)	stone, 0.61m thick	n.d.	5.1	5.9	n.d.
Norwood Cottage, Beamsley, (YVBSG 1269)	altered	n.d.	n.d.	4.8	A
Hole Farm, Silsden (YVBSG					

can you add to this?

Table 2

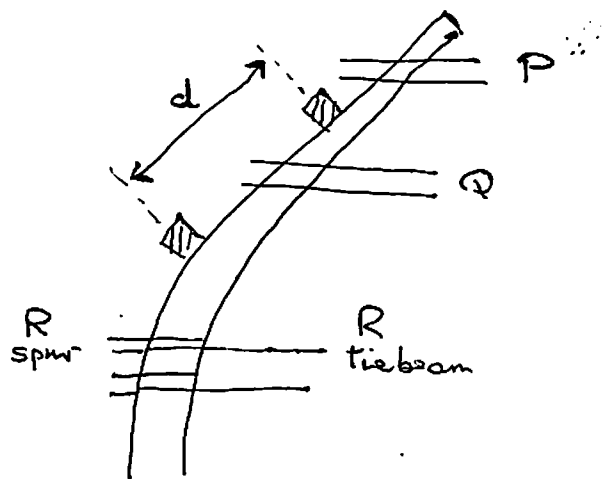
Variations in the design of cruck trusses.

All crucks with a "type A" apex have a collar at P, above the higher purlin.

Some crucks have a collar beam at Q, others do not.

Most crucks will have a halving at R, designed to take either a spur or a tie-beam.

(NB "missing" means that the timber has been cut short)



BUILDING	Halving at P?	Halving at Q?	Halving at R?	Dimension "d" (metres)
Cross Green, Lothersdale	missing	no	spur or tie?	2.3
Water Gate, Barden	missing	lap joint	spur?	1.7
Walton Hole, Silsden Moor	missing	no	missing	1.7
Matchless House, Draughton	missing	missing	tie?	1.5
Low Edge, Silsden Moor	missing	yes	missing	1.9
Lothersdale Tithe Barn	yes	yes	spur	1.4
Corn Barn, Drebley	yes	no	spur	2.1
Small Barn, Drebley	yes	no	spur	1.7
Duke's Barn, Bolton Abbey	yes	no, truss 1 yes, truss 2	spur spur	1.1 1.5
Norwood Cottage, Beamsley	yes	no	spur or tie?	1.2
Park House, Eastby	missing	yes	tie	1.2
Red Gables Middleton, Ilkley	yes	yes	tie, truss 2 spur, truss 4	1.6

can you add to this?
Trusses 1 and 2 should probably be amalgamated.

Table 3

Five types of cruck building in the Aire and Wharfe valley
 (* denotes standing crucks)

Building type and examples	Map reference	YVBSG report no.	No. of crucks	Possible date
<u>DETACHED BARNS (LAI THES)</u>				
Crow Trees, Silsden Moor	SE 025495	1322	?	c.1600
Lothersdale Tithe Barn	SD 957459	1267	2+*	1600-20?
*Corn Barn, Drebley	SE 053591	597	3	?
*Small Barn, Drebley	SE 052592	598	2	?
*Duke's Barn, Bolton Abbey	SE 072542	696	2	?
Hole Farm, Silsden	SE 028474	?	?	1595
Ricroft's laithe in Silsden survey of 1559 (<i>but see below</i>)	?SE 035478	-	3	1555
<u>FIELD BARNS ("HAY HOUSES")</u>				
Paradise Laithe, Addingham	SE 078517	1082	?	?
William Howson's, in Cracoe survey of 1586	?	-	2	?
<u>TWO-BAY DWELLINGS</u>				
Matchless House, Draughton	SE 039522	987	1	c.1600
Park House, Eastby	SE 017543	539	1	before c.1580
Ryley's "little house", Silsden survey of 1559	?	-	?1	c.1550
<u>LAI THE-HOUSE TYPE</u>				
Walton Holfe, Silsden Moor	SE 042492	-	2	c.1600
Dixon Green, Silsden Moor	SE 032478	1261	?	before 1579
no examples identifiable in documents (<i>but Ricroft's laithe and fire house could be of this form</i>)				
<u>LONG-HOUSE TYPES</u>				
*Red Gables Middleton, Ilkley	SE 122492	1259	4	?
Coxon's Farm, Cracoe	SD 976600	553	3	before 1586
*Ripponden and	SE 040197	1297	3	?
*Barkisland examples in Calderdale	SE 067207	?	3	?
William Ottalye's house, Silsden survey, 1559	?	-	3	c.1555

LIST OF POSSIBLE ILLUSTRATIONS

Figure 1 Examples of cruck blades

The attached drawing of Water Gate, Barden, indicates one kind of diagram that might be helpful - i.e. showing the cruck in its present position and also how it may have looked originally. We might also illustrate a cruck from the cart entrance to a barn.

Figure 2 Examples of cruck purlins

Can you provide an illustration here, Alison? Perhaps you could use a reconstruction of Hole Farm to illustrate both crucks and purlins on one diagram. Or would you prefer a different kind of illustration of the very interesting work you were doing on Hole?

Figure 3 Typical cruck trusses

The rough version of this I have included is not satisfactory. Table 2 seems to show that there are several kinds of truss, some with a collar beam between the purlins, some without, and other variations. Perhaps we should try to identify the main kinds of cruck truss and make a drawing that compares them.

Figure 4 Crucks shown against gable walls

I envisage combining Matchless House and Walton Hole on one drawing, hence Figures 4a and 4b attached. However, I find that there are no measurements - only sketches - on which to base the Matchless House drawing, so we would need to go back there to do more fieldwork.

