



Top Left: The chimneybreast in the Living Room at Stirrups, near Mapledurham. The fire-back and jambs still have original brickwork (2-inch, hand-made) from the 15<sup>th</sup>-16th Century. Above, the larger 18<sup>th</sup>-C. brickwork where the chimneybreast was rebuilt in the Georgian era, matching the re-facing, which is similar at Grove Street.



Bottom Left: the side walls and fire-back in the chimneybreast at Stirrups. These are Tudor era bricks.



Above, Right: the 2-inch hand-made bricks in Living Room chimneybreast at 330 Grove Street Petworth.

### 5.3 Historic Joinery.



#### Top Left: Stirrups, Oxfordshire.

The original 11-inch oak floor-boards which survive under modern plyboard underlay for the 20thC. carpets.

These wide floor-boards date from the 17<sup>th</sup>-Century, or earlier. Because pit-sawn boards were so labour-intensive, large sections were used in order to reduce the effort of sawing.

This compares -below- with the attic floorboards at 330 Grove St. [below].



#### Left: Attic at 330 Grove Street, Petworth.

Here, it is interesting to compare these oak floorboards with the prestigious estate house in Oxfordshire at Stirrups (Grade II\* Listed). The mismatched run of boards may suggest a possible original location where a rear stair was run; however, in any case, this ancient floor covering indicates that the attic was used as a bedroom and that it may have been in use as early as the 17<sup>th</sup>-Century. This floor may be original, or it may suggest a late 16thC date for the construction of this estate cottage, with 'improvements' in the 17thC. The board lying horizontally above appears to be a dislodged roof timber, given the tenon on one end. Carpenter's marks are clearly visible and are shown later in this report [page 46].

## 5.4. Surviving Timber-Frame Roof in the Attic: Construction Types.

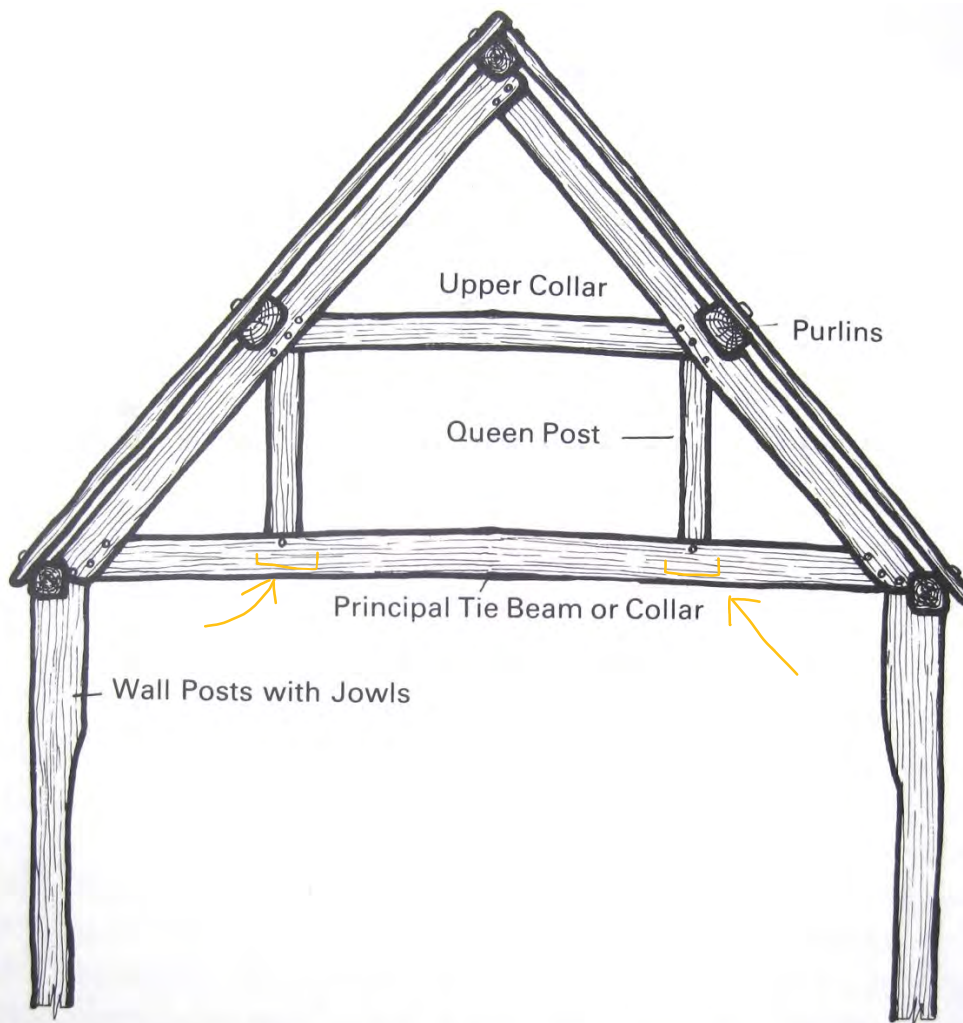
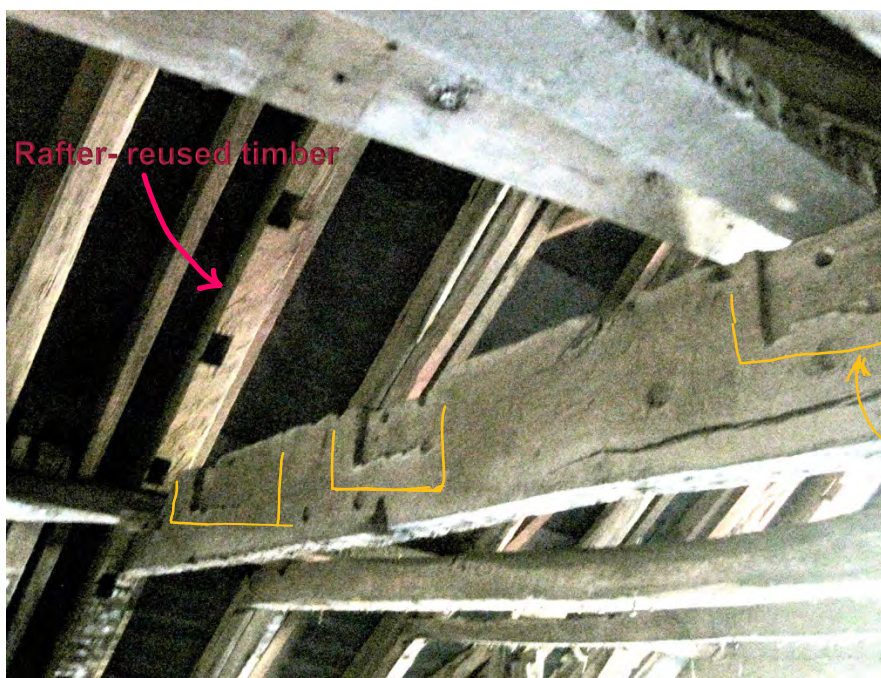


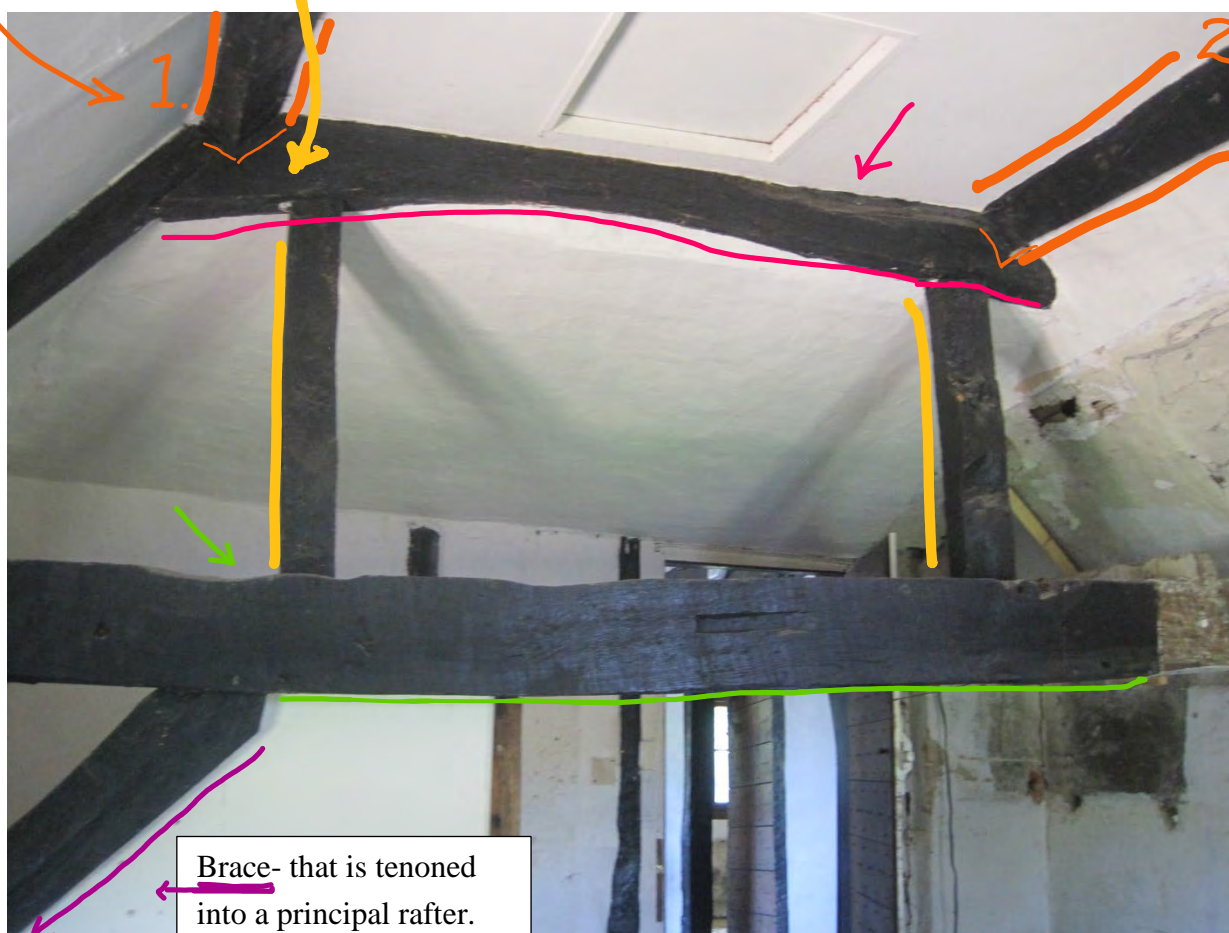
Fig 62 Queen post roof. The queen post developed coincident with the king post.



