

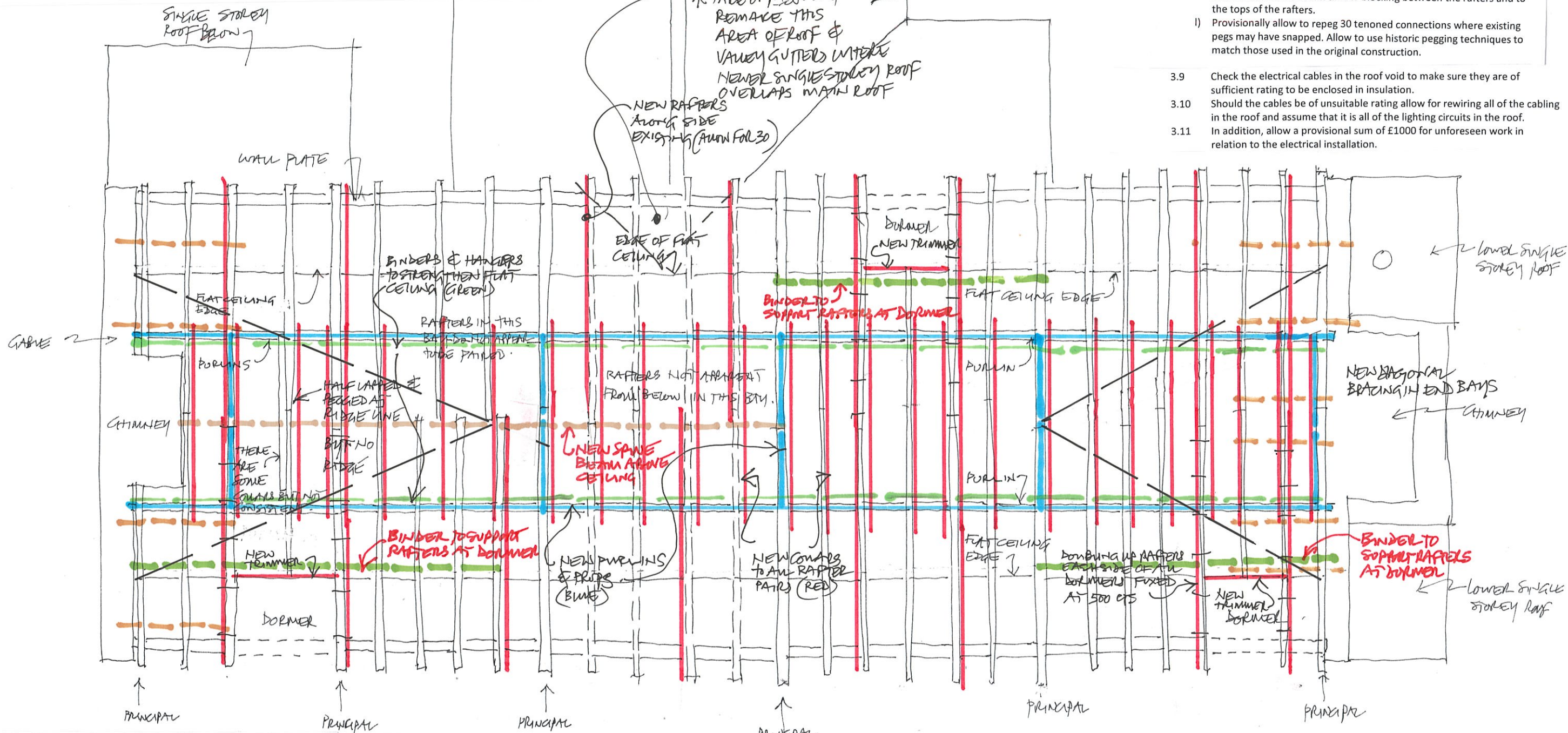
- 3.6 At This stage once the engineer and architect have confirmed the required repairs the conservation Officer will be invited to approve the repairs to clear the condition on the Listed Buildings Consent. There may be a delay while this approval is provided.
- 3.7 Carry out repairs to the roof structure and assume that they will include the following:

- Check all wall plates and allow a provisional sum of £1500 for repairs.
- Provide and install new collars for all 28 rafter pairs in 50 x 150 C24 softwood bolted to rafters with M12 through bolts with 50mm x 50mm square washers and with double sided tooth connectors between. Collars to be set immediately above the new purlins, see below.