Figure 5 Example of restoration of a cruck truss with surviving walls

The obvious example is Lothersdale Tithe Barn where the surviving cruck timbers could be re-assembled in their original positions without much difficulty (Figure 5b). But I have a feeling that a similar restoration ought to be possible with Park House, Eastby. I enclose a drawing of the cross-section of this house in its present state. You have measurements for the cruck blades, I think. Can you fit them into the section, as with the Lothersdale example? We could then use Park House instead of Lothersdale, or try for both on one sheet.

Figure 6 Comparative plans

My idea for this is five small drawings of the five types of cruck building plan listed in Table 3. The examples used, unless you have better ideas, might be:

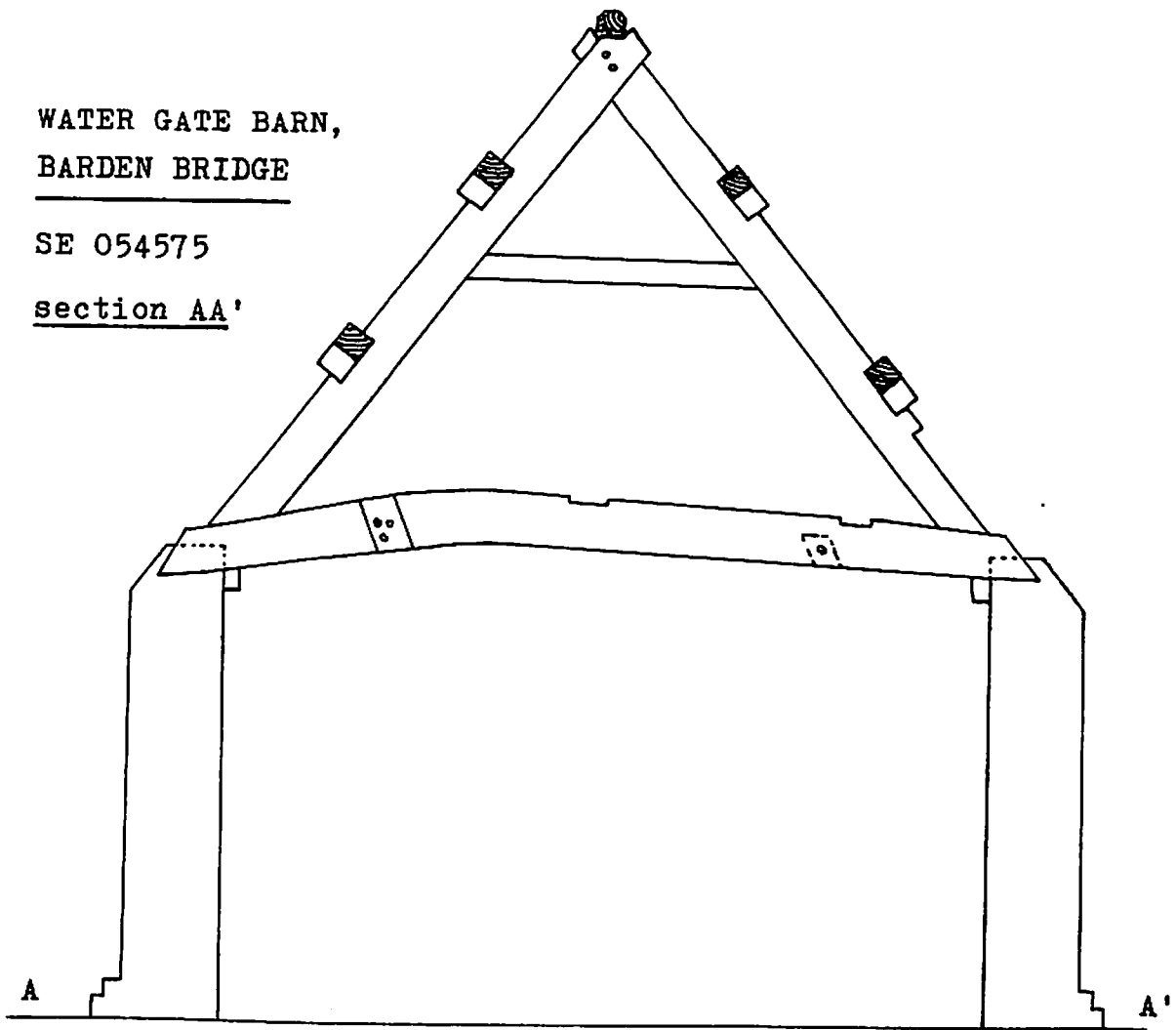
- 1) detached barn - one of the Drebley barns.
- 2) field barn - ?
- 3) two-bay dwellings - Park House, Eastby
- 4) laithe-house type - Walton Hole
- 5) long-house - Red Gables, Middleton

I haven't started on this drawing yet.

