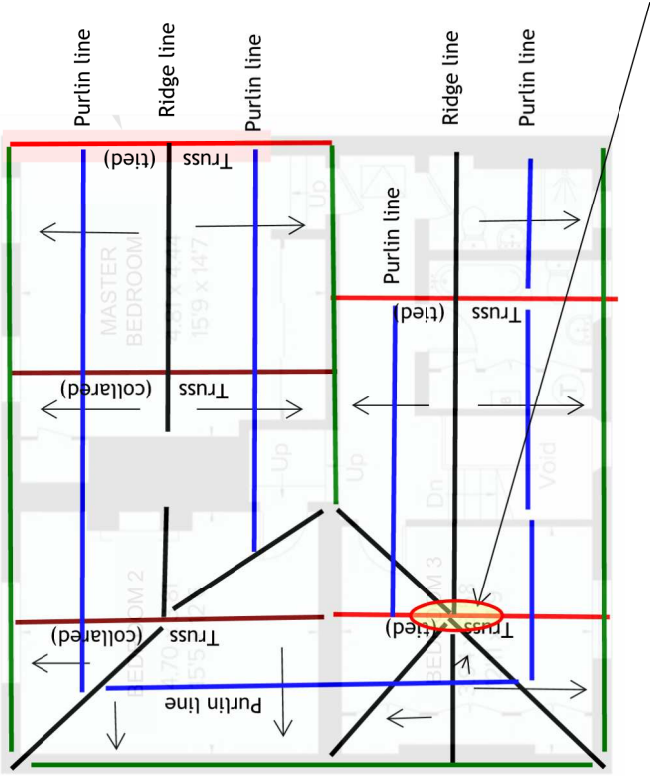
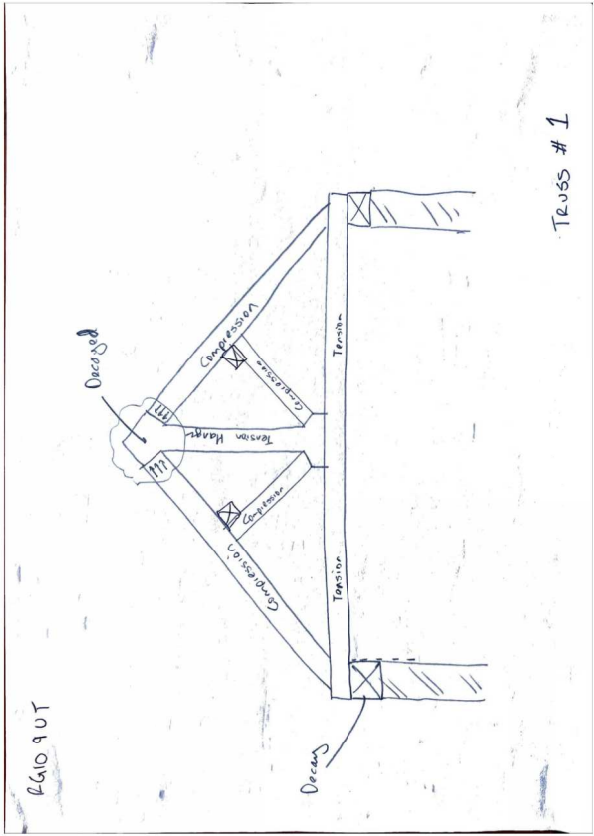




Schematic layout of roof structure
(over 2nd floor layout)



Indicative Side Elevation of a Tied Truss.



Problem

- The apex of the truss has decayed (water ingress through ridge intersection)
- The ability of the joint to transfer tensile force (from the central hanger post) to put compressive force into the principal rafter, has been adversely affected.

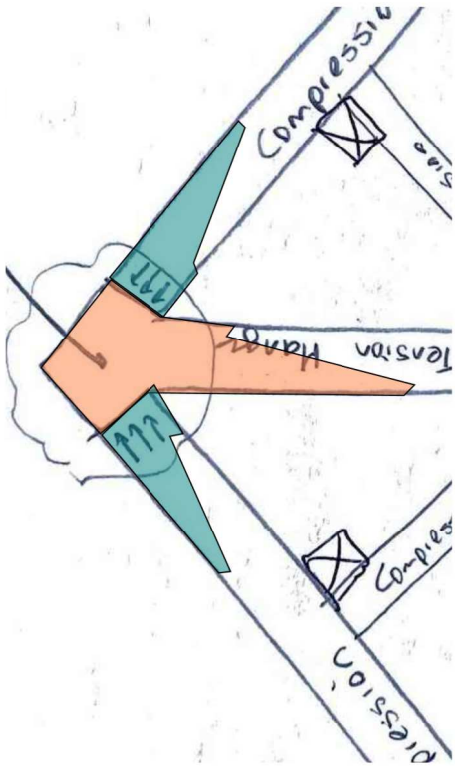
Proposed Remedial Works:

Either

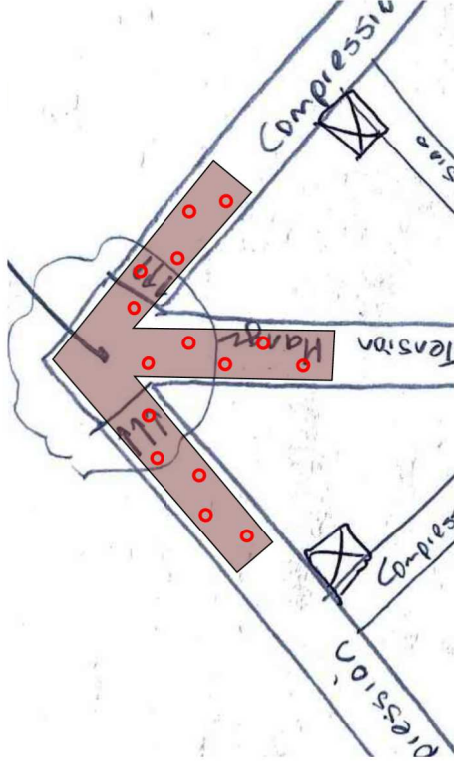
- After propping the truss from below.
- Reform the joint by cutting away the ends of the two rafters and the post
- Then splicing new ends on to a new replica (mortice and tenon) carpentry joint.
- Spliced connections to be scarf joints with lap length of 3 x depth (ie 300mm) for diagonals and 5x depth from the hanger (ie 500mm).
- Glue joists with Epoxy Resin (by Wessex Resins and Adhesives) and screw together to hold in place during curing.

Or.

- no need to prop the truss.
- Add 100mm wide x 5mm thick steel plates to each side and bolt through. Extend plates 500mm beyond decayed timber and use 5No M16 through bolts.
- Suggest applying ply template and drill through to ensure alignment of holes.



Glued and Screwed Scarfe Joint repair



Steel Plate and Bolted repair.

Castleman's Cottage

Client: Ashley Bryant and Kate Carson

Job No: 225131

Roof Repair: Tied Truss Works

225131 - MNP - XX - XX - SK - S - 4003

Sheet 1 of 1 Rev: P01

Author: SME

Scale: N.T.S

Date: 22/05/2025