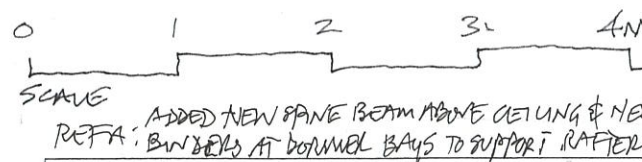
3.28 Where the single storey rear wing roof overlaps the main roof allow for removing tiles, remarking the valley gutter including code 7 lead, to take account of the repairs and thickening of the main roof construction, repairs and insulation and adjust the tiling and reinstate the wing roof.

- Double up rafters either side of all dormers using 80 wide x 125 deep C24 rafters affixed to existing rafters at 500 centres with M12 bolts with double sided tooth connector plates between and introduce 100 x 125 deep C 24 trimming timbers supported on existing rafters by joist hangers and picking up bottoms of upper rafters which were cut when the dormers were installed.
- Strap the ends of the roof structure to the gable walls using 12 no. L shaped straps (6no each gable), to be built into the gable walls and secured over three common rafters on east and west elevations at 2m centres. Straps to be 30 x 5mm thick galvanised steel 1.2m long and fixed to 100 x 50mm timber blocking between the rafters and to the tops of the rafters.
- Provisionally allow to repeg 30 tenoned connections where existing pegs may have snapped. Allow to use historic pegging techniques to match those used in the original construction.

- Check the electrical cables in the roof void to make sure they are of sufficient rating to be enclosed in insulation.
- Should the cables be of unsuitable rating allow for rewiring all of the cabling in the roof and assume that it is all of the lighting circuits in the roof.
- In addition, allow a provisional sum of £1000 for unforeseen work in relation to the electrical installation.



- Provide new purlins on both sides of the roof, 125 x 175 deep C24 softwood with timber packers supporting the rafters on the purlins and connected to rafters, packers and purlins with two fully nailed steel angles each side of each packer all as shown on the engineer's drawing. note that if the rafters are out of level the packers are likely to vary in height and the steel angles are likely to vary in size as well.
- Support the purlins off the central ceiling beams at each loadbearing partition using two 125 x 125 C24 softwood timber struts to prop the purlins off the central beams.
- Provisionally allow for new 30 new rafters to run along-side existing weak or failing rafters as directed, using 75 x 125 deep C24 softwood rafters, housed over wall plates and purlins and bolted with connector plates at the apex. These are generally to be in pairs as there is no ridge. Provide collars to new pairs of rafters as b) above.
- Provide and install diagonal bracing for the length of both end bays on both sides at both ends of the roof structure, in accordance with building regulations. Bracing block between rafters, using C24 timber and attach 50mm x 6mm galvanised fully nailed strap over the blocking and rafters to provide longitudinal stability of the timber structure.
- Allow a provisional sum of £2500 for unforeseen repairs to roof structure.
- Carefully check the ceiling joists and report back and allow a provisional sum of £2500 for unforeseen repairs. note that the ceiling structure must not be relied upon to take any weight.
- Provisionally allow for providing binders and hangers to strengthen the ceiling structures by halving the span of the ceiling joists. Assume binders to be 125 x 75mm C24 and truss clipped to the ceiling joists. Hangers to be 100x 50mm C24 bolted to the hangers and to the purlins with M12 through bolts.



• ROOF STRUCTURE PLAN (PRELIMINARY).
(RAFTER POSITIONS FROM PRESENCE IN ROOMS) IN SLOPING CEILING.
REPAIRS TO ROOF STRUCTURE

drawing title PROPOSED REPAIRS. ROOF STRUCTURE PLAN.		FREELAND REES ROBERTS ARCHITECTS 25 City Road, Cambridge, CB1 1DP tel 01223 366555 fax: 01223 312882 info@frrarchitects.co.uk			
client SIMONNE GRAEUS & JAMIE CAMPBELL	job title THE COTTAGE CHAPEL ROAD OLD NEWTON SUFFOLK	scale APPROX 1:50 @A3	drawn HF	date JULY 2023	sheet/layout number 23.038/ROOF 2.
					rev A