

Abbey Farm Barn Snape Suffolk

Record Drawings
Schedule of Repairs and
Repair Details

for English Heritage
Mr & Mrs H. S. Raynor

by
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The Barn Gallery
Mill Lane
Butley
Woodbridge
Suffolk IP12 3PA

March 2001

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Introduction

Abbey Farm Barn, Snape, is one of only two mediaeval aisled barns in East Suffolk. It is situated just outside the village of Snape, 400 metres NE of Snape Bridge and Maltings, which mark the tidal limit of the old Alde/Ore rivers. The Barn forms part of a group of buildings including C19th cart lodges, a modern Dutch barn and a C16th or early C17th farmhouse. Nearby to the south-west is the site of a mediaeval Benedictine priory of which nothing remains.

The aisled Barn is a Grade II* Listed Building, weatherboarded externally and roofed with pantiles and metal sheeting. It has seven bays of mainly mediaeval structure up to arcade plate level and above this level a modern low pitch roof.

Record Drawings were commissioned in 1999 by Trudi Hughes, Historic Buildings Surveyor of English Heritage, Eastern Region and to a brief prepared by Richard Bond of their Historical Analysis and Research Team. Funding for the Record Drawings has been granted by English Heritage, Suffolk County and Suffolk Coastal District Councils.

The purpose of record drawing is to provide a detailed record of the historic fabric prior to the commencement of repair work, which could alter, obscure or in the last resort, remove parts of the primary structure. In the case of Abbey Farm Barn some parts of the structure were at risk of being lost, being in a very decayed and fragile condition. As well as recording the chronology of the construction, the measured survey drawings served as a basis for a series of detailed repair proposal drawings which were used for specifying the repair works and obtaining Listed Building Consent.

The tree ring analysis has so far failed to produce conclusive evidence in dating the mediaeval timbers of the Barn. This is due partly to the unsuitability of the timbers themselves for analysis, and partly to the lack of a reliable tree-ring data base for this region of Suffolk, there being insufficient data for comparison of samples. If and when more information is available, the analysis of the Snape Barn timbers could be reviewed.

Record Drawings can also highlight areas for the Building Analyst where there is something to be gained from further archaeological investigation. The Recording Brief was in fact extended into the Contract Phase, when the builder was asked to expose post bases to verify the extent of primary structure.

The Architect's involvement with both the production of Record Drawings and then with the subsequent development for repair proposals had its advantages. Early familiarisation with and understanding of the historic fabric of the building enabled a more sensitive approach to repair work. The final

version of the Contract Specification and Repair Details was developed with the benefit of this historical knowledge.

The basic criteria applied to the repair policy was for minimal intervention and for repairs to avoid distorting evidence provided by the fabric. Initial repair methods using traditional materials were found to be impracticable where mediaeval timber was in a severe state of decay and fragile condition. An alternative method using steel components was the eventual solution which enabled all the original fabric to be retained.

An example of this approach, illustrated in Fig 31, was the removal of the temporary shoring which had been installed between the arcade posts after storm damage. The problem was how to replace the missing curved arcade braces. Options which used the existing mortices included replication of the originals in grown oak or in some form of laminated timber. These solutions were rejected as these replacements could not in fact be authentic due to their length being altered by the deformed shape of the structure. In the end, round section steel was the chosen material, fixed with a very simple and direct clamping arrangement to avoid concealing existing mortices or other detail.

The repairs to Arcade Post P6n, illustrated in Fig 32, also presented problems. This was an important part of the primary structure and had an example of a passing brace and aisle assembly attached to it. The original specification called for complex timber repairs in a laminated form. After the builder started work, it became apparent that the post was in an extremely fragile condition, with a fracture at aisle tie level. It was also disintegrating where there was a vertical shake at the jowl head.

The post had virtually no structural value and therefore required replacement. However, the removal of such an important part of the primary structure was unacceptable. The solution adopted was to insert a specially fabricated steel post which provided both roof support and a background against which one side of the arcade post could be fixed and left in a preserved condition after consolidation treatment.

The Barn's Future

Spanning fifteen years, the project record demonstrates the time sometimes required to assess an historic building at risk and to put into action the necessary repairs to ensure its preservation. With the current repair project now complete, it is hoped that the Barn's future has been secured for appreciation and further study.

At the present time, a suitable alternative to agricultural use is being sought, to provide a greater financial return with which to maintain the building.