Above: a diagram of the Queen post roof, which may relate directly to the surviving collar tie beam at 330 Grove Street. [Credit: "*Restoring Timber Framed Houses*" pg.93, David J. Swindells, 1987; Butler & Tanner, Frome; for David & Charles.]

Left: there are obvious 'ghost' markings where the upright members of a Queen post may have originally been constructed. This may be compared, again, with Stirrups' Queen post roof.

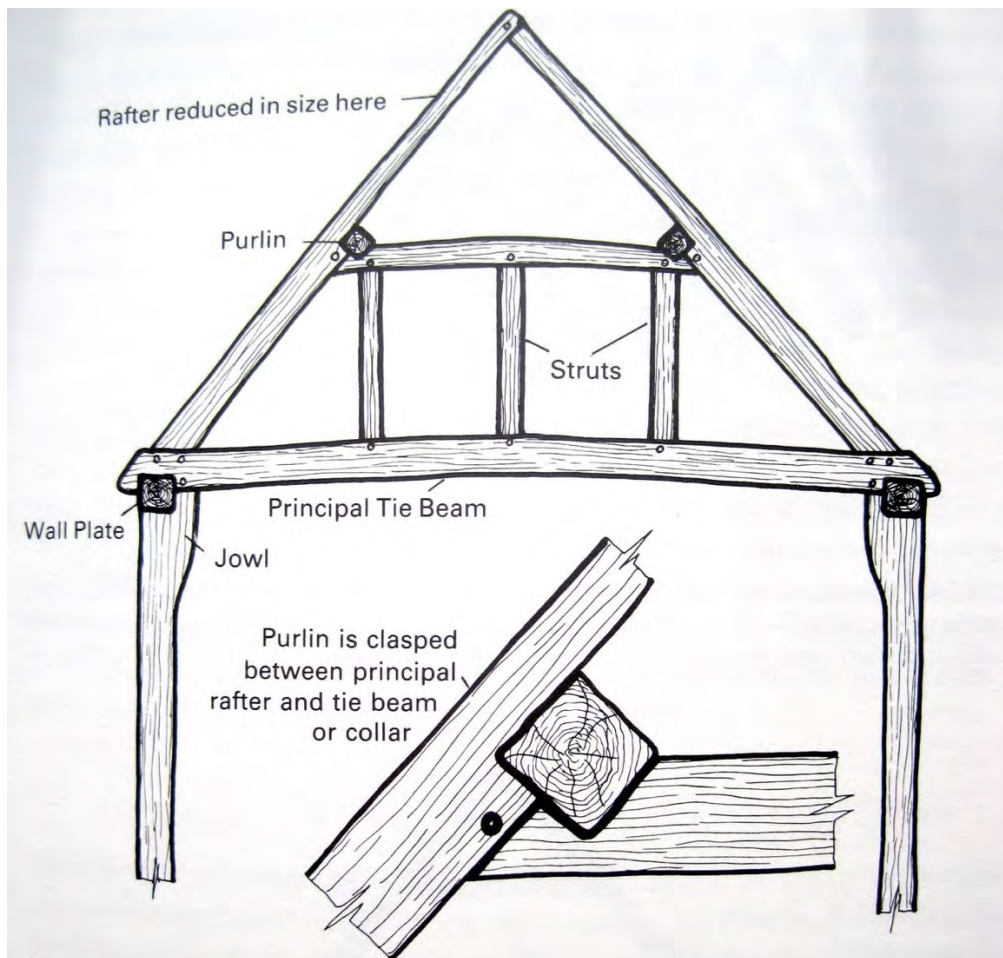
5.4.1. The Queen Post Roof. The attic at 330 Grove Street has a degree of surviving timbers, but also includes re-used timbers, so is something of a 3-dimensional puzzle. Where the pieces fit, it is worth noting, and also because this marks the roof structure as a feature of “High Significance.” Firstly, as Mr. Swindells explains the Queen post construction: “The structure was formed of a principal collar connected to the wall posts and the wall plate. ... The queen posts effectively propped the purlins and were cut with a bird’s mouth joint on the upper edge for this purpose. It was common for the queen post roof to have two pairs of purlins. ... At a level just below the upper purlin, an upper collar or tie-beam was provided which was tenoned into the inside of the queen posts at the top.” [loc. cit., page 93]



Above: a good example of a Queen post roof, here at the rear wing of Stirrups in Mapledurham, Oxfordshire (as before). It is noticeable that the Queen posts are only tenoned into the principal collar beam on one side. This can also be detected in the principal tie beam at 330 Grove Street, although with a third strut (see next diagram).

In Para 5.4, the diagram shows three struts in a Clasped Purlin type of roof structure, which is what we find in Grove Street. However, some of the purlins have become detached from the rafters, so it is apparent that the roof has moved at some stage.

### 5.4.2 The Clasped Purlin Roof Type.

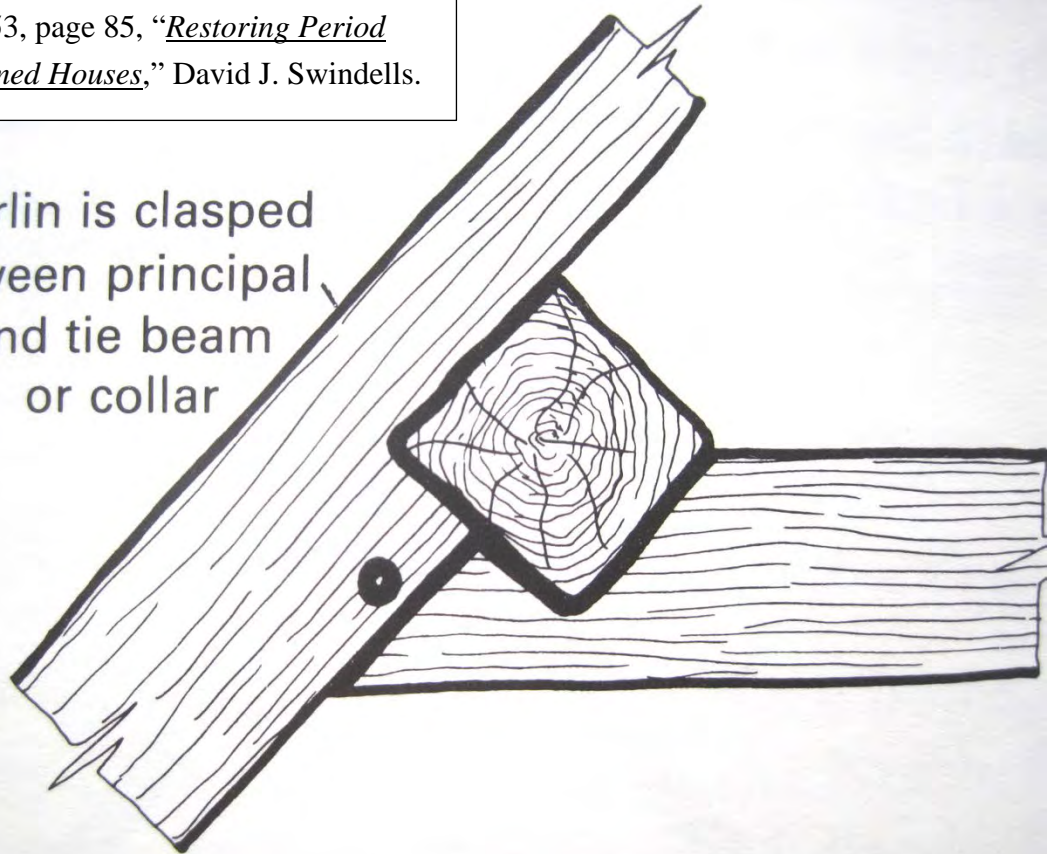


5.4.2 The next roof construction evident at 330 Grove Street is the “Clasped Purlin” type. Again, Mr. Swindells explains that: “After c.1500 the clasped purlin became almost the standard construction and lasted in parts of England until the nineteenth century (see Fig. 53 above). ...The purlin is clasped in the cut-out portion by the end of the collar which is notched to hold the purlin in position. The joint between the collar and the principal rafter is commonly a mortice-and-tenon type. The collar is further held in place by means of a strut.” Both photos below are from the East (left) and West (right) slope of the roof at Grove St. However, the example on the west slope is an original pegged structure; the east is a later collar.