WATER GATE BARN,
BARDEN BRIDGE

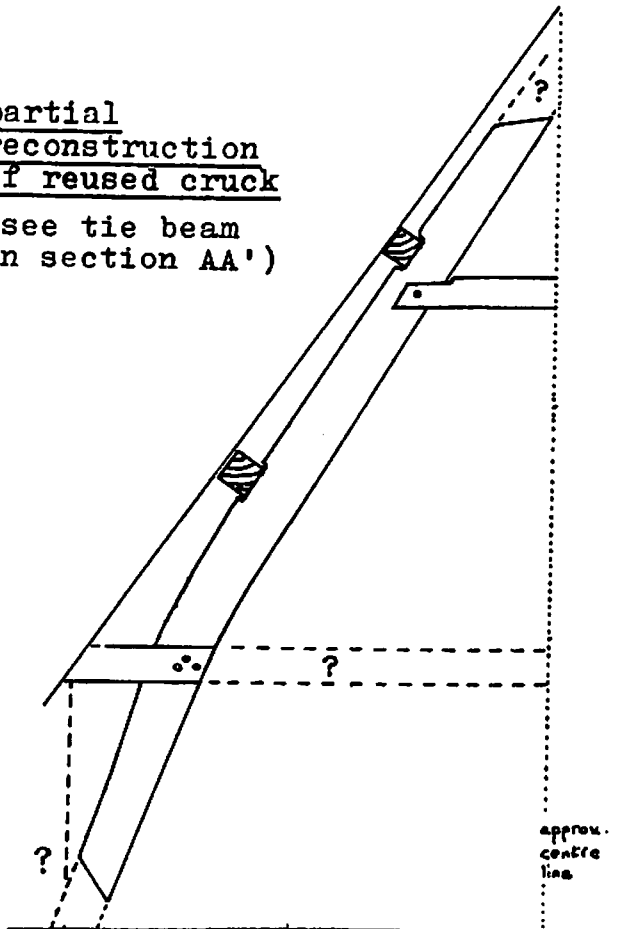
SE 054575

section AA'



partial
reconstruction
of reused cruck

(see tie beam
in section AA')



The barn was originally thatched with heather. Remnants of this are now covered by corrugated iron. As with other heather-thatched roofs, rafters are very rough (some are untrimmed larch poles), and are very closely spaced.

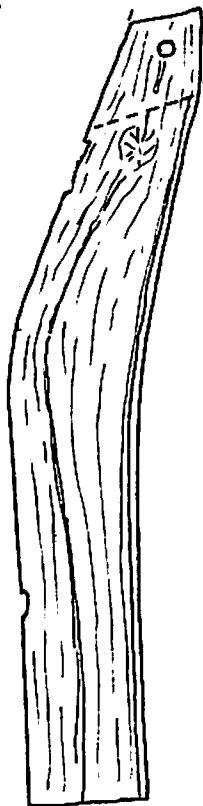
Arnold Pagan
2 Sept. 1980
No. 62
No. 697

Cross Green, Lothersdale

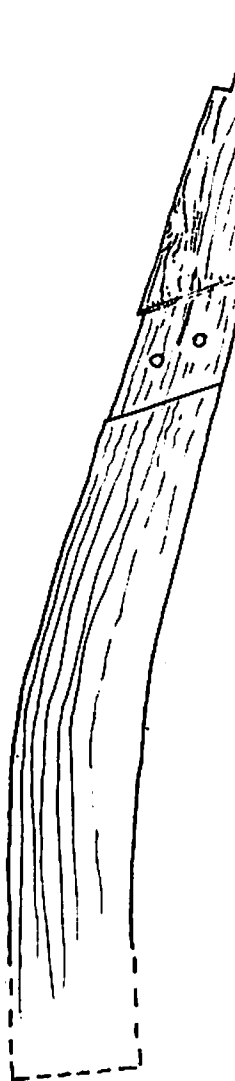
SD 961473

Two cruck blades re-used as tie-beams in the roof of the barn. The shorter length was broken by the collapse of the roof.

Halving for tie-beam or spur on the other face



halving



trenching and peg-holes to secure purlins

timber cracking and near to breaking

peg-holes for purlins

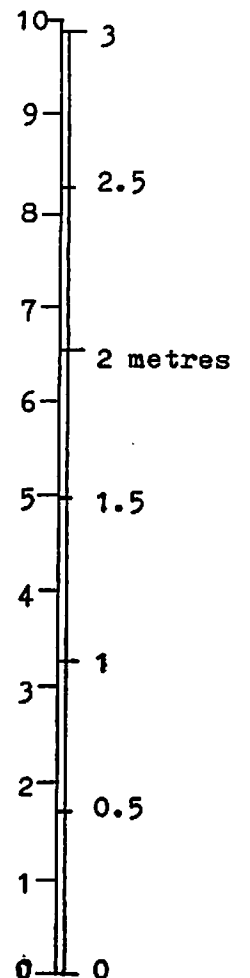


Figure 3

Generalized diagram of the type of cruck truss found in the Silsden and Addingham areas.

