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Project:		Date.	19 th March 2021
HEREFORDSHIRE - OAST HOUSE FARM BARNS			
Client: The National Trust		Job No.	SS. 1104. TRS
Drawing Title:		Issue.	Tender
STRUCTURAL TIMBER SPECIFICATION		Revision:	

GENERAL NOTES

- i) The structural specification is to be read in conjunction with the main Architect Details, Specification, all other scheme drawings and contract documents, which take precedence.
- ii) Any ambiguity between documents shall be clarified with the Contract Administrator (CA) before any building work and remedial repairs are undertaken and new material sourced.
- iii) The builder / contractor is responsible for all temporary support, falsework and protection of the building and property contents, including for the restraint and safety of walls and roofs in between work stages.
- iv) A suitable risk assessment and method statement (RAMS) shall be provided for approval of the CA / Architect prior to commencement of work.

DO NOT SCALE THIS DRAWING. All measurements to be double checked on site.

1 PREAMBLE – SCHEME OF WORK

- i) The existing traditional timber frame elements shall be retained, repaired and reused unless shown otherwise.
- ii) All salvageable material and elements removed from the building shall be sorted, clean and treated for potential reuse in the permanent works
- iii) The temporary stability of ironwork roof frame shall be safe guarded using suitable propping, ties, support scaffold or by shoring.

2 TIMBERWORK

2.1 GENERAL MATERIAL & SIZING

- 2.1.1 All replacement hardwood timber to be no younger than 3 years old after felling and be straight grained, free from sapwood, waney edges and shakes (splits) greater than 150mm in length
- 2.1.2 All softwood shall be FSC certified from sustainable sources.
- 2.1.3 Softwood for carcass (roof structure, stud framing, etc.) shall be minimum stress grade C16 as shown. All new softwood timber shall be double vacuum pressure impregnated with organic solvent preservative (e.g. Tanalith E) complying with BS 5268 Parts 1 and 5 and British Wood Preserving Association Standard 114. Moisture content at time of use shall not be greater than 20%.
- 2.1.4 Fresh sawn faces shall be re-treated with brush-applied preservative or by dipping.
- 2.1.5 All new timber shall be well cut, sound uniform and square, free from warping or any other deformation, hard or soft rot, worm or beetle and shall not contain any large or loose knots, checks, splits or sapwood seepage that may render it deficient for the purpose it is intended.

2.1.6 All timbers shall be stored in dry conditions, set level on pallets off the ground.

2.1.7 All embedded ends of replacement timber or repair timbers should be isolated from the walls with an impervious membrane. A lime mortar packing shall be used in addition to a DPM wrap in solid external walls.

2.2 NEW CARPENTRY JOINTING & REPAIRS

2.2.1 Repairs shall be the minimum necessary to achieve structural adequacy.

2.2.2 Decayed or severely rotten timber shall be cut back a minimum depth of 90mm into sound hardwood timber or 45mm into softwood timber. New replacement timber shall be of identical size and shape of the original with the grain closely matching that of the replaced piece.

3 STRAPPING & RESTRAINT TIES

3.1 GENERAL

3.1.1 Where indicated additional ties and strap restraints shall be provided where external panel walls meet the lower masonry brickwork, to increase the overall robustness.

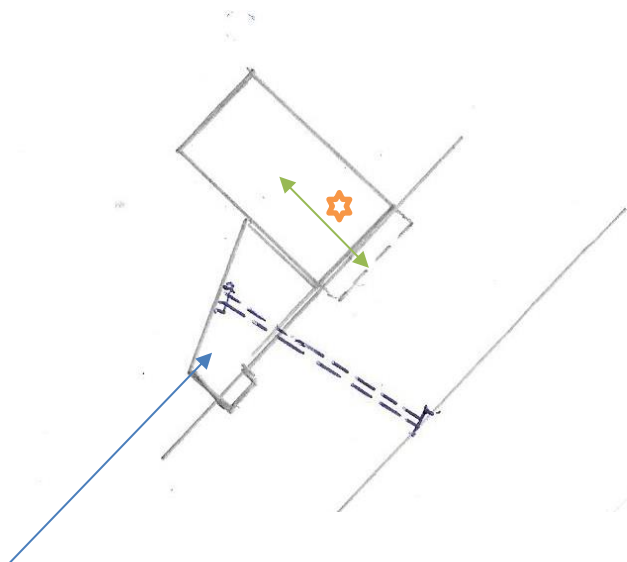
3.1.2 Wallplates and soleplates shall be firmly fixed down to masonry brickwork with a minimum 12mm thick lime mortar bed. In addition , standard 30 X 5mm HD Straps (Galvanised Mild Steel) to be provided at 1500mm maximum centres fixed down to the inner face of masonry wall, unless shown otherwise

3.1.3 Wallplates shall be made continuous with new pieces spliced in, and additional HD strapping as indicated, or alternatively provide through masonry bolt fixing with M10 stainless steel resin anchor bolts at 300mm centres, nominally 140mm long drilled vertically down into the inner leaf of the solid walling, i.e. with 45mm inner edge clearance.