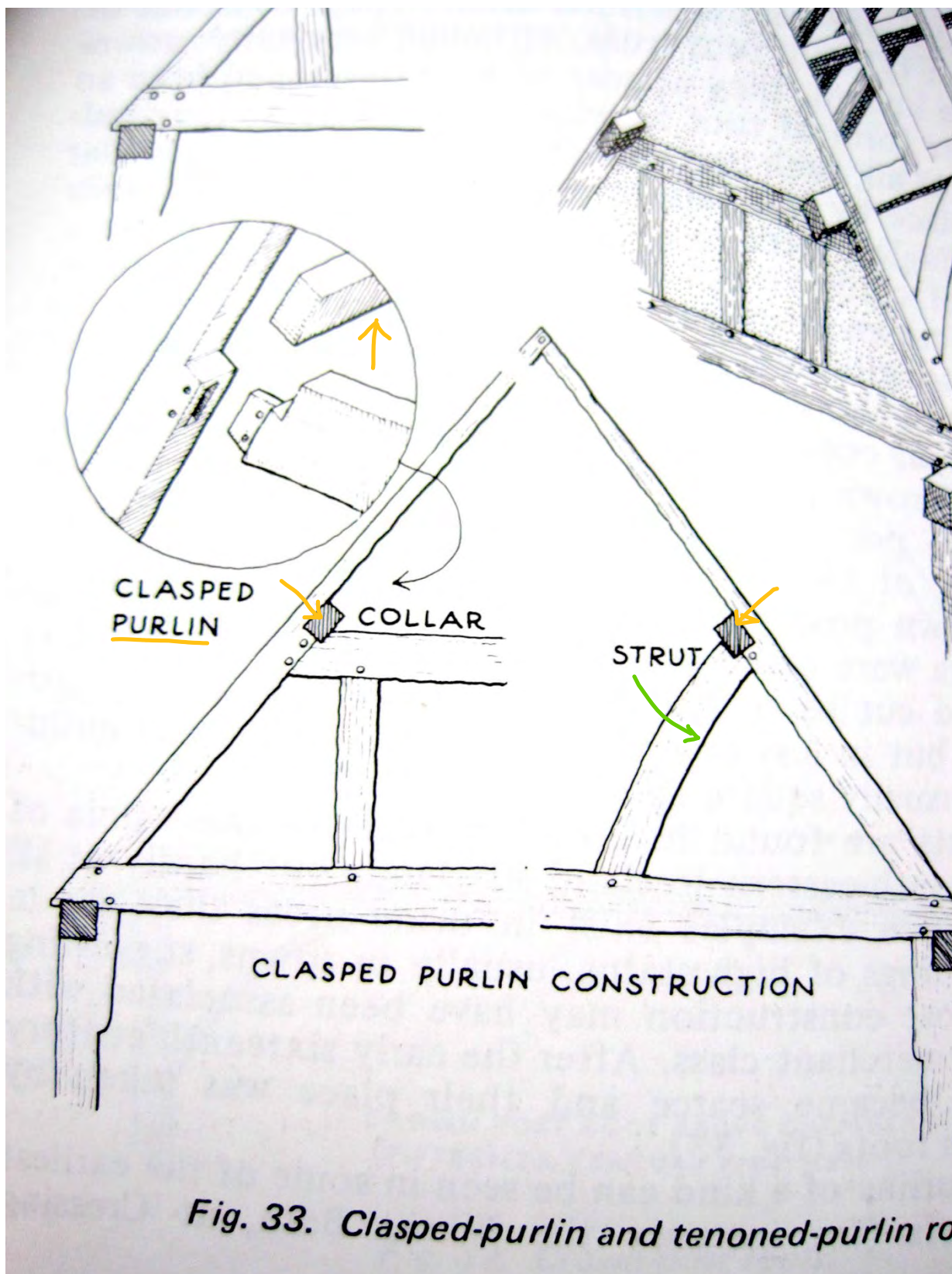
Below: Fig.53, page 85, "*Restoring Period Timber-Framed Houses*," David J. Swindells.

Purlin is clasped  
between principal  
rafter and tie beam  
or collar



Below: a view of the eastern slope of 330 Grove Street showing the clasped purlin structure. However, this purlin has come detached from the principal rafter, and floats above a collar which was notched to receive it, but this has either dropped, or been moved subsequently.



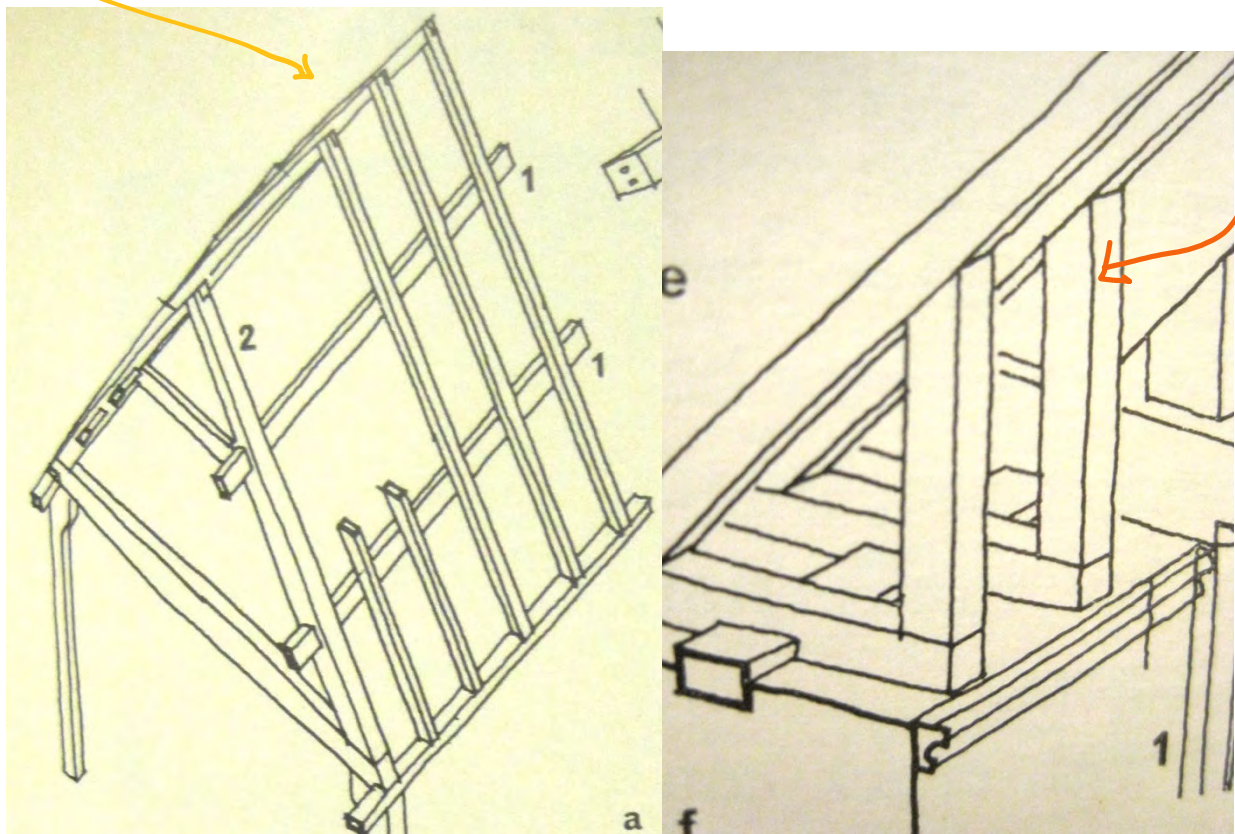


*Fig. 33. Clasped-purlin and tenoned-purlin ro*

Above: diagram explaining the 'clasped-purlin' construction as seen at 330 Grove St.  
 [Credit: "Discovering Timber-Framed Buildings" by Richard Harris, page 64.]