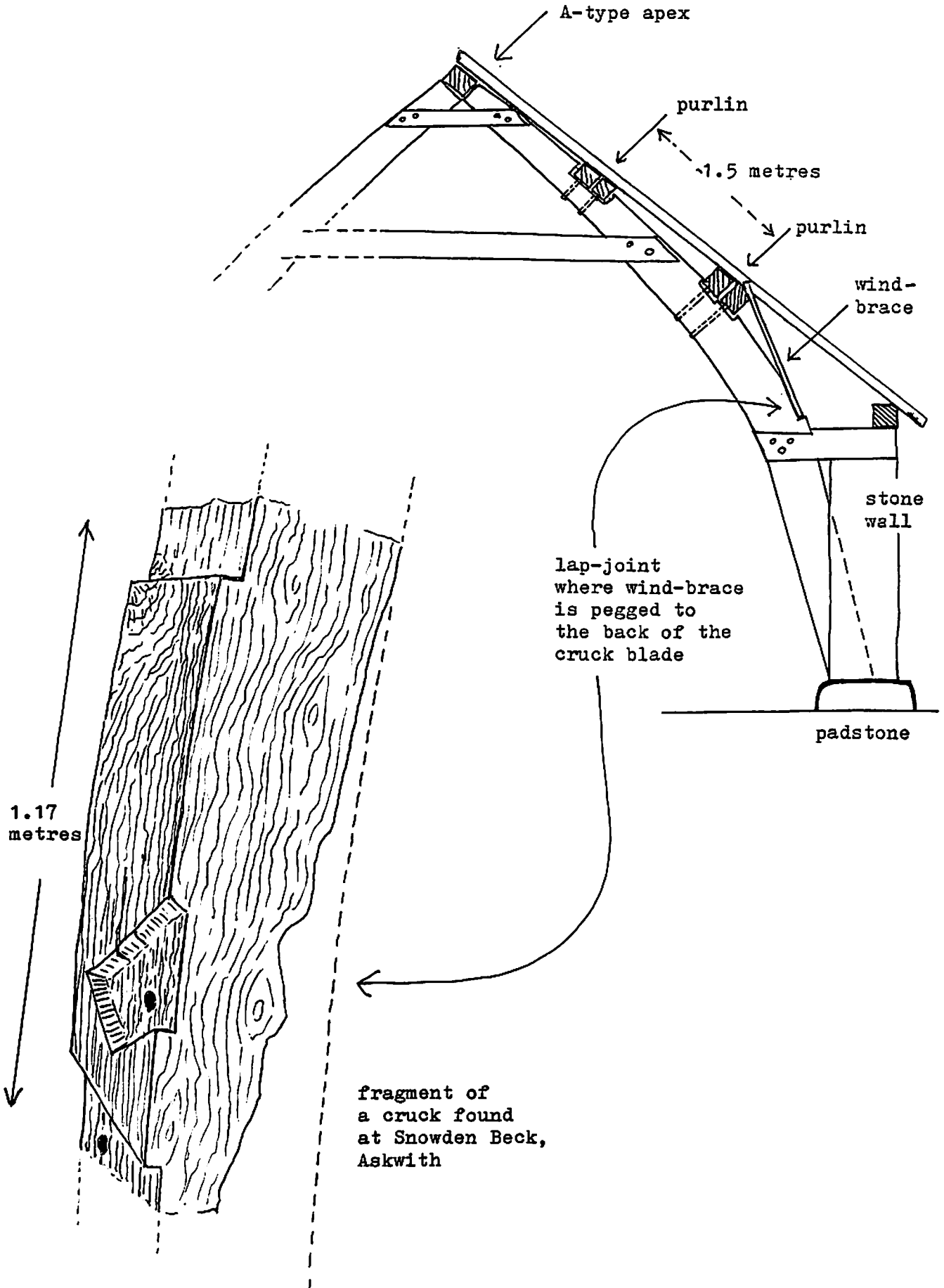


Figure 4(a)

MATCHLESS HOUSE, Draughton, showing the gable wall from a cruck building with a length of cruck found on the site, re-used as a barn door lintel.

(not to scale)

