

ST JOHN'S COTTAGE

POLING STREET, POLING, ARUNDEL, WEST
SUSSEX, BN18 9PS

TIMBER CONDITION ASSESSMENT

PREPARED BY

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PCIFA

AND

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REVIEWED BY

BEN KIRK MSc, IHBC

AUGUST 2021



MANORWOOD
building on tradition

ABOUT MANORWOOD

Manorwood is a small team of historic building professionals with varied skills across different areas of the historic environment.

This report has been prepared by Historic Building Research Consultant Roberto Prieto-Labrador and reviewed by Director Ben Kirk

Roberto holds a BA (Hons) in Art History, specialising in historic buildings and is a Practitioner member of the Chartered Institute of Archaeologists (PCIfA) and is currently studying for an MA in English Building History at the University of York.

Roberto is also an Affiliate member of the Institute of Historic Building Conservation (IHBC) and a member of The Domestic Buildings Research Group and the Wealden Buildings Study Group.

As a Historic Building Research Consultant at Manorwood, Roberto is responsible for in depth research into building records, mapping, and physical evidence to help inform proposal and for preparing Heritage Statements and Statements of Significance to support applications for alteration or redevelopment of historic buildings and areas, as well as surveying and recording historic buildings.

Ben holds an MSc in Timber Building Conservation, completed at the Weald and Downland Museum, and validated by Bournemouth University, and is a full member of the Institute of Historic Building Conservation (IHBC) and a recognised Historic Environment Service provider under the well-established HESPR scheme.

Ben is a member of various groups including the Vernacular Architecture Group, The Domestic Buildings Research Group, and the Wealden Buildings Study Group.

Ben has been actively working in the historic environment industry for 15 years on numerous heritage asset projects which include surveying of historic buildings (both domestic and agricultural), preparation of schedules of works and detailing of repairs. Ben oversees numerous applications for Planning permission and Listed Building Consent and has built solid working relationships with Conservation Officers at a number of Authorities across the South East.

As a company Director at Manorwood, Ben has overseen works to historic buildings carried out by a skilled network of sub-contractors including the timber restoration at Charleston Farm barns in Firle and the re-erection of historic buildings at the Weald and Downland Living Museum near Chichester, both which received awards from the Sussex Heritage Trust.

As a company Manorwood have provided various historic environment services to a number of Country Estates across the South East including the Lydhurst Estate, the Borde Hill Estate, the West Dean Estate and a number of projects on the Wiston Estate where Manorwood continue to provide consultancy advice on redevelopment and reuse of various areas.

Most recently Manorwood completed the sensitive restoration and conversion of the magnificent 15th century barn for Nyetimber Vineyards in West Sussex.



TIMBER CONDITION ASSESSMENT: ST JOHN'S COTTAGE

INTRODUCTION, CONTEXT AND GENERAL ASSESSMENT

This report has been prepared by Roberto Prieto-Labrador BA (Hons), PCIfA and Gareth Watson Conservation Carpenter on behalf of Manorwood, following two surveys carried out on 17th June 2021 and 6th August 2021 of St John's Cottage.

St John's Cottage is a Grade II Listed Building located on the east side of Poling Street and to the north of the village of Poling, West Sussex. The house was built during the late 16th century and originally contained a smoke bay which was later replaced by an axial brick chimney stack with back-to-back fireplaces.

The plot where the building sits seems to have been related to the nearby medieval St John's Priory until its suppression in 1546. The house was possibly erected soon after the land was secularised.

Manorwood were instructed by the applicant to carry out a survey of St John's Cottage and prepare a Timber Condition Assessment in relation to the building. The Timber Condition Assessment is prepared to accompany an application for Listed Building Consent for a general refurbishment of the cottage.

Manorwood visited the property on 17th June 2021 and on 6th August 2021 and surveyed the cottage to assess the amount of surviving historic timber, as well as its condition and the extent of repair where required.