Acknowledgements

I am very grateful for the advice and encouragement given by Richard Bond, Historical Analysis and Research Team of English Heritage, during the production of Record Drawings, and also to Trudi Hughes of the East of England Area Team of English Heritage, for her guidance on repair policy.

My thanks are also due to the Building Owners, formerly Graham Willmot and latterly Hugh and Sue Raynor, for their patience and co-operation during the Recording and Building Contract, also to Peter Howard, a builder from Woodbridge, for the loan of a scaffold tower and level, to Ned Allen, an art student, for assisting in the measuring, and finally to the Contractors, Chapman and Pleasance and their Site Foreman, Neil Cocksedge, for their co-operation and high standard of workmanship.

Project record

1986-7

October Barn suffered storm damage: temporary bracing installed by the Building Owner.

1997

February First meeting between Building Owner and Graham Hussey, Architect.

April Initial Survey of Condition by GH.

November Site Meeting with English Heritage, District and County Authorities and Building Owner.

1998

January Preliminary Outline Specification submitted to EH for comment.

June Grant Application to EH.
Listed Building Consent Application.

September Site Visit by Richard Bond, EH Historic Buildings Recorder.

1999

January EH Grant Offer received.

February Tree ring analysis of timbers by Dr Martin Bridge of UCL.
Historical Analysis Survey by Richard Bond of EH.
Grant Applications to District and County Authorities.

June Historical Assessment Report by Richard Bond of EH.
Brief for Recording Drawings received from EH.

July Report on architectural history of barn by Philip Aitkens.
Structural Assessment by EH Engineer.

July-October Measured Survey and production of Recording Drawings by GH

2000

February-March Production of Contract Specification for EH Approval.

March Increase in EH Grant Offer received.

April Site Meeting to discuss Contract Specification.

May Final Specification approved by EH.

June Tenders for the repair work invited.

July Contractor appointed.

September Repair Contract commenced.

2001

March Repair Contract completed

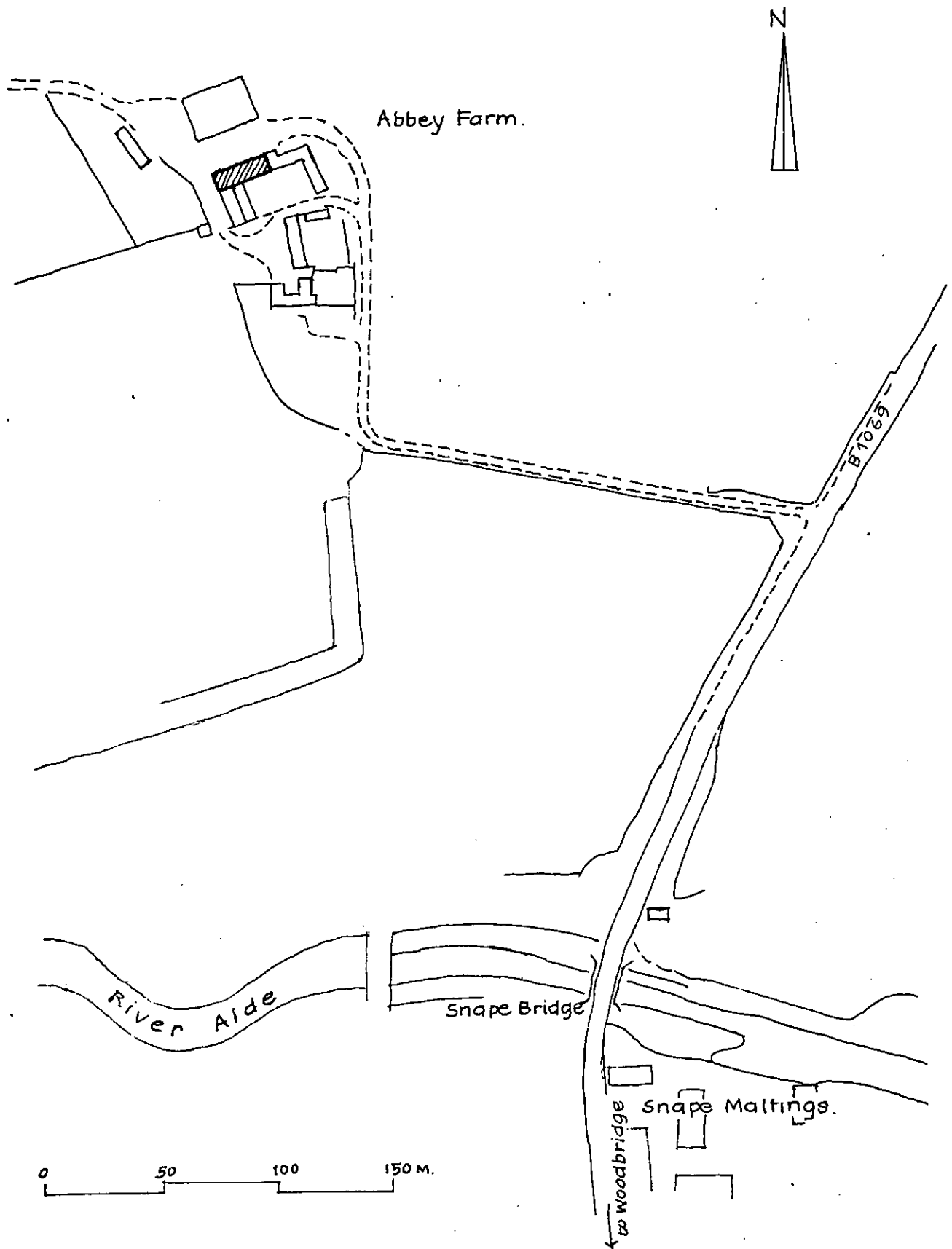
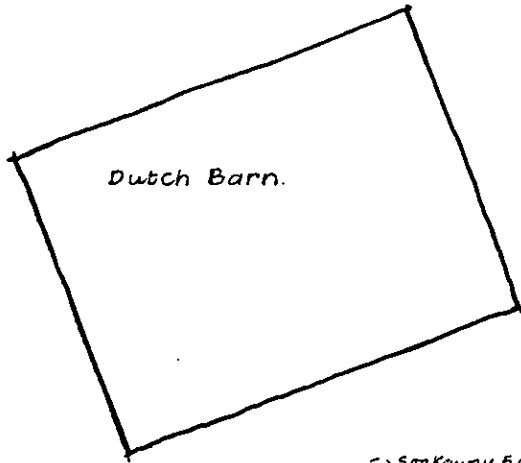
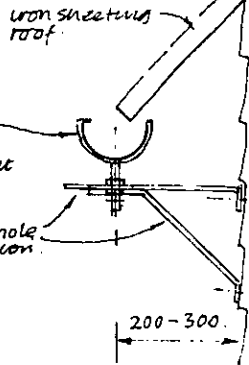