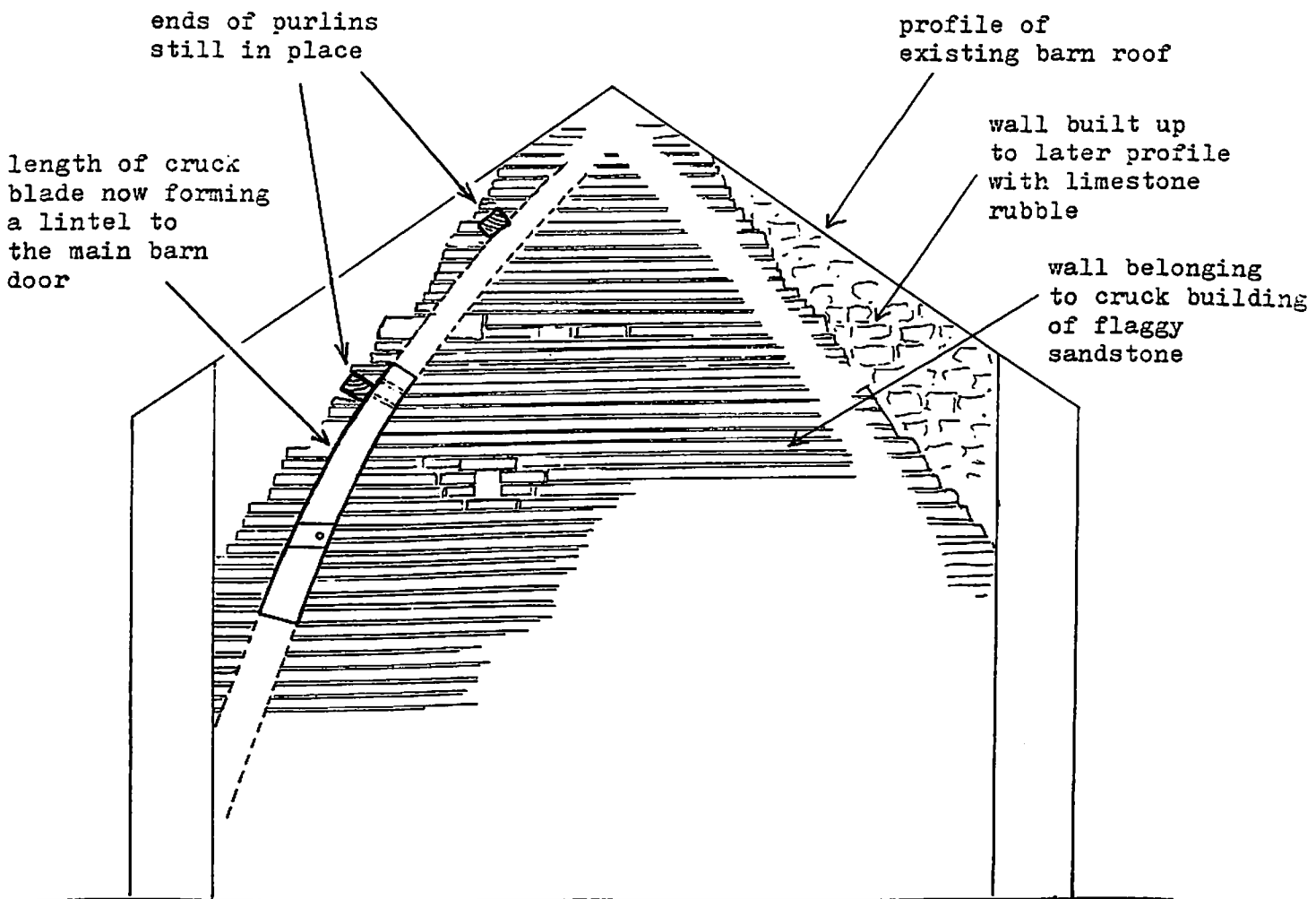


Figure 4(b)

WALTON HOLE, Silsden Moor.

Elevation of the gable wall at the east end of the house.

profile of house
as reconstructed
in 1719, mainly
using squared
blocks of gritstone