The surveys revealed that most of the timbers forming the walls and ceilings were generally in good condition, except for the presence of cementitious mortar between the framing and the panels, which is trapping moisture against the original fabric and causing its decay. The existing cementitious mortar will, therefore, be removed carefully with hand tools to avoid damaging the fabric and will be replaced with lime mortar to reinstate the "breathability" of the building.

The roof structure was the most deteriorated part of the building. During recent years, the roof has suffered from a significant wood boring insect attack (Death Watch Beetle) which has weakened and damaged the entire roof structure. This is due to the use of elm in most of the construction of the roof, except for some elements such as the purlin and wind braces which are of oak.

Elm is not particularly appropriate for the construction of buildings as it is susceptible to insect attack and rapid decay. The use of elm only in the roof is likely due to its low cost, whilst oak, which was more expensive, was used in the visible parts of the building such as the walls and ceilings. Unlike elm, oak is a much more durable timber.

The Death Watch Beetle infestation of the roof of St John's Cottage is currently active and appears to have been active since, probably, the 1970s, when the roof structure must have been at risk of collapsing and the existing softwood structure was built to support it.

Despite the poor condition of the roof, it is still possible to read its original form from the surviving elements. The roof, as built, was of the clasped purlin type with Queen post trusses and straight wind braces from the principal rafters to the purlins.

Whilst the most desirable approach is to maximise retention and minimise intervention, this is not always possible. The roof structure has failed and most of it is beyond salvage. It only stands thanks to the additional softwood structure that currently supports the entire roof. The Queen post trusses are the key elements of the roof structure as they contribute to the historic understanding of the building and its construction. None of the trusses, however, are structurally sound and their retention as a feature would only be possible by adding additional tie beams to support the original trusses as a feature behind new structural trusses. This approach, however, would result in significant intervention to the roof and to the ceilings below and it would alter its original form further.

Having considered this and other approaches such as strengthening in order to retain as much original fabric as possible, the removal of the failing elements of the roof and the supporting softwood structure, to be replaced with a new roof structure was considered the most appropriate solution.

The applicant, however, is aware of the significance of the roof and is keen to replicate the original roof form using a traditionally jointed oak frame to ensure its longevity and incorporate the original elements that can be salvaged such as the tie beams, wall plates, the existing purlin, collar, and wind braces. The scheme also proposes to

reinstate the elements that are now lost such as the high-set collars to create the gablets and the missing purlin and wind brace.

The approach described above is considered to be the most appropriate solution and the benefits are significant as it will reinstate part of the original character of the building whilst ensuring the building is structurally sound and preserved.

The following pages included a high-level repair schedule based on the surveys carried out by Manorwood in June and August 2021. Further details and specifications for individual repairs should be agreed on-site with a contractor with experience of repairs to historic timber-framed buildings, historic brickwork and lime mortars.

Plans showing the level of intervention required to the roof structure are also included in the following pages for clarity:

HERITAGE ASSETS AND DESIGNATIONS

St John's Cottage is a statutory listed building designated in September 1984. The listing reads:

ST JOHN'S COTTAGE

Location Poling, West Sussex, BN18 9PS

District Arun (District Authority)

Date Listed 20th September 1984.

List Entry No 1027590

Grade II

Description Probably C17. Two storeys. Three windows. Faced with flints and red brick. Hipped thatched roof with pence on north side. Casement windows.



St John's Cottage.