Figure 1 Location plan

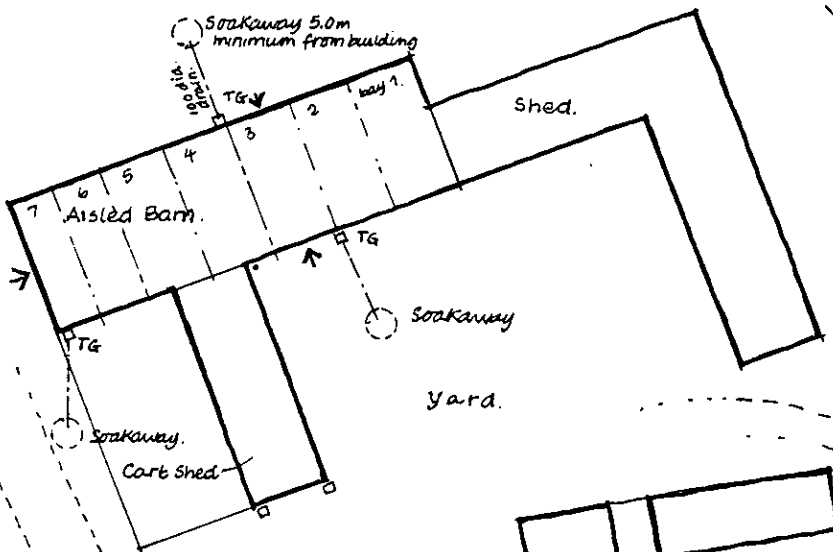


18 x 2.5 ms bunt to gutter profile: 6 dia. threaded rod for height adjustment.

25 x 3 ms: slotted hole for overhang variation.



GUTTER BRACKET DETAIL
Scale 1:20.