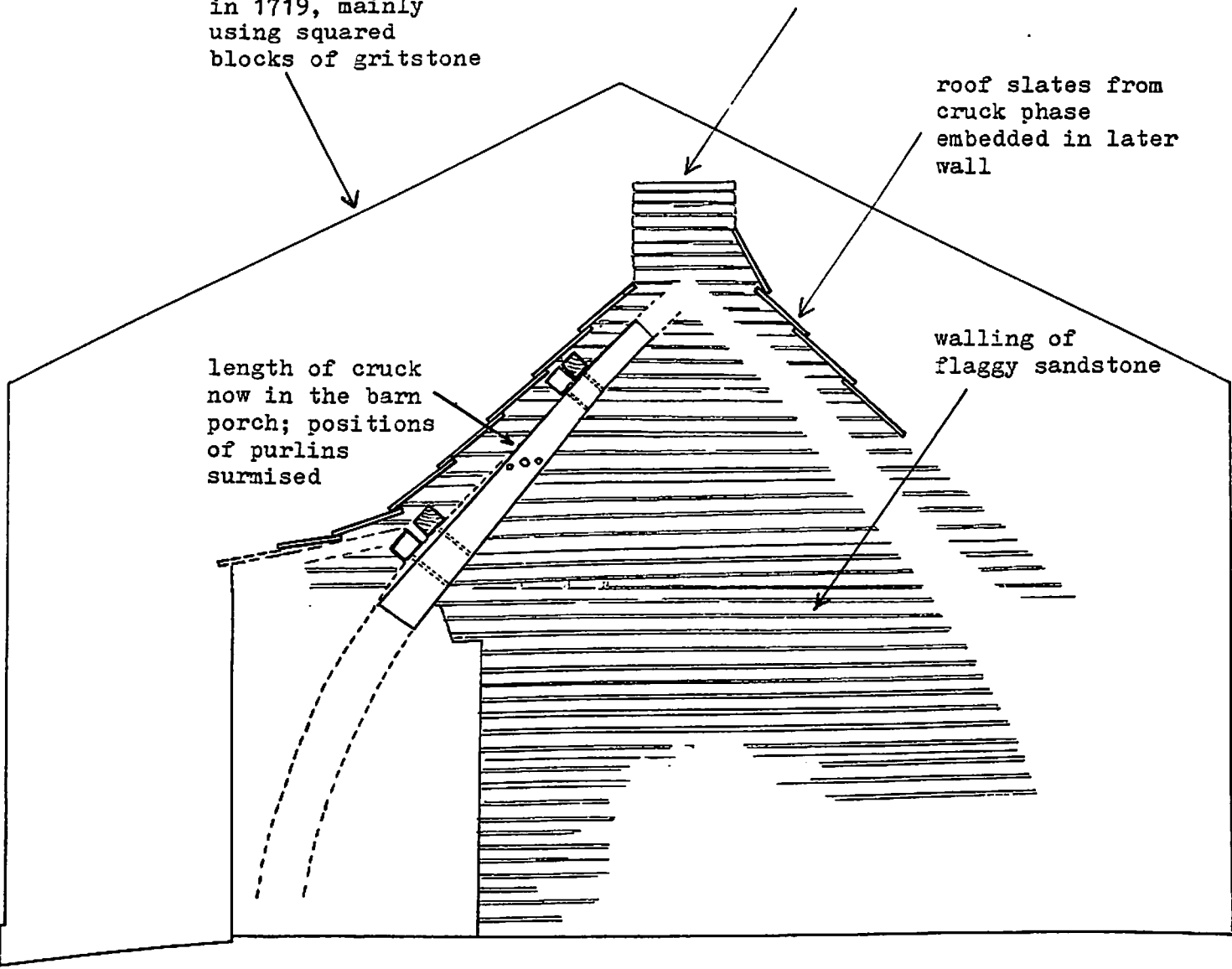
chimney belonging
to the cruck phase

roof slates from
cruck phase
embedded in later
wall

length of cruck
now in the barn
porch; positions
of purlins
surmised

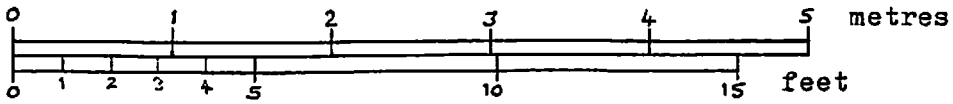
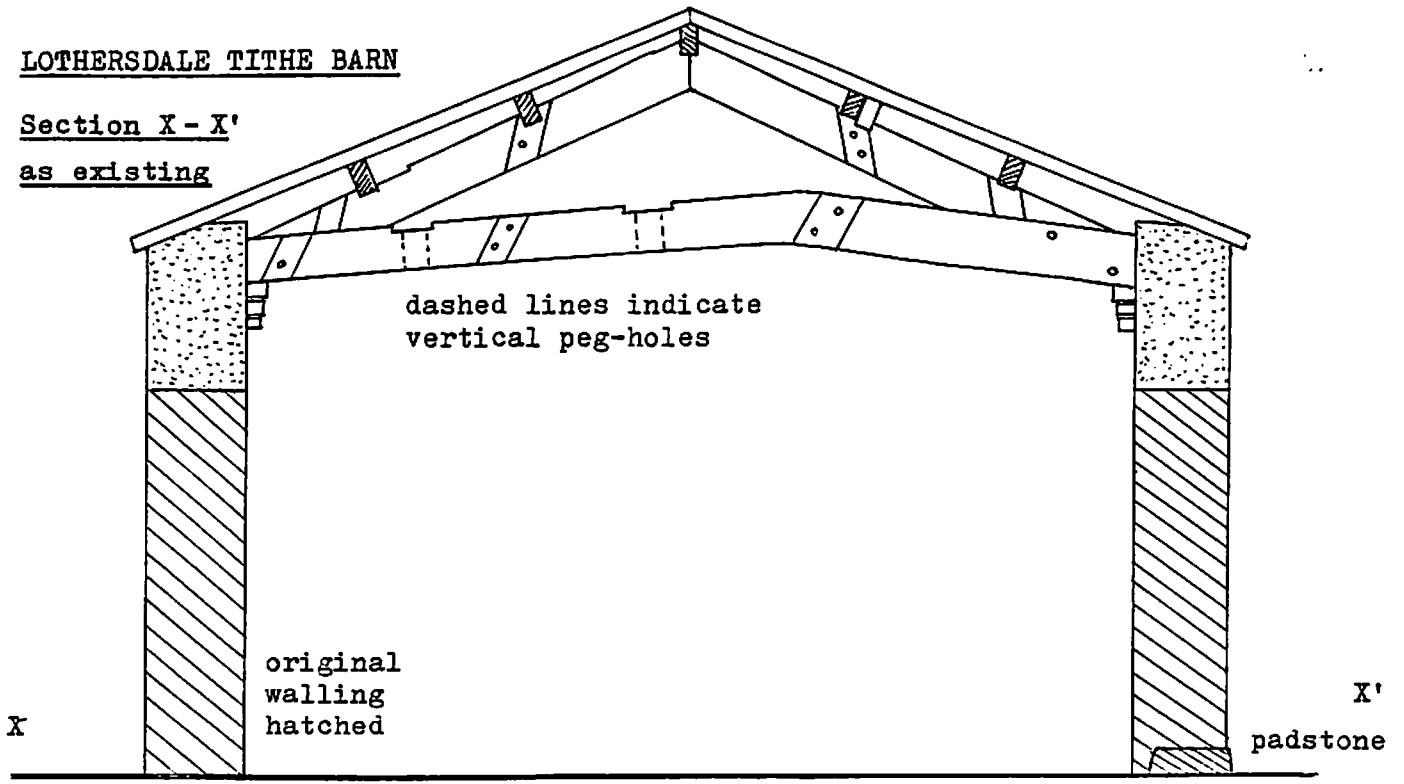
walling of
flaggy sandstone

