



Bank House, Bath Road, Chippenham SN15 2SA

**SOUTHWEST ELEVATION EXTERNAL JOINERY - STRUCTURAL
REPORT**

[1850GE]

July 2026

Document

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1 Introduction

Giraffe Engineering was appointed by the client to carry out a structural inspection of the external joinery on the southwest gable elevation of the existing property at Bank House.

The aims of this report are:

- To describe the condition of the existing structure
- To discuss the likely causes of any observed defects
- To give recommendations for any remedial works required to ensure the ongoing safety and serviceability of the structure.

1.1 Background

Giraffe Engineering carried out a visual inspection of the property on 2nd June 2026, via external scaffolding which was installed up to roof level against the southwest elevation.

The inspection consisted of a visual inspection of the observable structure only and did not include any intrusive or investigative works to expose hidden structure or ground conditions.

2 Observations

2.1 General Description

The property is a three storey commercial premises of traditional solid stone wall construction, with timber roof structure.

The scope of this inspection and report is limited to the external joinery on the southwest elevation consisting of the decorative timber gable truss and timber bargeboards on the end of the pitched roof.

There is an identical decorative timber gable truss on the northeast elevation (pictured below), which was not inspected.



Figure 1: Front elevation showing external joinery on northeast gable elevation.

2.2 Condition

Detailed observations are given in Appendix A.

3 Discussion and Recommendations

A full set of recommendations and specifications is shown on drawing S01.

Some of the timber members have suffered decay and fallen off the building, other members have suffered decay and are still in place. To provide sufficient future design and serviceable life to the structure, all decayed timberwork should be replaced.

For replacement timber, it is important to specify a naturally durable species such as douglas fir. The existing timberwork is softwood and it therefore wouldn't be appropriate to mix with a hardwood such as oak.

For both the existing and replacement timber, and suitable specification and maintenance of a coating system is essential to provide ongoing protection to the timber to prevent decay due to moisture ingress in this exposed location. A suitable coating system will be flexible to avoid cracking as a result of shrinkage and movement in the timber and porous to water vapour to allow the timber to dry out when water does penetrate the coating. A specification is given on drawing S01.

Repair works should be carried out by a suitably experienced joiner/carpenter with experience of working with historic buildings and traditional carpentry. Generally the structural members should be replaced like-for-like and all joints to be replaced like-for-like, although where appropriate new joints may be formed as glued biscuit joints using external grade adhesive and suitably sized structural tenons.

4 Appendix A: Schedule of Observations

Ref	Description	Figure
#1	2No. lead caps on timber beam ends deteriorated, replace.	

#2	Painted timber fascia piece immediately beneath roof tiles. The portion of this fascia piece towards the upper half of the roof pitch have been replaced previously and are in good condition. Original timber where not replaced is decayed and now requires replacing. Coving piece immediately beneath fascia does not require replacing but may need to be removed and reinstated or replaced to facilitate replacement of fascia.	
#3	Roof slates in good condition. One tile missing adjacent to gable. Replace.	

#4	Rafters and rafter ends in good condition. Rafters typically 50mm wide at 300mm centres. The end rafters is 100mm wide.	
#5	Timber members in good condition. Some decay to base of horizontal finial. Repair with mouldable epoxy wood putty.	

- #6 Vertical king post. Decay in at lower end around joint with tie members.
- Removed the length of timber up to the existing splice joint and replace like-for-like with new timber.



#7	Left hand side horizontal and curved tie members. Decayed at end adjacent to king post. Both sections appear to be more recent repair in a less durable timber species and are therefore vulnerable to further decay and should be replaced with more durable timber. New mortice & tenon or domino joints to be formed, fully glued using external adhesive.	
#8	Timberwork at ridge. Good condition. Repainting required.	

#9 High level and low level purlins and braces on both sides all in good condition. No action.