### 5.4.3 The Double Rafter Roof Type: 330 Grove Street.

Prof. R.W. Brunskill (*“Illustrated Book of Vernacular Architecture,”* Universe Books, 1970) explains that concerning roof shape and construction, there are two types of build. A house either has a single, or double rafter roof. A double-framed roof is made of principal rafters supporting the longitudinal members, seen at Grove Street. The through purlin roof (the earliest kind) is made from a series of trusses supporting purlins that rest either on top or entrenched into the blades of a truss. [See left, below.] No.330 Grove St. has notched trusses which carry through purlins, even if these are detached from their original bedding (seen on page 40). Pairs of rafters were usually halved and pegged at the apex of the roof, which is what we have here. Brunskill further explains: *“Where the roof was carried on a thick wall, each rafter was usually triangulated at the foot by short members in the detail known as ashlaring. ...In rafter double roofs... a ceiling is not often found, instead the exposed tie beam or arch braces...”*

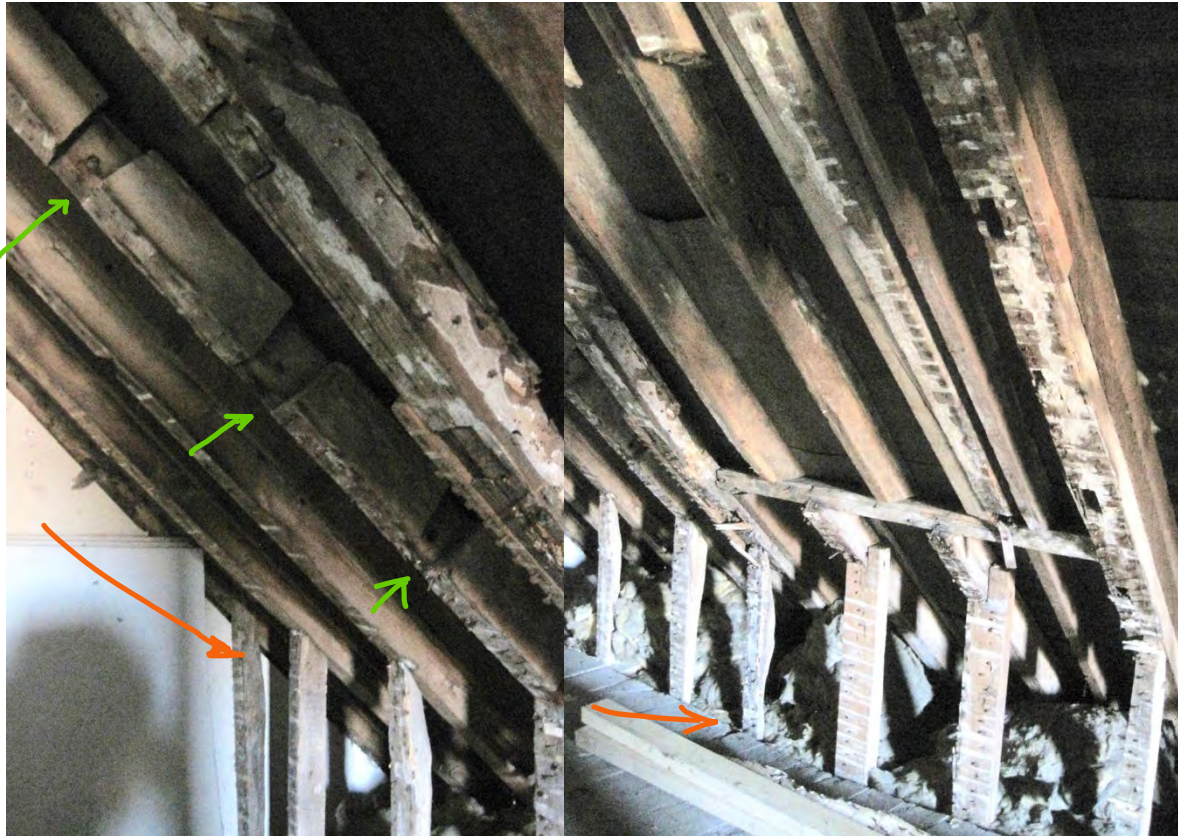


In Grove Street, many timbers have empty mortices indicating lost members (or braces). The wide attic floor-boards appear to be 17thC; they may be original, or a later 'improvement' inserted to use the attic as a servant's bedroom. In looking at the pegged roof structure and the 2-inch bricks in the Living Room chimney-breast, 330 Grove Street might even go back to the late 16thC or early 1600's. [The W. Sussex Records Office maps may confirm this.]



#### 5.4.4. Evidential and Historical Value: The Roof Structure.

The pictures below on the west side of the roof slope show the rafters, including the “ashlars” or short studs at the bottom of the rafters near the eaves level. The bottom photos show empty mortices, the left one still retains the original peg. Left, does this indicate an area where struts for the original stair (at rear) may have run, for instance?



Below left: An empty pocket or mortice that shows a missing truss, but the peg still survives.  
Below right: An empty mortice on the east slope with 19<sup>th</sup>-C. later truss with machined faces.



Above: both pictures show ‘ghosts’ of missing lathe & plaster (white marks) + nails. This shows that the attic was altered, so it was likely used as a bedroom at a later date.

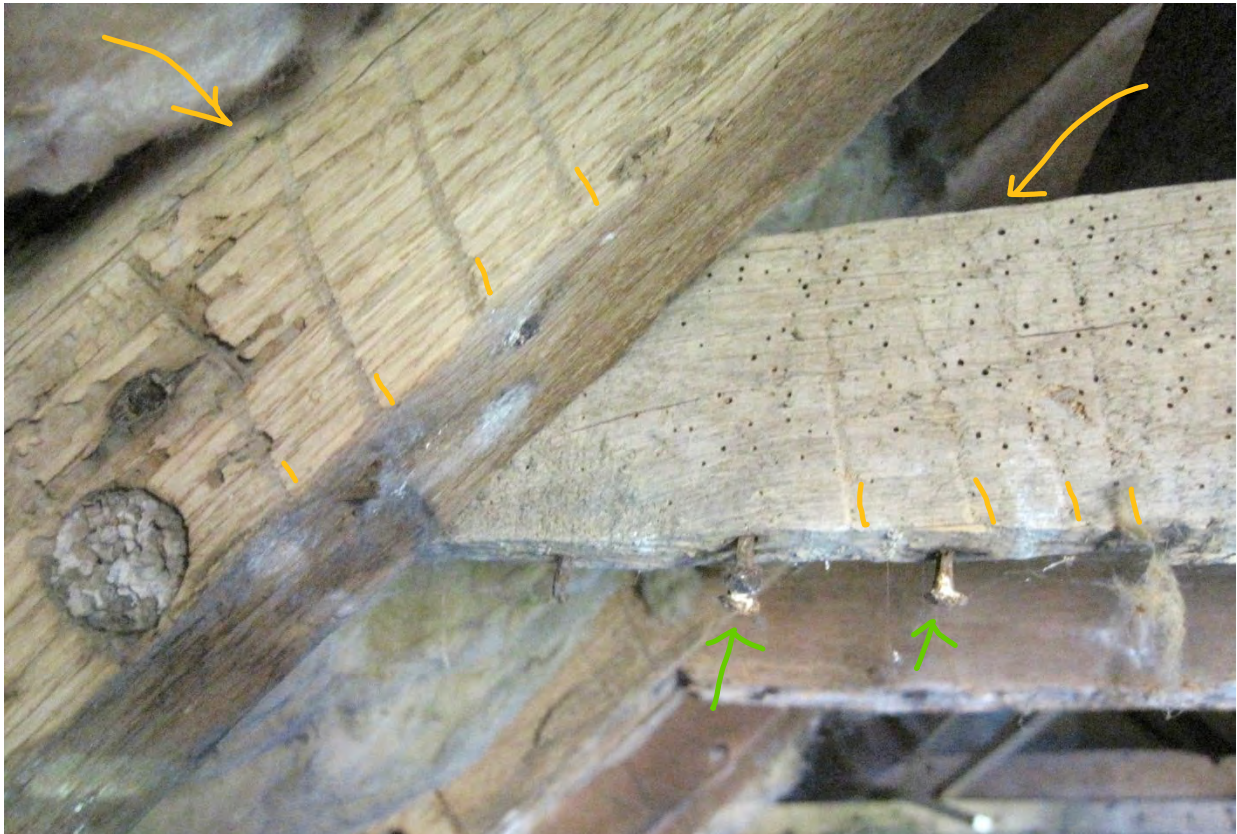
5.4.4. The evidence for a brace. Below we see a principal rafter that has a large mortice. Could this have held the tenon for a brace that is now missing? It seems so.



Bottom Left: This large mortice would appear to be a pocket for a diagonal brace. However, given the apparent re-use of old members, this isn't entirely clear due to missing timbers. It is interesting to notice that the attic would have had lathe-and-plaster at one point and appears 18thC because the nails are hand-made, not 19thC milled ones. [The author's hand is included to give a sense of scale here.]

Also, on both slopes, the rafters often have "sandwich" rafters that enclose and support original rafters in the early structure, which may well be 16<sup>th</sup>-17<sup>th</sup>-Century.

### 5.4.5. Construction Marks and Evidence



Above: a tie collar and principal rafter show carpenter's marks to guide the roof construction. Notice the original peg, on the left. Below: an original timber shows hand wrought tool or maker's marks and hand-made nails.