Block Plan.
Scale 1:500

Figure 2 Block plan

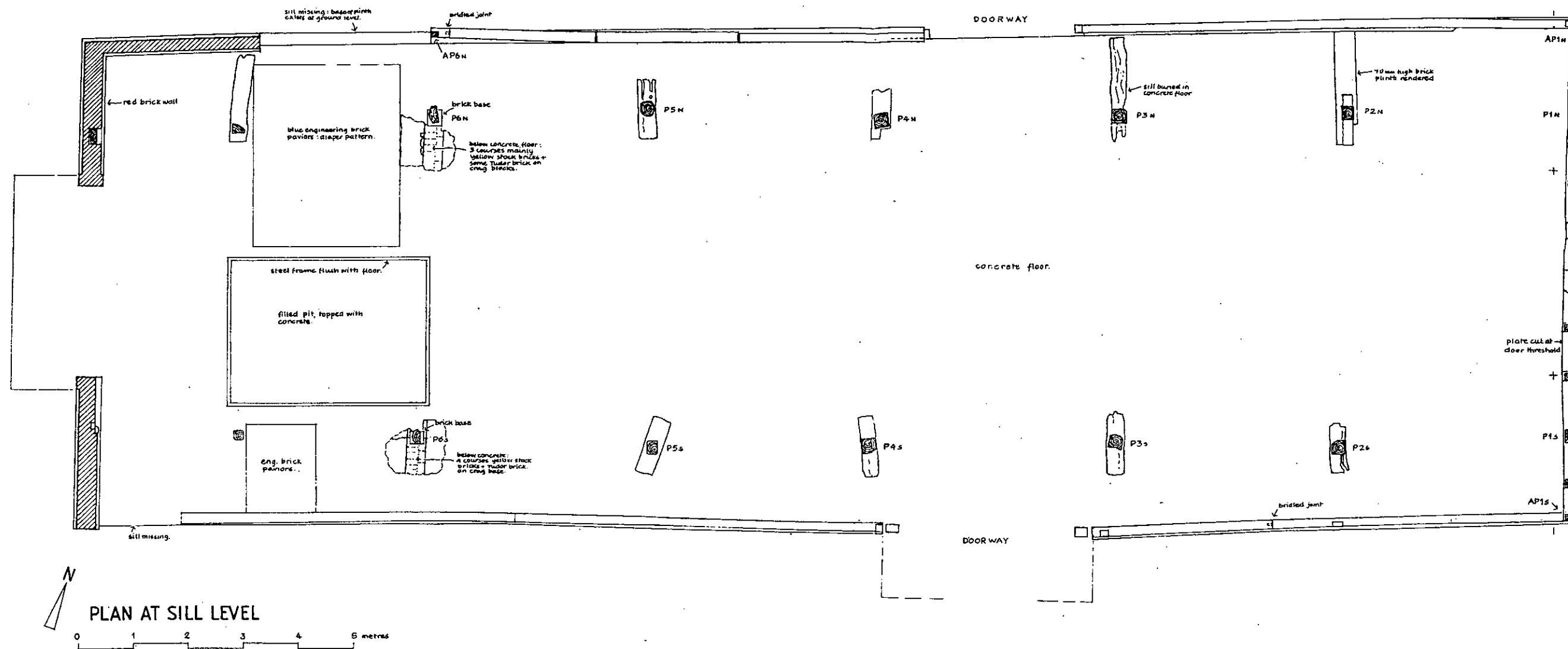


Figure 3 Plan at sill level