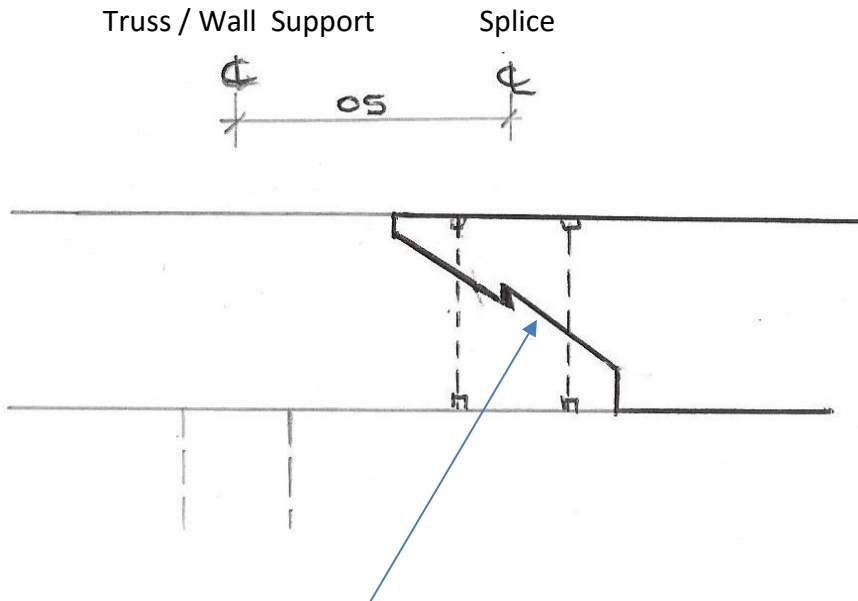
PURLIN STAY DETAIL (nts)

TYPICAL SPLICE SCARF JOINT DETAIL (IN ELEVATION) SHOWING MAXIMUM OFFSET FROM TRUSS / WALL BEARING (CENTRELINE SUPPORT)

Purlin notched into truss principal rafter support.



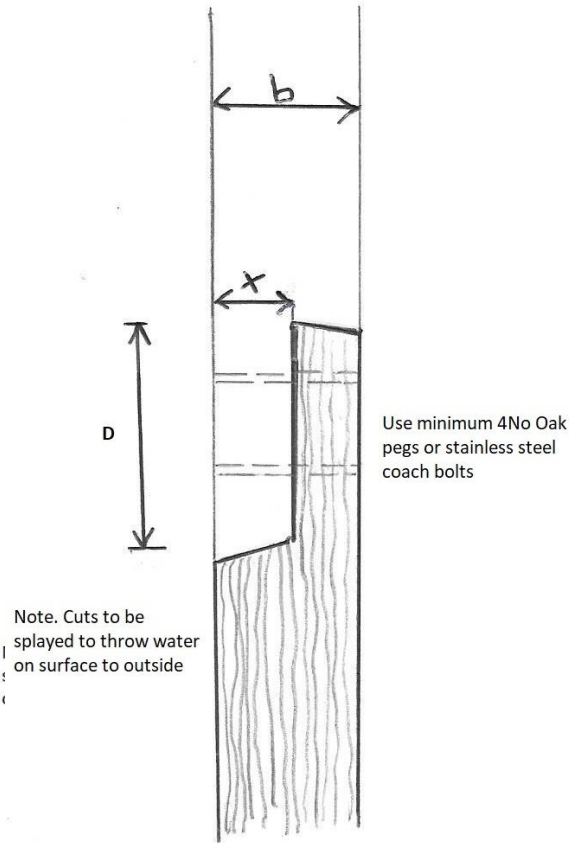
Purlin Stay to be cut from 150 x 150mm square solid Oak block.
Notch up to 40mm cut across truss principal rafter and fix through using M12 Coach Bolt in sleeve with washes