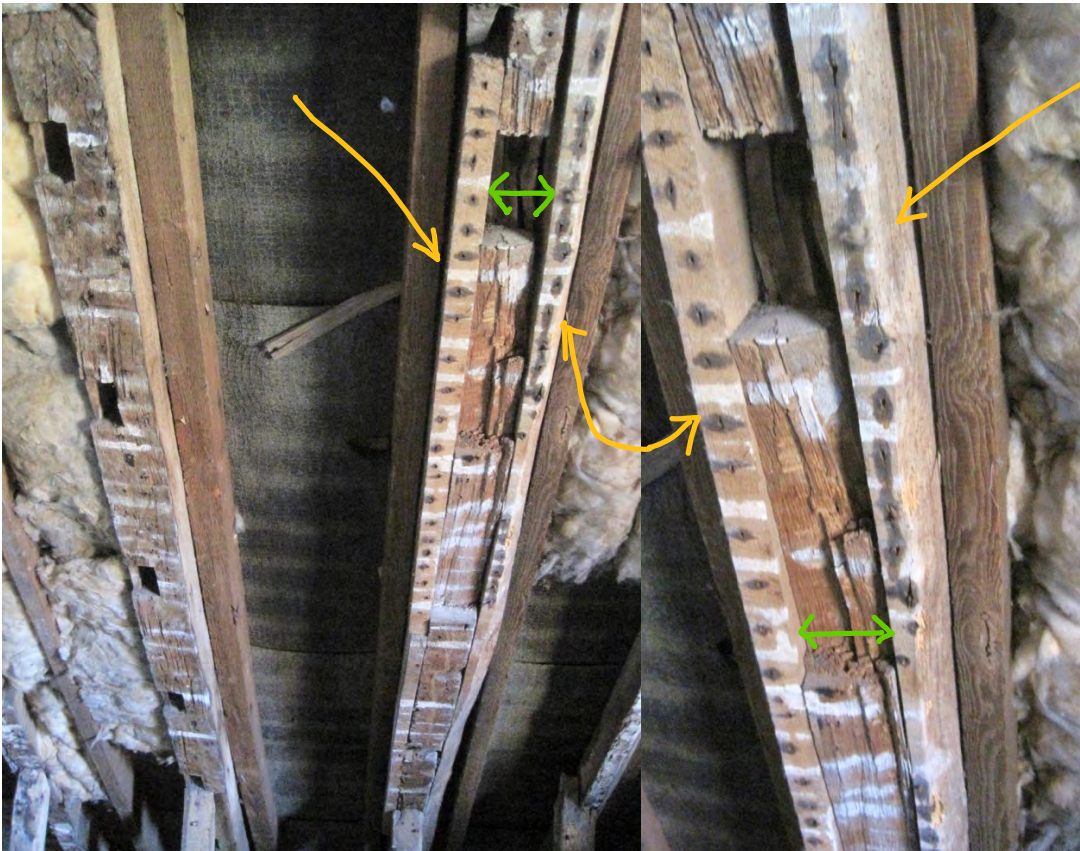
5.4.5. Below: The dislodged board shows original carpenter's marks, on the attic floor.[pg.36]





5.4.5. This same timber does not appear to be a floor-board because of the raised notch at left end and a tenon on the right, which is a fixing- for elsewhere in the roof. While it should be preserved and re-fixed at this level, its exact location must be found.

5.6 Repairs and Alterations. Several old rafters have been repaired with “sandwich” planks on either side of the original 16<sup>th</sup>-17<sup>th</sup>-C timbers, as shown below (west slope).



## 5.7 Ground Floor: Aesthetic Values and Architectural Features.



Left: the pine cupboard to the left-hand side of the Living Room hearth appears to be an authentic Georgian feature. Due to its age and aesthetic value, it has 'High Significance.'

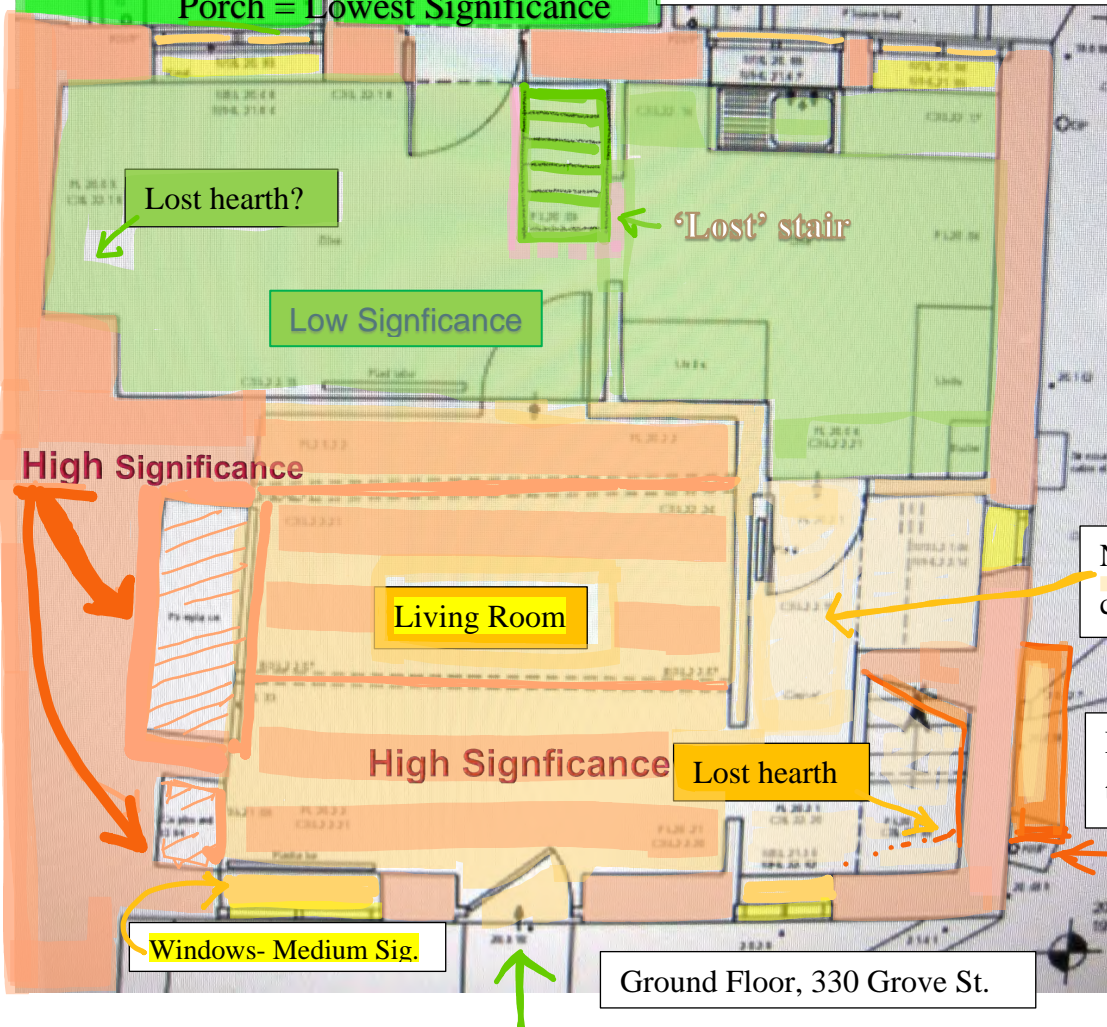
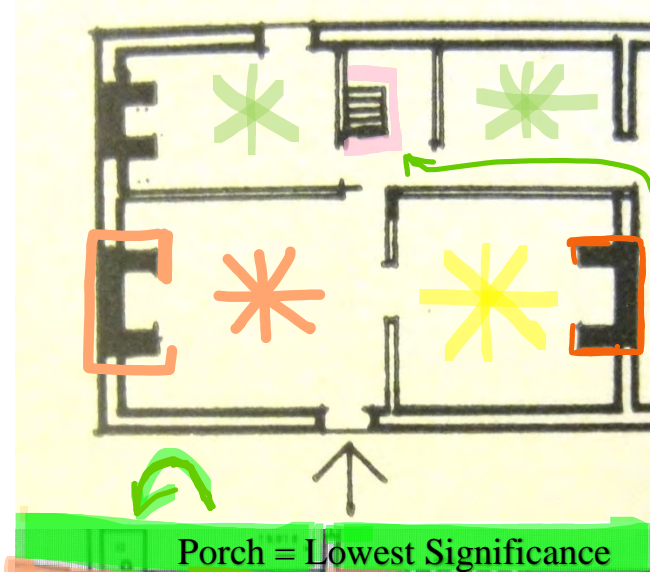
Below: the chimneybreast in the Living Room and front 1stFloor bedroom is also of High Significance. The 2-inch brickwork is original and would appear to date from the 17<sup>th</sup>-C. or mid to late 16<sup>th</sup>-century, dating it from the Elizabethan era, potentially. The timber beam over the fireplace is also original and has hand-wrought nails. The fixings and square open holes may indicate there could have been a timber jamb or side fixings.