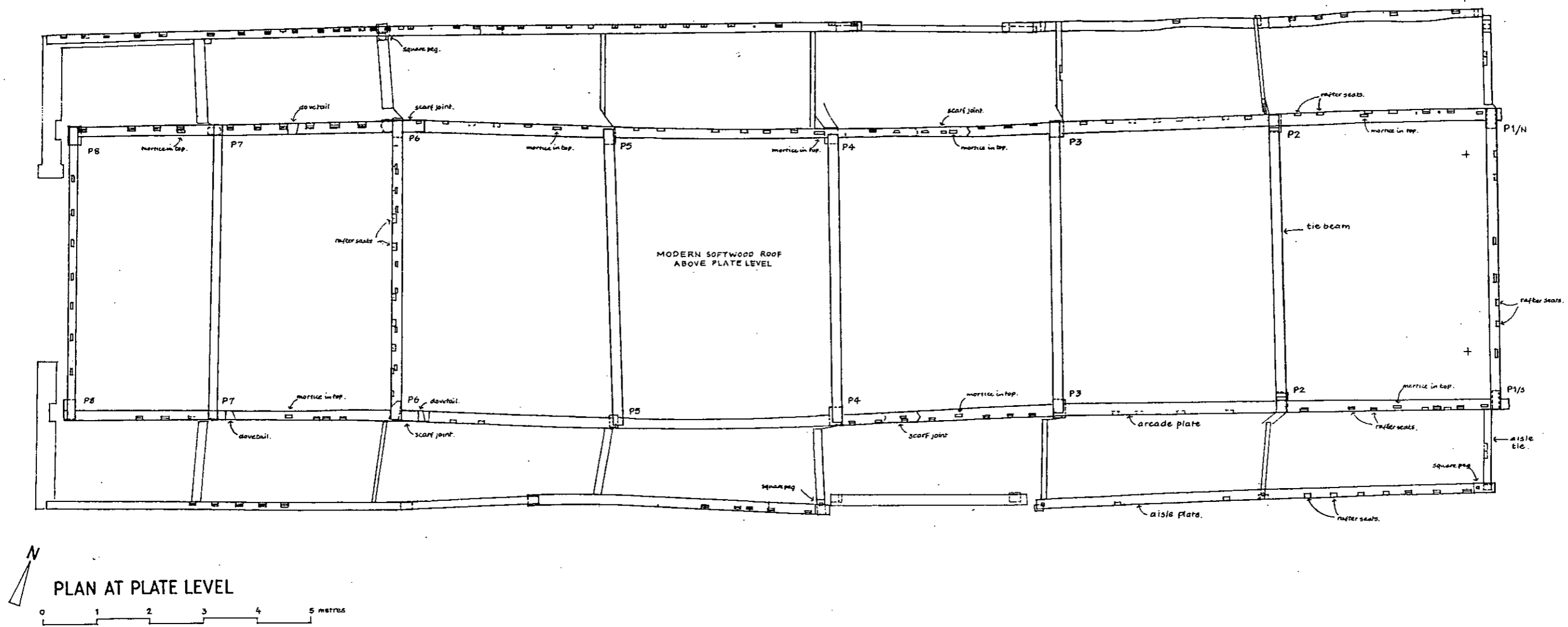
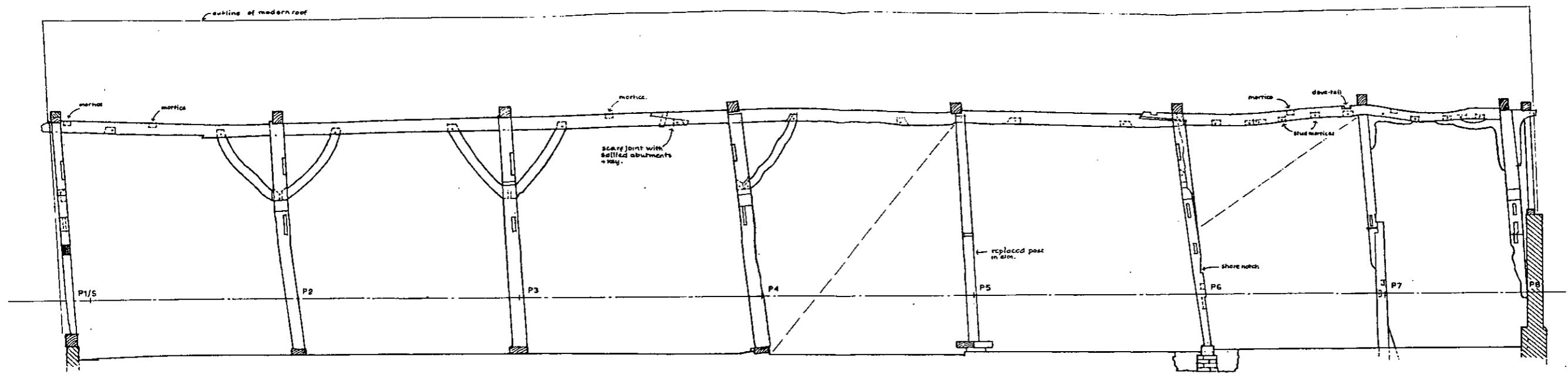
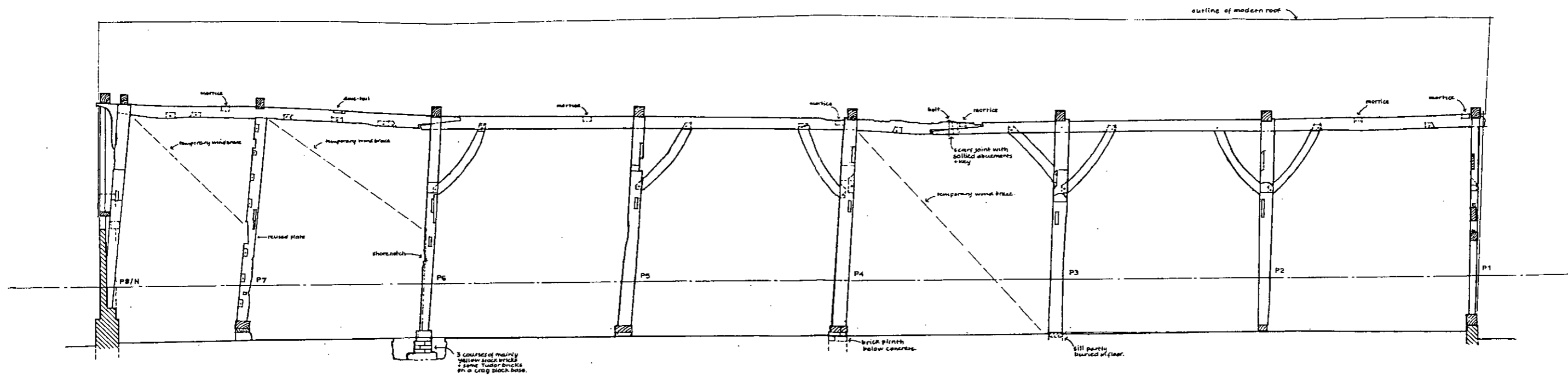