scale of metres



LOTHERSDALE TITHE BARN

Section X - X'
as existing



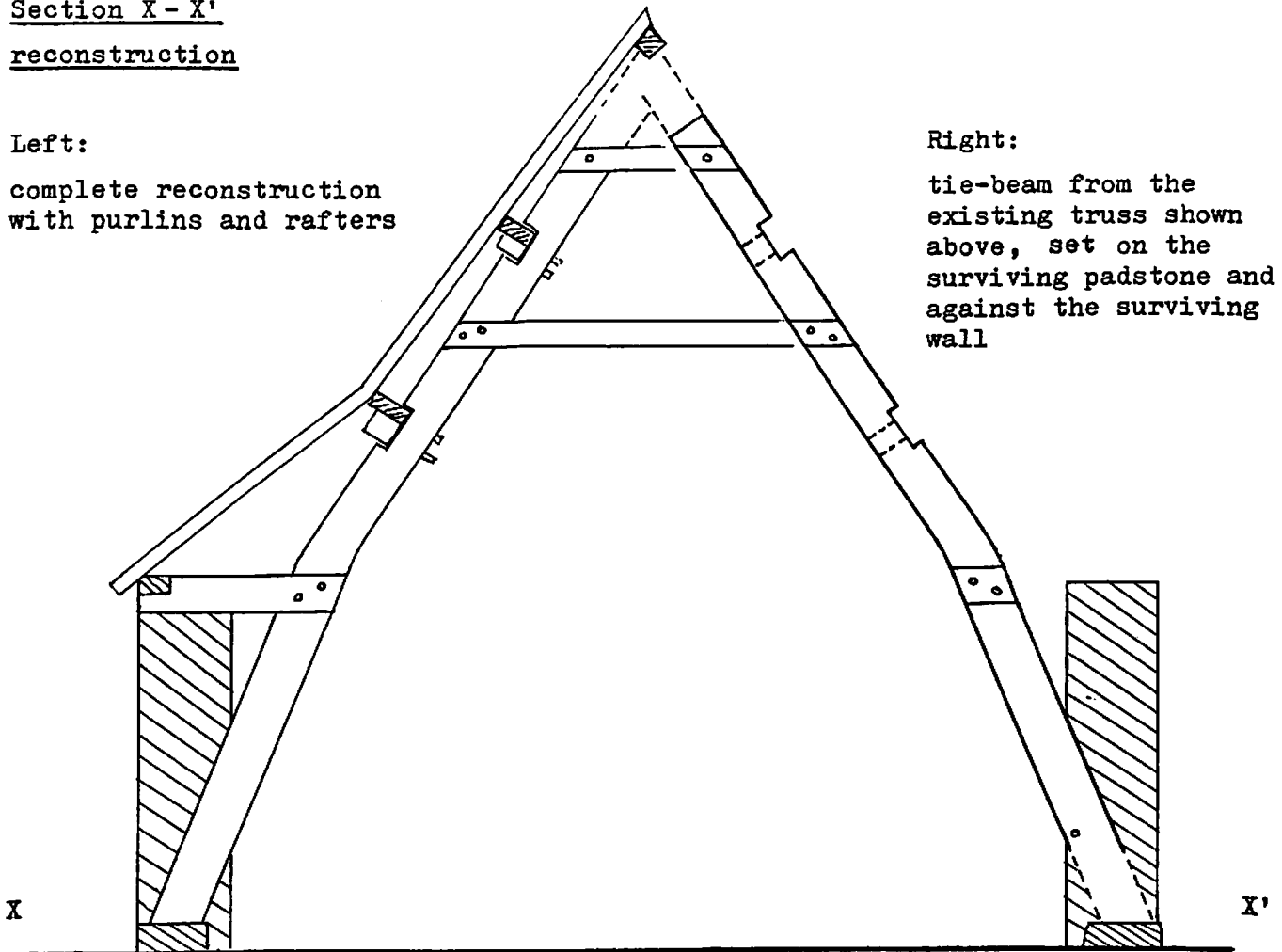
Section X - X'
reconstruction

Left:

complete reconstruction with purlins and rafters

Right:

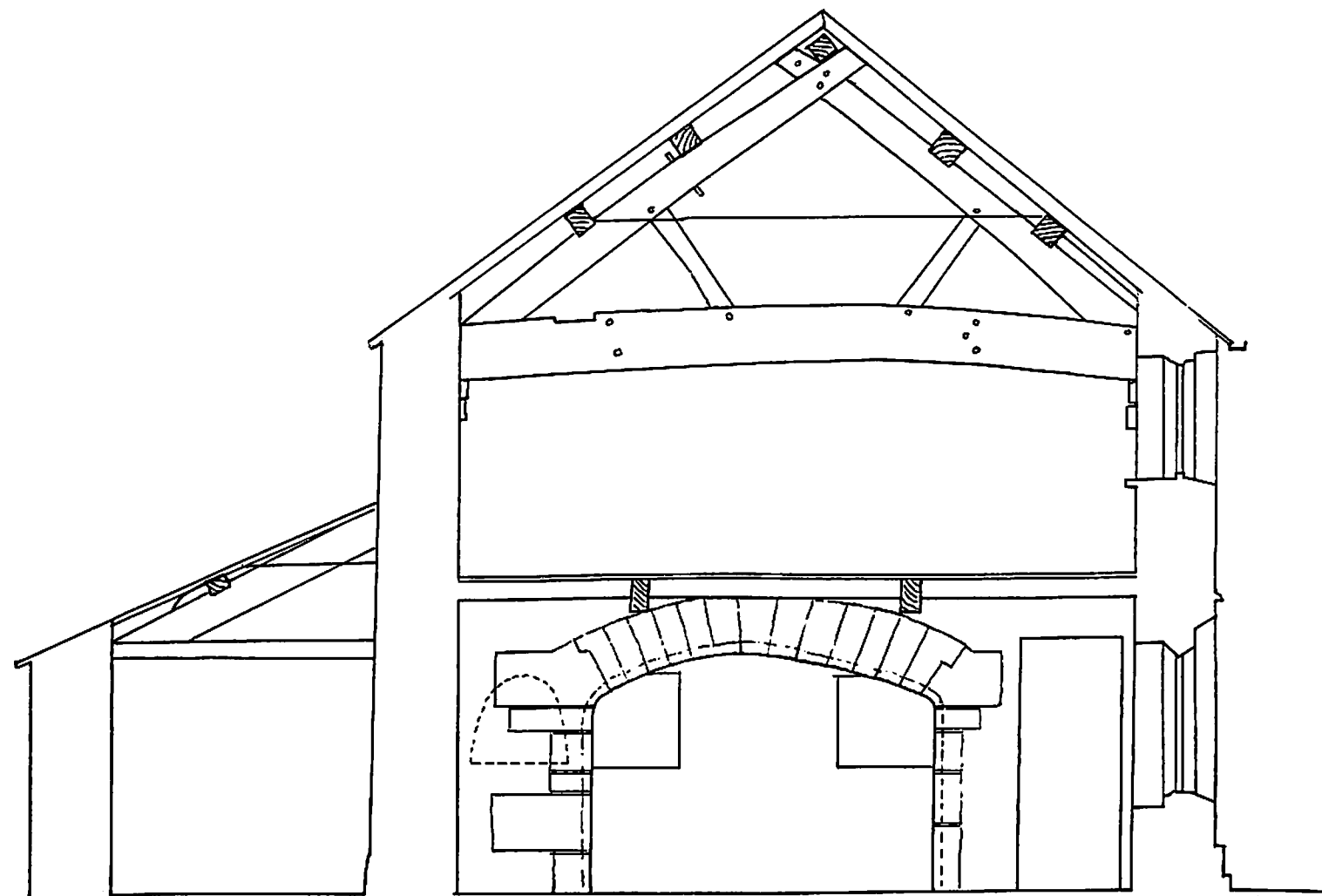
tie-beam from the existing truss shown above, set on the surviving padstone and against the surviving wall