## HIGH SIGNIFICANCE

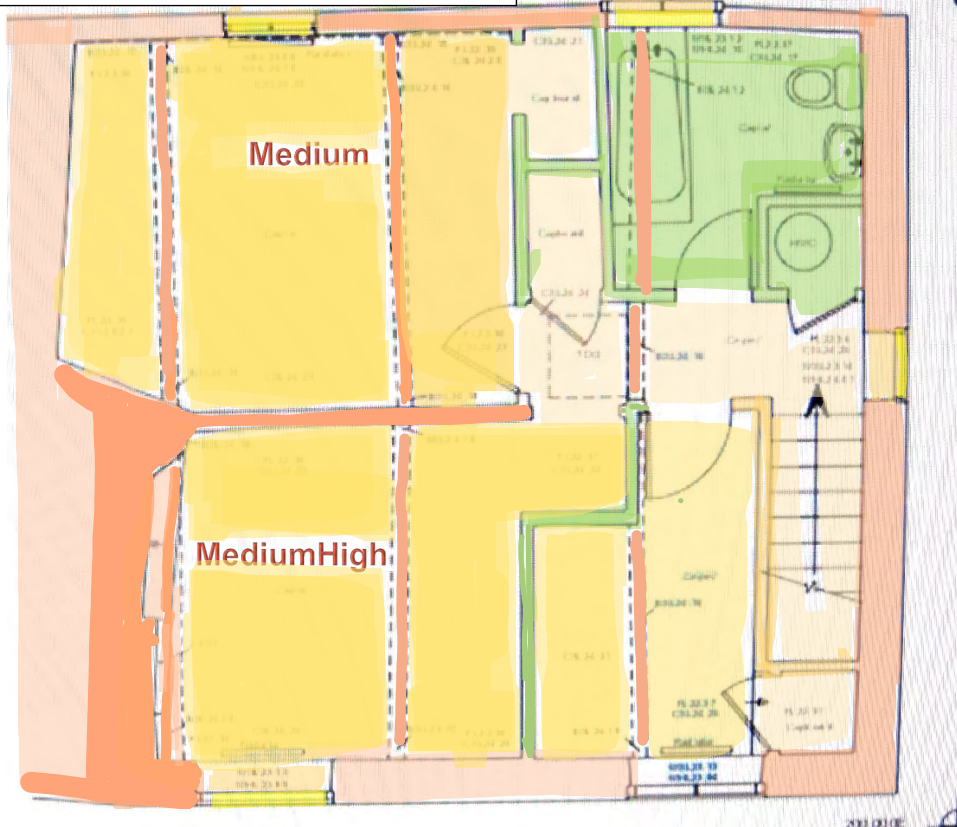
## 5.8 Levels of Significance

Left: the floorplan here shows the "Double Pile Plan" as explained by R. W. Brunskill (pg.105, loc. cit.). He says: "The basic version of the double pile plan consists of four rooms, a principal living-room, a private room, a kitchen and another service room [e.g. a dairy or pantry]. A staircase at the rear between the two subsidiary rooms rises to the upper floors." Below, the Ground Floor plan at 330 Grove Street shows the High Significance of the basic envelope or timber-frame and stone-&-brick structure. By comparing the two plans, it seems the most likely place for the original stairs was in a similar position, shown below. KEY for Significance, next page.








Above: the locale of the existing stairs appears to have been a secondary hearth. Its ghost appears in the end elevation which has scars of an old stack where the tile-hanging is obviously been interrupted [North elevation]. The structure, main hearth, chimneybreast and Georgian cupboard are of especially High Significance.

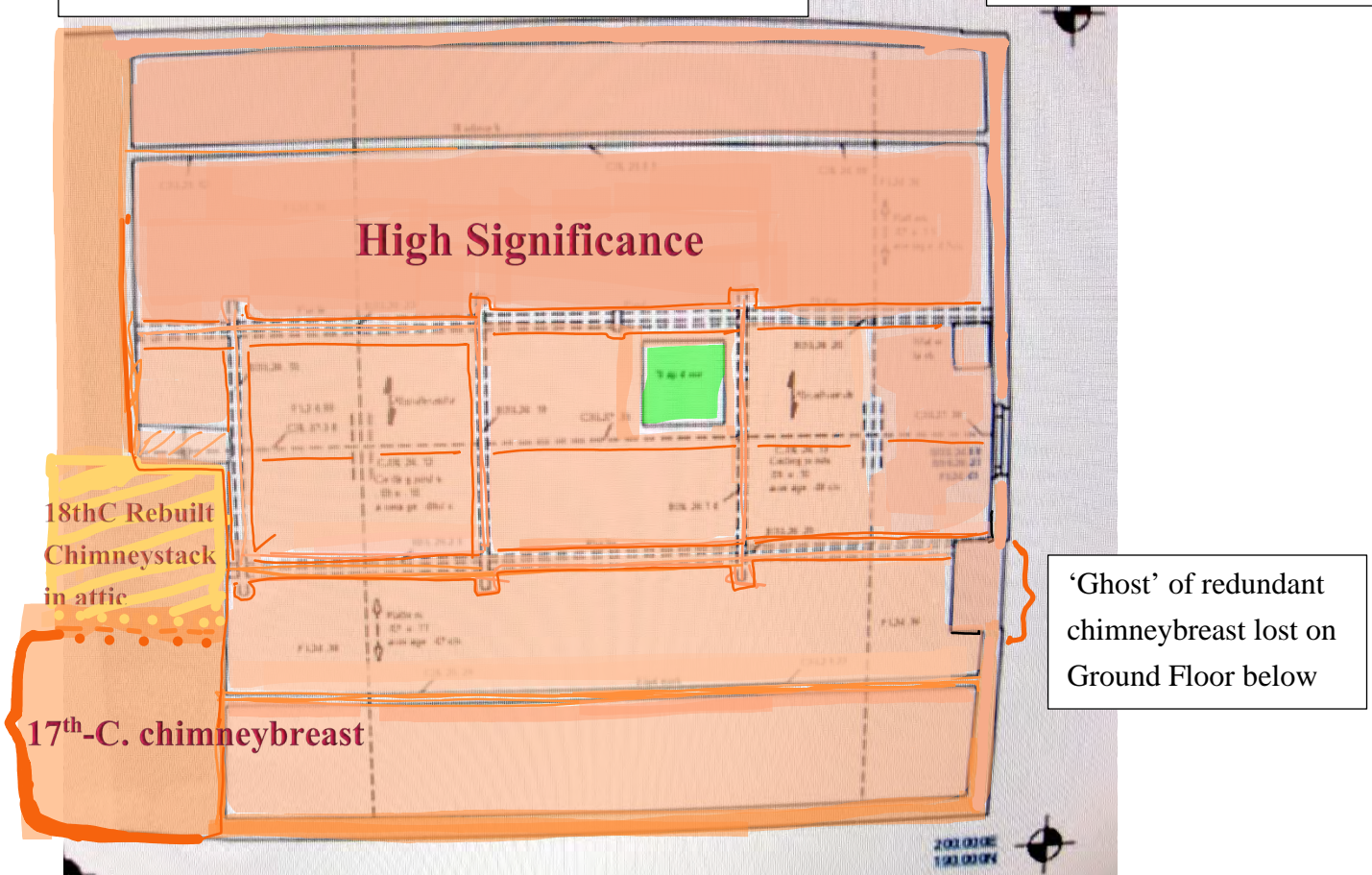
First Floor Plan: 330 Grove Street



Key: Level of Significance.

-  High
-  Medium
-  Neutral
-  Low
-  Lowest

Attic Level: showing roof structure and floor-boards.





The following assessment is offered for the Levels of Significance:

### 5.8.1 HIGH SIGNIFICANCE

The most notable features namely those in the attic exposed to greater assessment, may be considered as having 'High' Significance as follows due to their age- dating from the 17<sup>th</sup> to 18<sup>th</sup>-C, their constructional importance, and their aesthetic or architectural value include [in no particular order]:

1. Timber-frame structure, especially the roof with signs of a Queen post form
2. Attic floor-boards, because they appear to date from the 17<sup>th</sup>C. era
3. Brick chimneystack and structure (one obscured) which appear 17<sup>th</sup>C.
4. Living Room and its Georgian side cupboard beside the fireplace
5. Stone facades (front especially) with brick facings- of the 18<sup>th</sup>C.
6. Raised garden with hedges- being last vestige of rural setting

### 5.8.2 MEDIUM HIGH to MEDIUM SIGNIFICANCE

1. The First-Floor Rooms- these are reasonably intact, but with altered partitions.
2. Front (East) Bedroom has "Medium High" Significance due to the presence of the chimneystack in the south end which is likely to be an Elizabethan feature
3. The timber casement windows with "ram's horn" closings contribute to the character of the cottage and appear to be 19<sup>th</sup>C (approx.150 years old)
4. The rear patio- defines the west setting and gives a sense of enclosure.

### 5.8.3 LOW SIGNIFICANCE

1. Ground Floor- Kitchen and narrow Dining Space to the west -due to alterations
2. Ground Floor- rear porch- due to being largely altered and windows replaced
3. First Floor- Bathroom and any stud partitions- which appear to be altered

### 5.8.4 NEUTRAL SIGNIFICANCE

- The hall and circulation spaces- due to their lack of architectural features and are very likely to have been altered, including moving the present stairs.