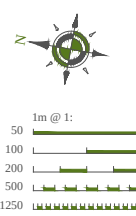
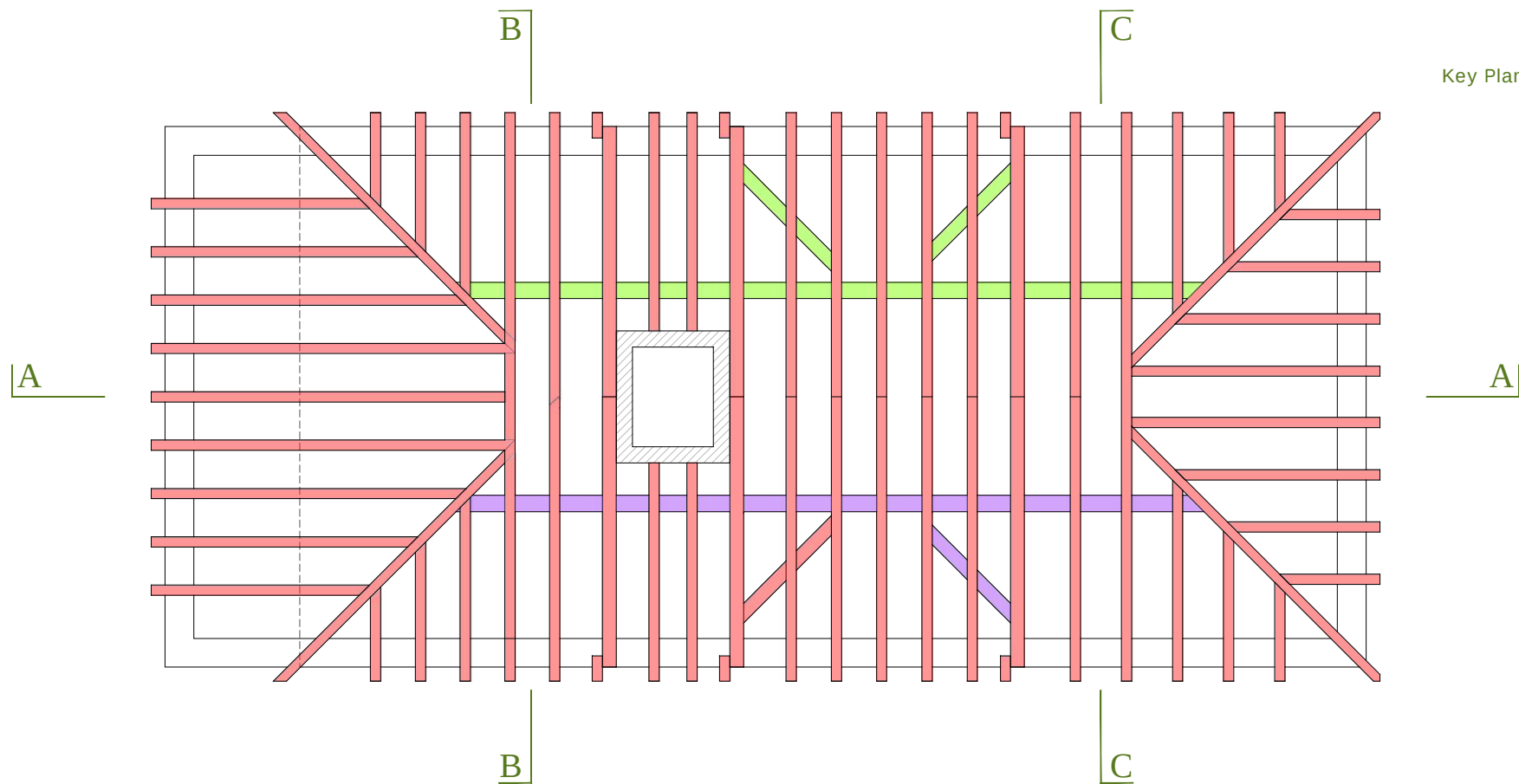
Key:

Retain/Repair

Replace

New

Key Plan:



Address

St John's Cottage,
Poling Street,
Poling, Arundel BN18 9PS

Drawing

Site Drawings:

**Wall plate plan
and trusses sections**

Scale @ A3

1:100

Drawn: 25.08.2021	Issued: 25.08.2021
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Drawn By VM	Checked By BK
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Job No.

2005ST_R.0

Drawing No.