OS = 1200mm maximum offset

Make staggered cut at 30 – 35 degrees to horizontal. Fix through with 2No M12 Bolts in sleeve with washes

TRADITIONAL TIMBER FRAMED BUILDINGS
TYPICAL DETAIL - 2

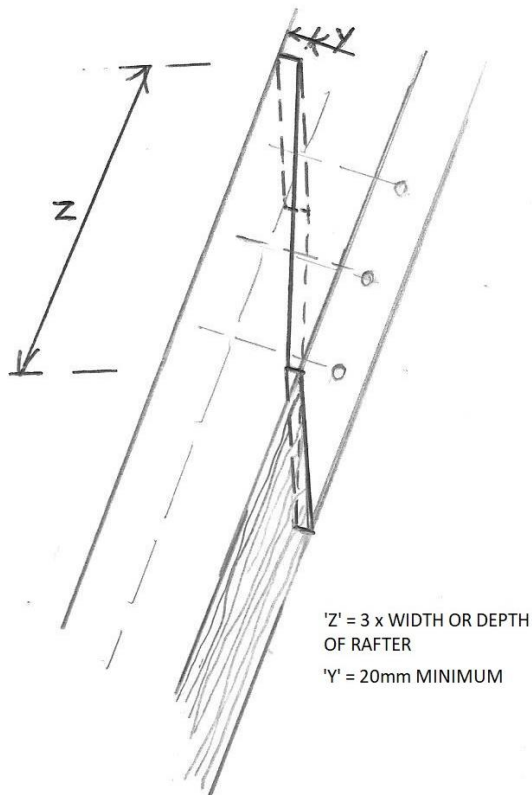


Note. Cuts to be splayed to throw water on surface to outside

TYPICAL POST / STUD REPAIR

$$b/3 < 'x' < b/2$$

$$'D' = 3 \times b$$



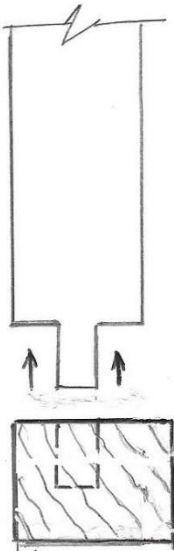
$$'Z' = 3 \times \text{WIDTH OR DEPTH OF RAFTER}$$

$$'Y' = 20\text{mm MINIMUM}$$

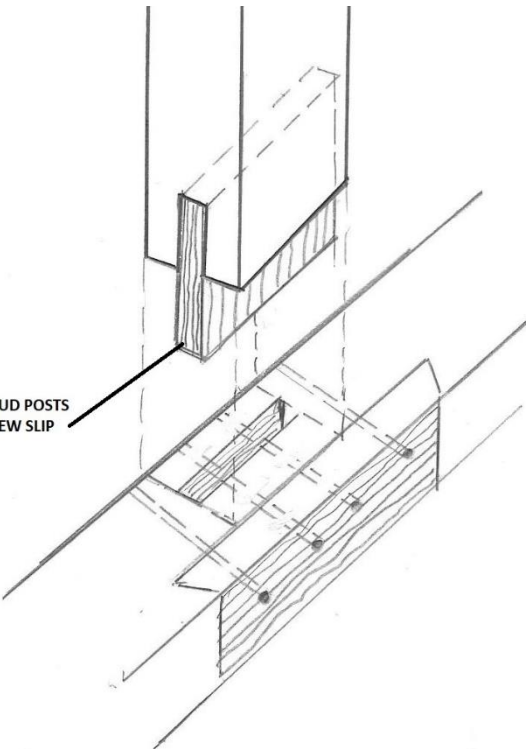
TYPICAL SCARF REPAIR TO COMMON RAFTERS

CUT TO BE FORMED IN VERTICAL PLANE SET MINIMUM 50mm INTO SOUND TIMBER
Note 1. Horizontal cut scarf joint may be used for wallplate repair
Note 2. Scarf repairs usually not suitable for beams or purlins with internal bending stresses

TRADITIONAL TIMBER FRAMED BUILDINGS
TYPICAL REPAIR DETAIL -1



CENTRAL TENON IS NORMALLY 1/3 POST BREADTH. LENGTH OF TENON SHALL BE TWICE WIDTH OFFERED INTO NEAT MORTICE BY CHISEL AND PEGGED THROUGH TO HOLD IN PLACE.



WHERE A DEFECTIVE TENON ON STUD POSTS NEEDS TO BE REPLACED INSERT A NEW SLIP TENON FROM SIDE FACE