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## **SCHEME PROPOSALS & IMPACT**

### **6.0 Impact of Proposals on Significance.**

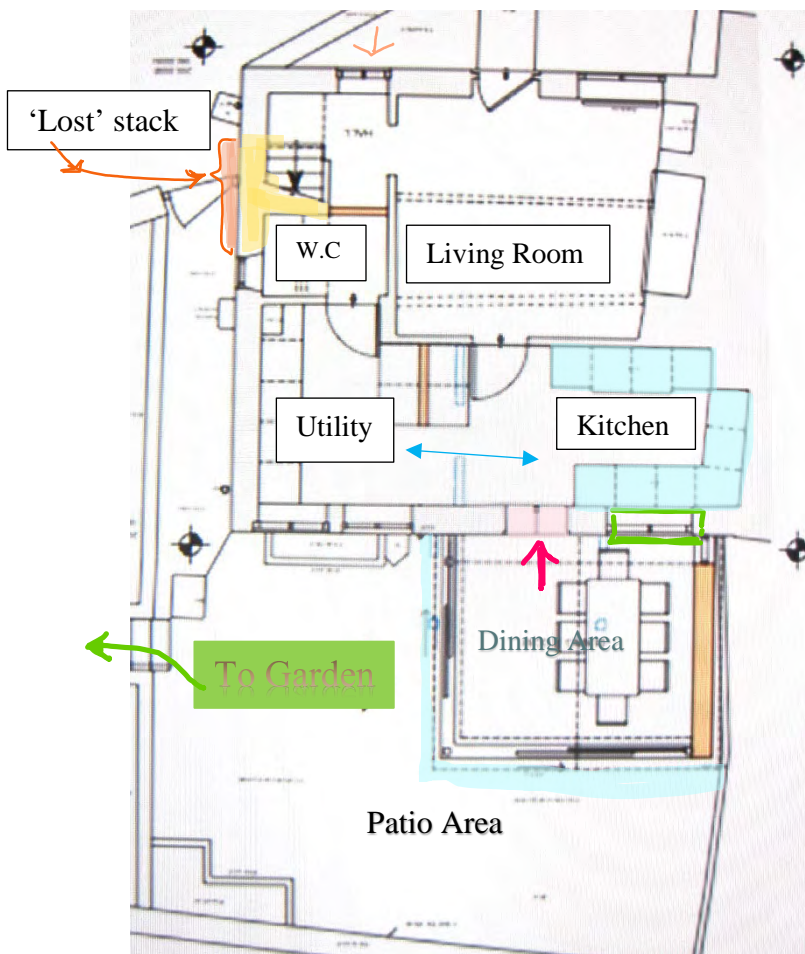


Above: The East elevation of 330 Grove Street will remain unchanged except that the front door will again be used as the main entrance, following the historic function.

## 6.1. Design Principles

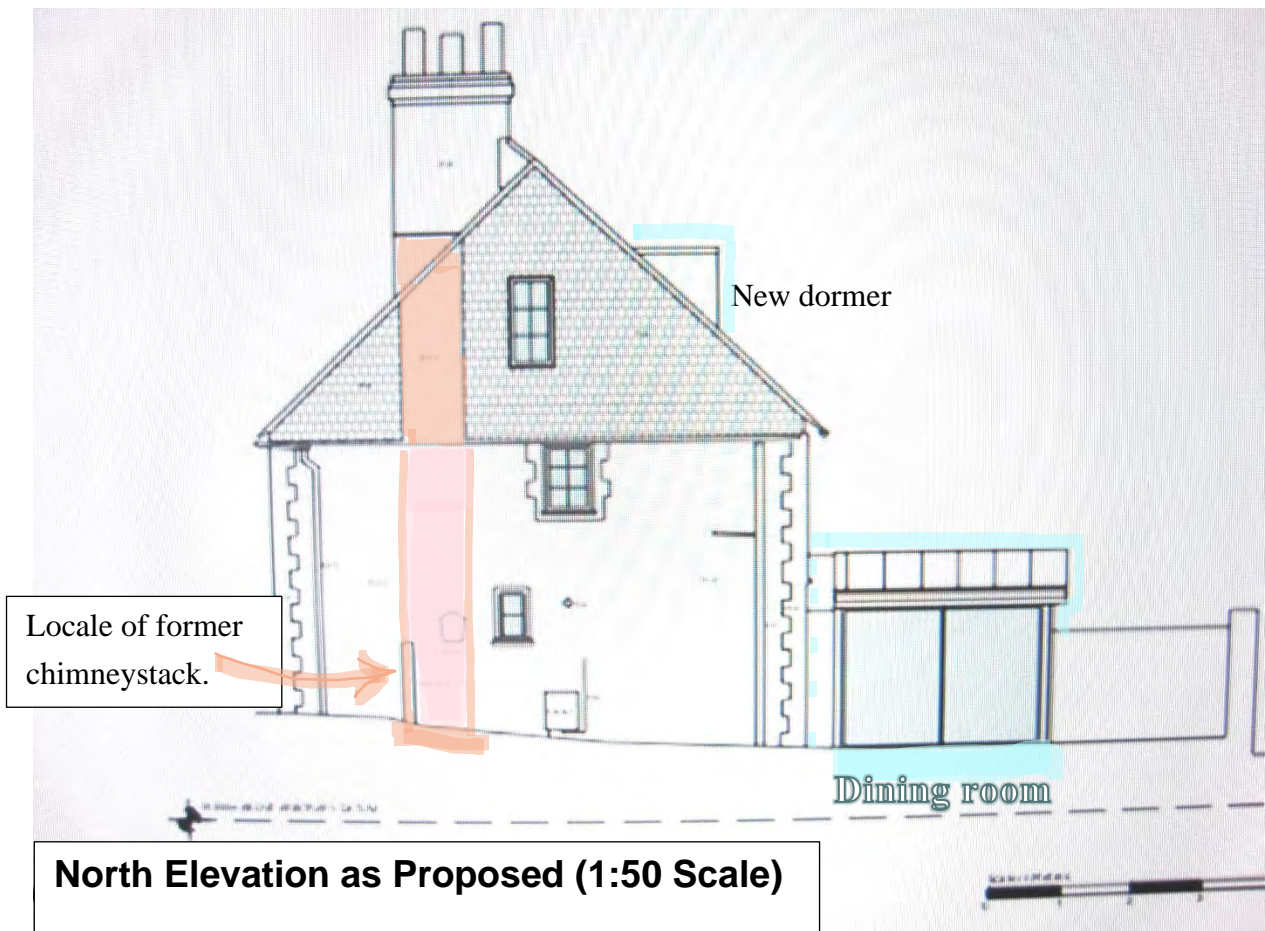


**Left:** The design principle for an improved living space in the Kitchen is, firstly, to retain the authentic casement window and 18thC opening with burnt brick header and red-brick surround to stay as a feature in the new arrangement. Secondly, a new west kitchen wing is proposed with a shallow roof in standing seam metal with the south end standing away from the boundary garden wall for separation and maintenance. The design idea is for a small, light-touch rear extension to accommodate a dining space facing the raised garden. This would allow a U-shaped kitchen in the present rear wing that sits behind the principal Living Room.



**Bottom Left:** As shown, the new floor-plan would have a modest rear wing to make better use of the Kitchen with a 'flipped' or reserved layout. In this way, a Utility Room can replace the old range/fridge area, and a downstairs W.C. can be inserted into the rear of the existing Hall space. However, it is very likely that this did not serve as a circulation space originally, given the presence of a redundant stack [behind the entry door] in the attic and 'ghosting' of the chimneystack on the north gable end. Stud partitions are suggested to close off the W.C. and Utility rooms to give better functionality and convenience. The 'High Significance' of the Living Room would be conserved intact, and the original entry restored to its historic function.

## 6.2. Materials Palette

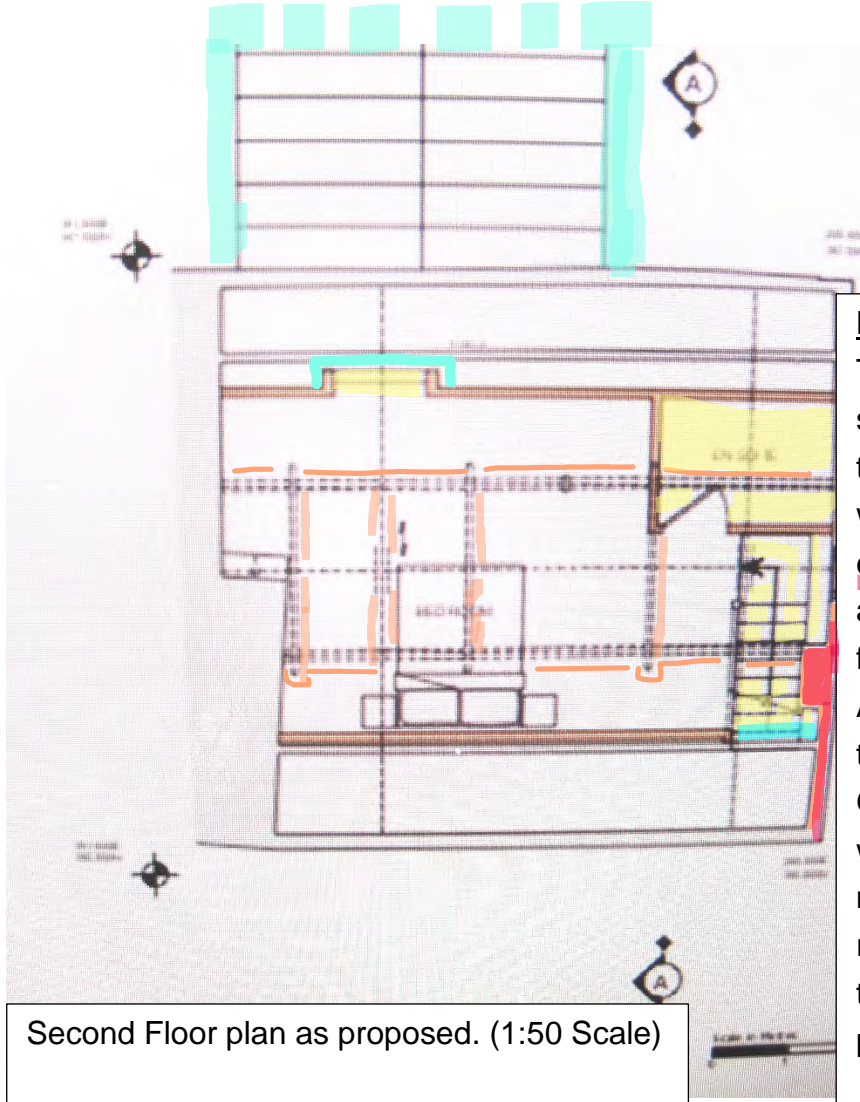


6.2.1 Above, the north view of the proposed Dining area of the new wing, being a modern form of conservatory. The north and west walls are suggested as glazed panes, the right-hand ones being openable to give access to the patio and garden adjacent. Note: this end elevation shows the 'ghosting' of the former chimneystack which is indicated in the thicker brickwork at Ground Floor level (in the front Hall), and in the north wall in the attic above. Below: This would correspond to the surviving Kitchen stack in 331 Grove Street, next door; although it is odd that this feature was set at the front of the cottage at No. 330.