Park House, Eastby

SE 017543

Section through Dairy and
Housebody, with tie-beam
truss made from re-used
cruck timber



Scale 1:100

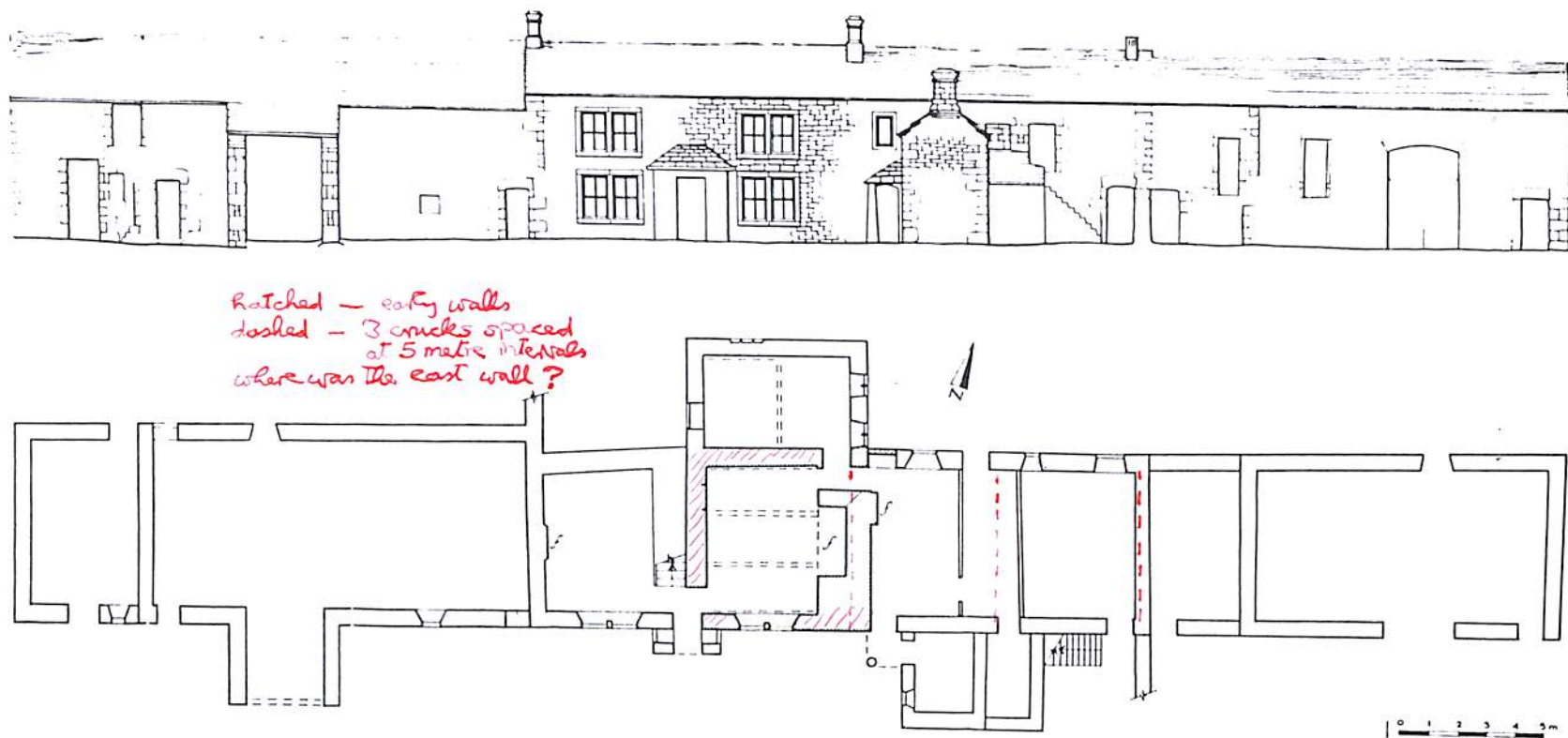


Figure 3.5. Cracoe, Coxon's Farm, 1669 [553]. Stone house in Craven, earliest part corresponding in length to 16th century description. Passage with rear door now removed, stone-arched fireplace; added rear service wing and 55 m long range of outbuildings, perhaps incorporating a second dwelling on east side of passage at some stage. Crucks re-used as principals in passage roof and as barn lintel.

dimensions of the part which is claimed to be of same size as 16th cent. — ~~6 1/2 m long~~ x 6 1/4 m wide, wall thickness, ends 750 mm and 900 mm behind fire. Back 600 mm, front, c. 500 mm. Rebuilding of 1669 included a fine arched fireplace — part of "longhouse"