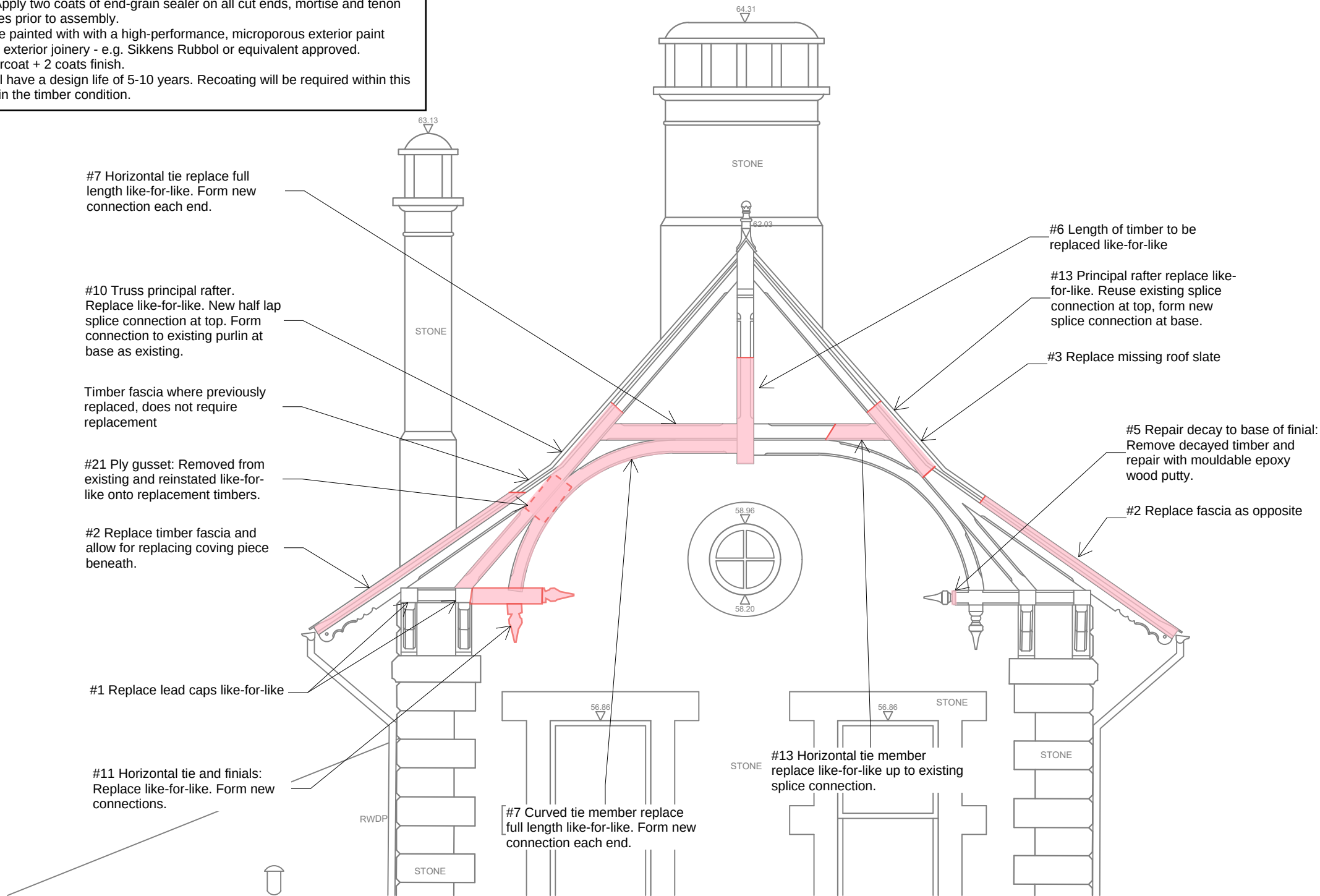
#10	Truss principal rafter on left hand side, decayed to rear face. Replace full length of member up to horizontal tie where new splice connection to be formed with existing.	
#11	Horizontal timber, finials from left hand side have decayed and come loose from structure. To be replaced like-for-like with new.	

#12	Existing ply gusset is screwed to principal rafter and curved tie. To be removed from existing and reinstated like-for-like onto replacement timbers. 615mm long x 215mm high x 18mm thick.	
#13	Decay to right hand principal rafter. Length of rafter and horizontal tie to be replaced up to existing splice joints.	

5 Appendix B: Structural Drawing

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- Timber replacement:
- Timber repair works to be carried out by suitably experienced carpenter.
 - All decayed timber to be removed and replaced with new.
 - New timber to be grade C24 douglas fir or other timber species with natural durability suitable for the exposed condition, subject to approval.
 - All new timber to be kiln dried to under 18% moisture content before priming.
 - Joints to be formed between new and existing to replicate existing joints - reuse existing tenons where possible.
 - New joints to be mortice and tenon to replicate original joint, or use hidden stainless steel screws, external adhesive and domino joints.
 - New splice connections to be half lap splices with 2No. M12 bolts, recessed and plugged with timber.
- Timber coating:
- Existing coating to be removed.
 - End grain sealer: Apply two coats of end-grain sealer on all cut ends, mortise and tenon joints and screw holes prior to assembly.
 - All timberwork to be painted with with a high-performance, microporous exterior paint system designed for exterior joinery - e.g. Sikkens Rubbol or equivalent approved.
 - 1 coat primer/undercoat + 2 coats finish.
 - Coating system will have a design life of 5-10 years. Recoating will be required within this timeframe to maintain the timber condition.



- GENERAL NOTES**
1. DIMENSIONS ON THIS DRAWING SHALL NOT BE SCALED.
 2. ALL DIMENSIONS TO BE CHECKED ON SITE.
 3. ALL DIFFERENCES BETWEEN THIS DOCUMENTATION AND CONDITIONS ON SITE MUST BE IMMEDIATELY REPORTED TO ENGINEER.
 4. ALL TEMPORARY WORKS ARE TO BE DESIGNED AND CARRIED OUT BY APPOINTED CONTRACTOR.

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