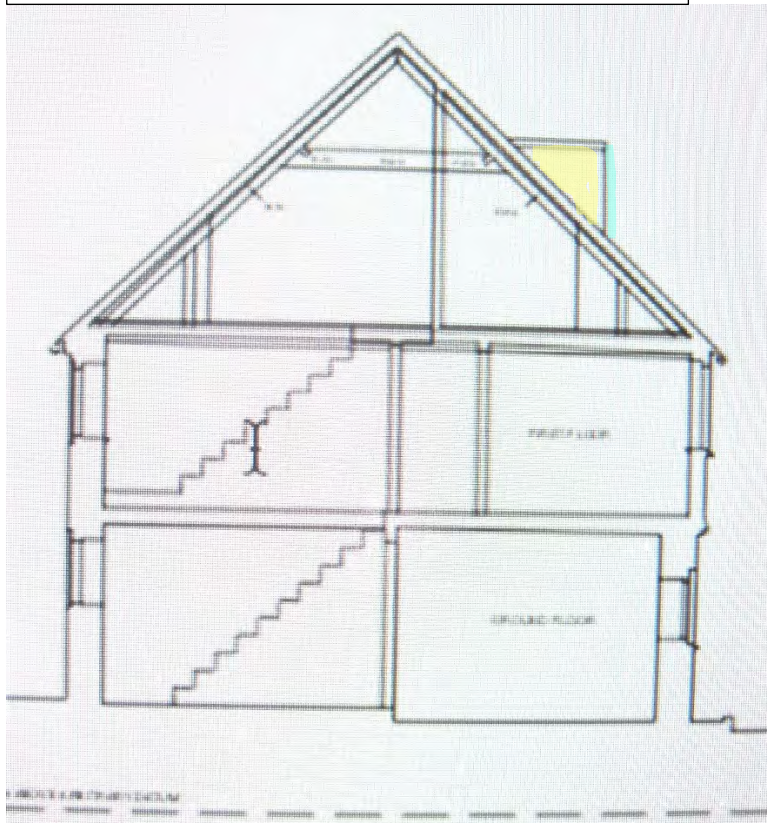
Note: the south wing and end stack at 331 Grove St. must be a later extension, as seen in the Ordnance Survey Maps of 1875, 1898, & 1912 (pages 14- 17). A new dormer would match No. 331.

## Proposed Dining Room



Second Floor plan as proposed. (1:50 Scale)

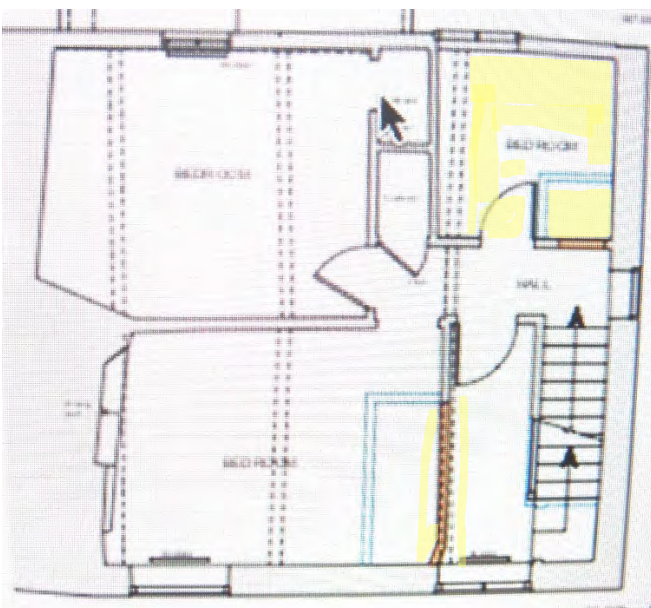
**Left:** The proposed Attic floorplan. This shows that there would be slight amendments to restore this top floor to a Bedroom. A new stair would be scribed around the existing brick structure and remove as little as possible of the timber fabric, re-using historic floor-boards. A new dormer window would match the existing one next door at No.331 Grove Street. A small bathroom would be placed over the Kitchen, making use of the existing service runs for plumbing. The historic timber roof structure is proposed to be conserved *in situ*.



**Bottom Left:** Proposed cross-section which shows the minimal change to the historic fabric and structure to restore the attic to a Bedroom. This design would use matching materials and design to blend with the existing dormer at the rear slope of 331 Grove Street.



6.2.3. Above: the drone photograph of the north end gable of 330 Grove Street. This clearly shows the ‘ghosting’ where there appears to have been an earlier chimneystack behind what is currently the front entrance door. This also appears in the thicker brickwork of the Ground Floor plan here, and also corresponds to a similar chimneystack for the Kitchen at No.331, although this survives at the rear where one would normally expect it to be located.



Left: the proposed floorplan which shows the minimal changes needed to reinstall a stair to the attic and amend stud partitions. The small ‘box room’ would be converted into a Hall. The front, or East Bedroom would have more generous proportion and presumably restore its original volume. A boiler cupboard would be removed and incorporated into a refreshed Bathroom in an existing corner of the 1<sup>st</sup> Floor. The brick chimneystack and historic timber structure would be conserved as found.

### 6.3 Scale and Overall Appearance



Top: The existing west elevation has a modest Porch with hipped tiled roof. However, the windows appear to be modern replacements and the brick plinth is a cavity wall build with a modern stretcher bond. As a result, it is considered to have a 'Low' significance compared with the historic fabric in principal house.



Above: The low-key Dining Room extension to the west such as the suggested one above would simply replace the existing Porch which appears to have had its fenestration replaced in the 20<sup>th</sup>-C. The conservatory would appear lightweight and form a transparent wing that would allow the original rear elevation still to be 'read.'



## 6.4 Overall Impact

As described in the above sections of this Heritage Statement, these proposals offer a holistic scheme to modernise and repair this historic fabric of this semi-detached cottage at 330 Grove Street. By giving it new life, it will ensure its survival in the years ahead. The design proposes to use matching traditional materials of timber structure and clay roofing tiles, combined with 'state-of-the-art' structural glazing for a light-weight, conservatory Dining Room wing at the rear. The existing 19<sup>th</sup>-C casement window is proposed to be conserved *in situ* and sit within the glazed conservatory wing.

The overall impact on the historic and architectural significance of this cottage would be minimal. The alterations would offer improved services, as well as restoring the attic Bedroom, whose evidence exists in the scars of lath-and-plaster in the roof timbers, as shown above. The one loss would be the removal of the late 19<sup>th</sup>-C Porch (above), which in any case, has been re-windowed and has a modern type of brick plinth with stretcher bond. Only the hipped roof appears early C20; however, it could be photographed for the record.





**7. Conclusions.** The proposed changes to No.330 Grove Street are intended to conserve its historic and architectural significance, while offering improvements such as a refreshed Kitchen and Bathroom facilities. The former Bedroom that appears to have been in the attic will be restored, and a new dormer inserted carefully along with a small ‘*en suite*’ Bathroom on the top floor. Matching materials will be used generally. A light-weight, conservatory type west wing would house a Dining Room. In summary, the existing north, raised garden will be conserve as found, recalling its former rural origins. This will ensure its future care and maintenance into the future. [End]

## Sources:

West Sussex County Council Archives (Records Office)- as follows-

1. 1610 Treswell Map
2. 1630 Velum Map
3. 1799 Petworth Estate Map (WSCC R.O., Courtesy of Lady Egremont)
4. 1838 Historic Tithe Map [Ref: TD W97]- Landowner: George Esq.
5. Occupiers: Cottages and Garden- Charles Pannell.
6. Occupiers: Plot 617 = Charles Murray
7. Occupiers: Plot 615 = Parish of Petworth
8. Occupiers: Plot 603 = George Lucas

National Library of Scotland Archives (on-line)

1. NL Sussex XX11 Series, Petworth, 1875 Ordnance Survey Map.
2. NL Sussex XX11.SE Petworth & Tillington 1895- Pub.1898.
3. NL Sussex Map 1910- Petworth, Published 1913.
4. NL Sussex Map 1938- Petworth, Published 1949. [PHA3368]

Text: Sir Nikolaus Pevsner: *The Buildings of England: Sussex.*