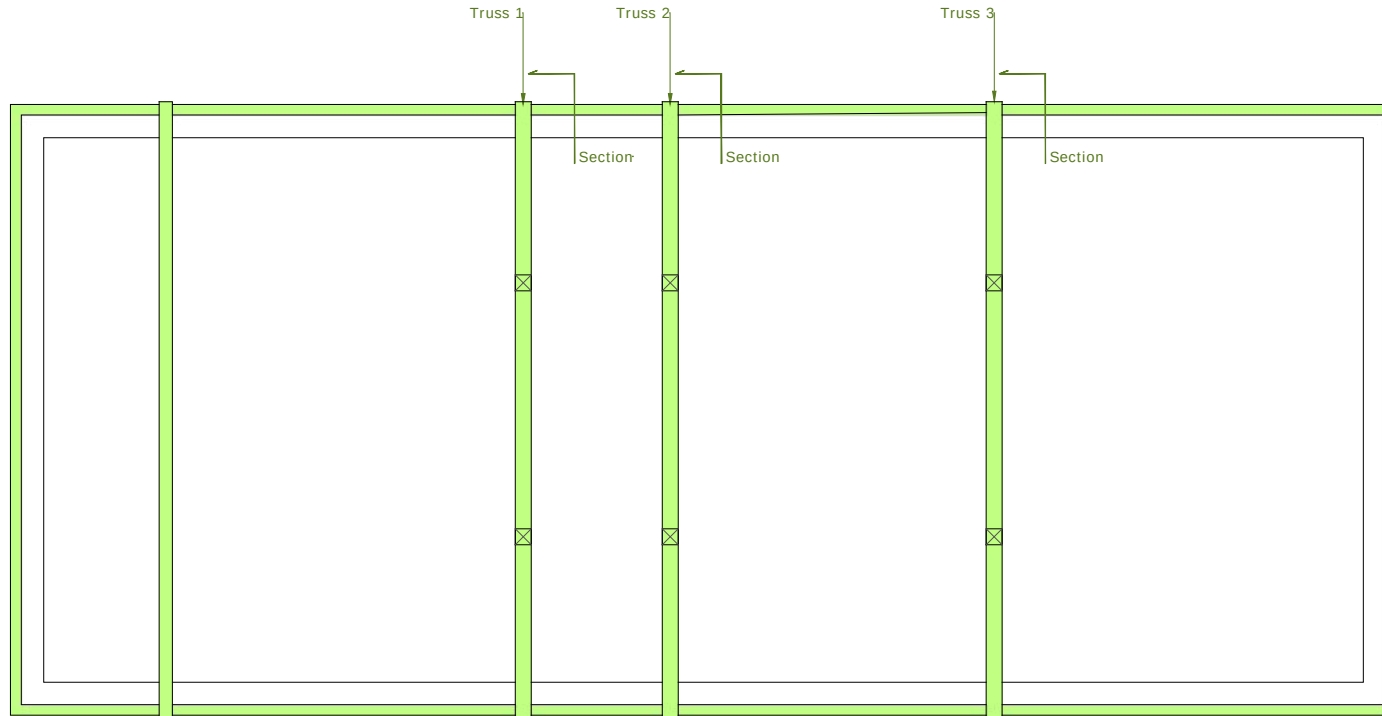
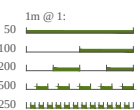
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Revisions:

R.0

Status

FOR COMMENT



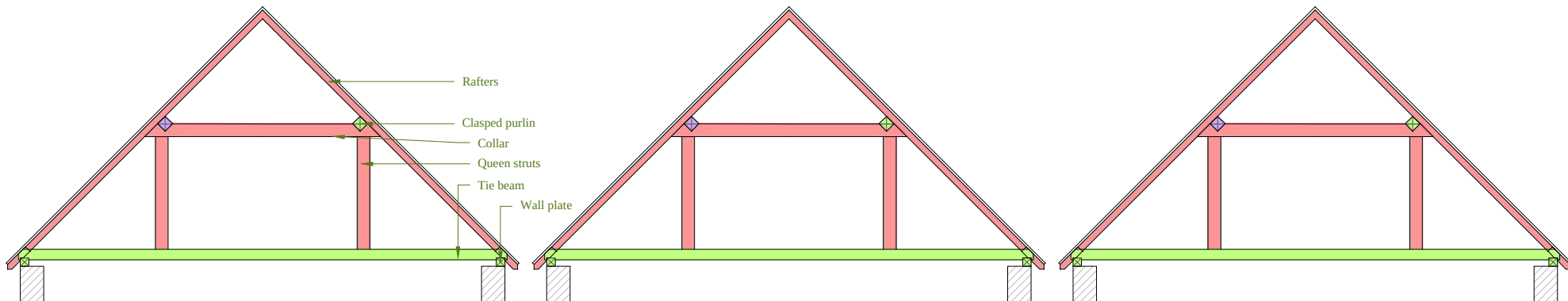
Key:

- Retain/Repair
- Replace
- New

Key Plan:

Wall Plate Plan

1:100 | PROPOSED



Truss 1

1:100 | PROPOSED

Truss 2

1:100 | PROPOSED

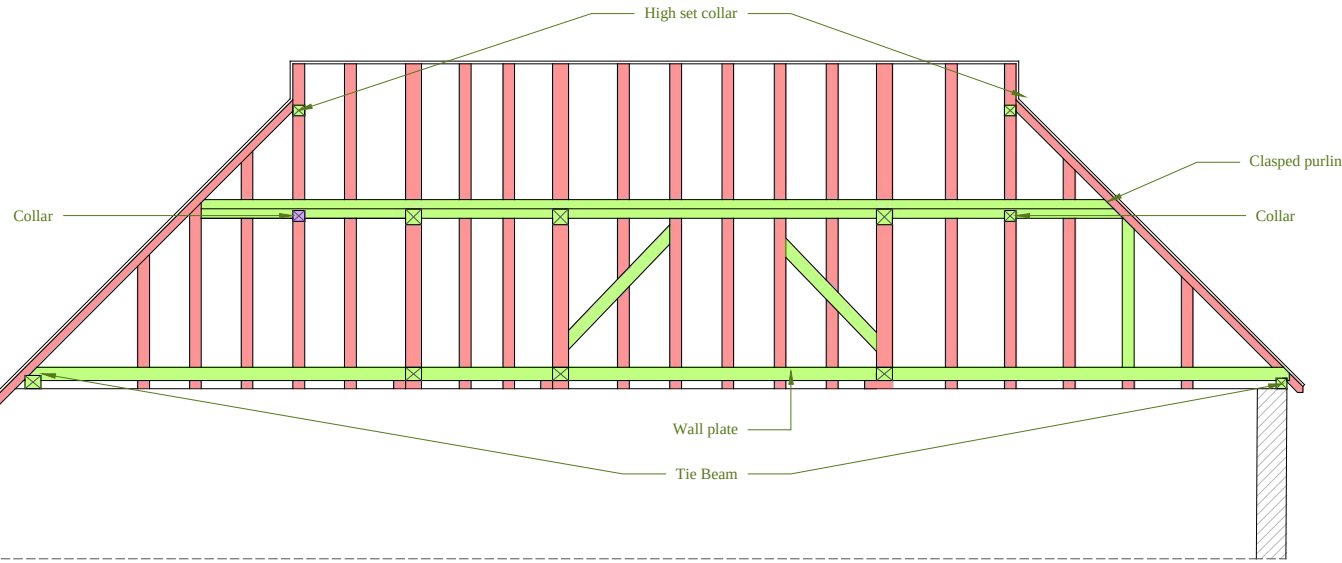
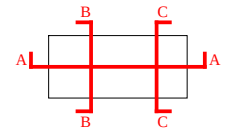
Truss 3

1:100 | PROPOSED

Key:

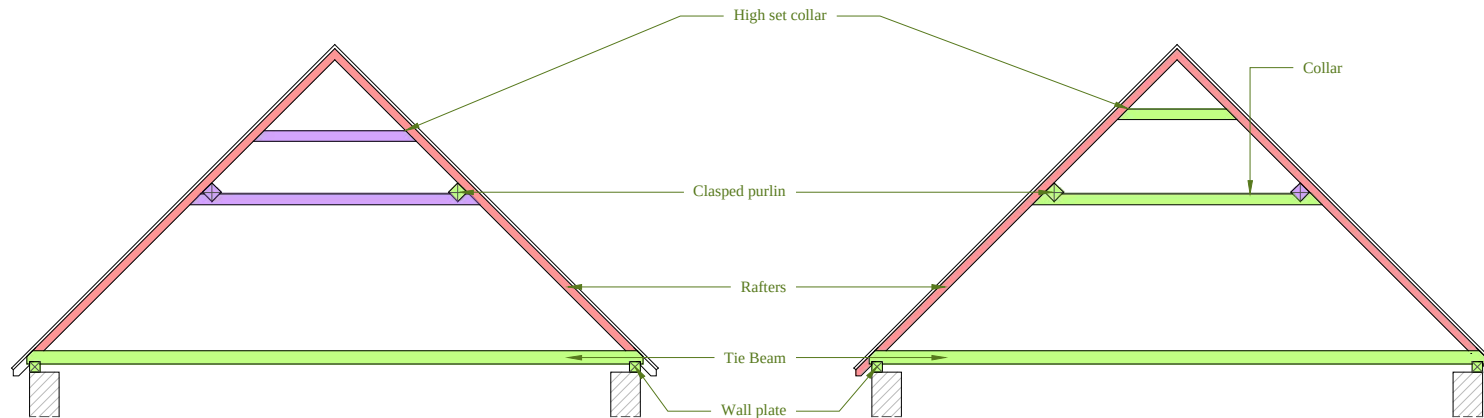
- Retain/Repair
- Replace
- New

Key Plan:



Section A

1:100 | PROPOSED



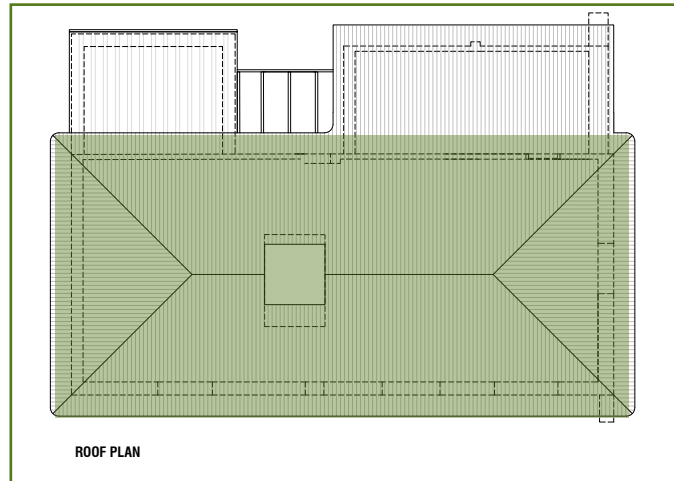
Section B

1:100 | PROPOSED

Section C

1:100 | PROPOSED

ROOF STRUCTURE



1. All elm rafters and roof timbers are severely decayed due to insect attack.



TIMBER CONDITION ASSESSMENT: ST JOHN'S COTTAGE

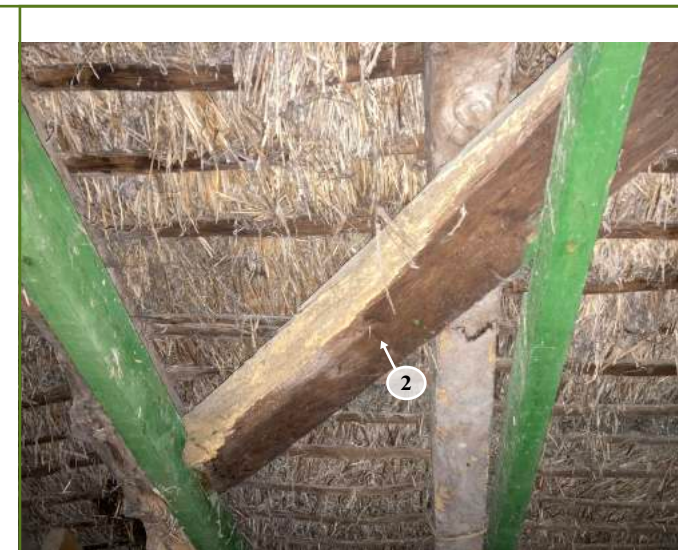
1. All Elm rafters and roof timbers are severely decayed due to insect attack.



1. Queen posts and Elm collars severely decayed though insect attack.



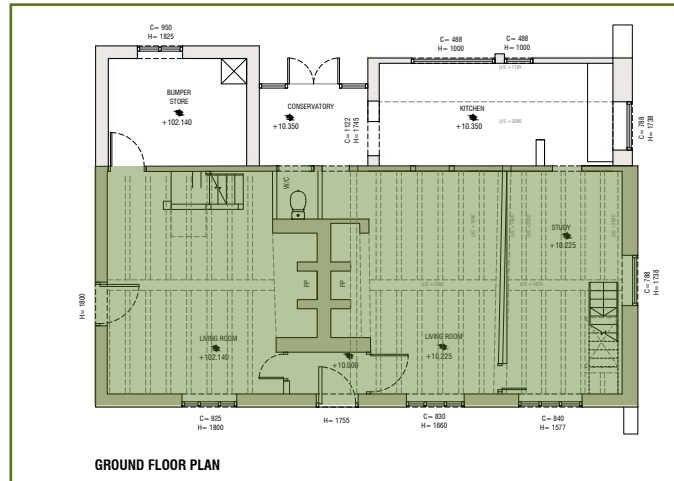
1. Oak purlin to be salvaged and incorporated into the new roof.
2. Oak wind braces to be salvaged and incorporated into the new roof.



1. Oak purlin to be salvaged and incorporated into the new roof.
2. Oak collar to be salvaged and incorporated into the new roof.



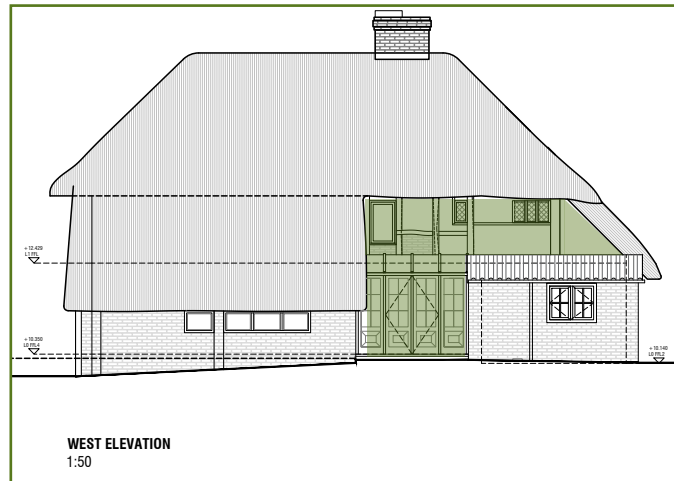
INTERIOR



1. Ends of original joists failed. Splint repairs could be improved or joist ends repaired with oak/resin splice with grp reinforcing.
2. Further investigation around splint to spine beam required after the removal of board.



EXTERIOR



1. Face patch and iron strap required to area of decay around failed tenon.
2. Remove cement mortar around timbers and repoint using lime mortar.





RESEARCH & DOCUMENTS BY:

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