Figure 4 Plan at plate level



SOUTH ARCADE



NORTH ARCADE

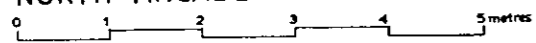
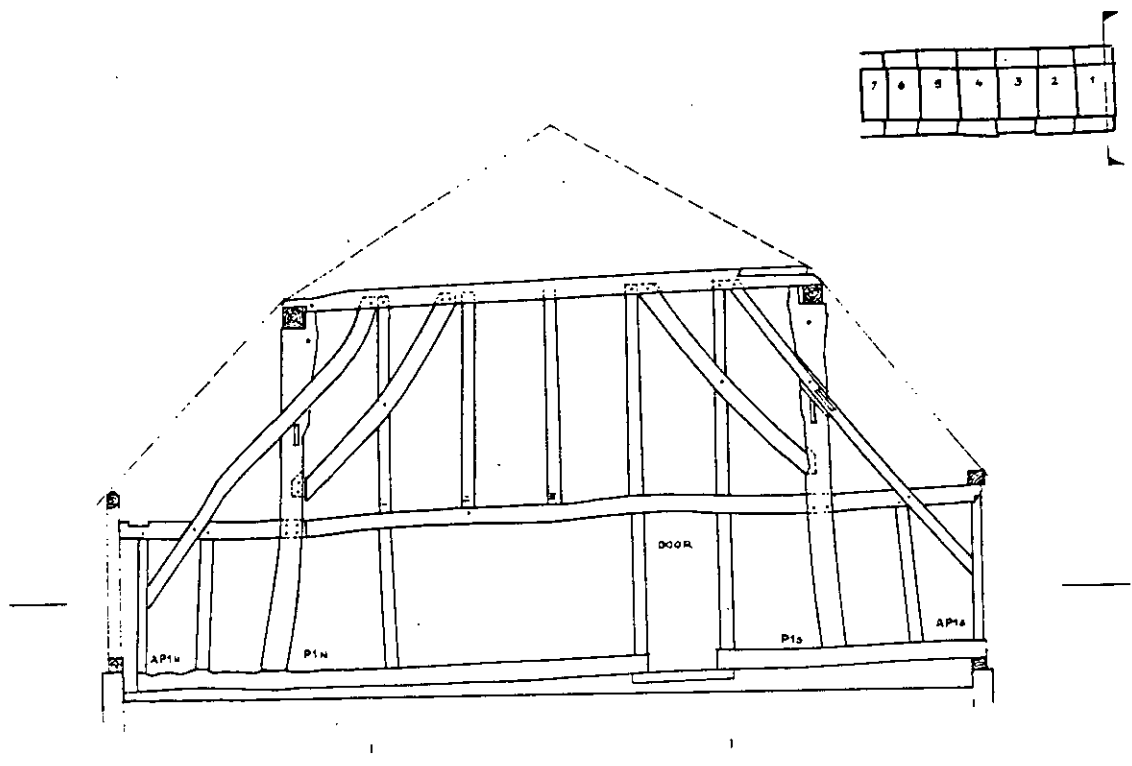
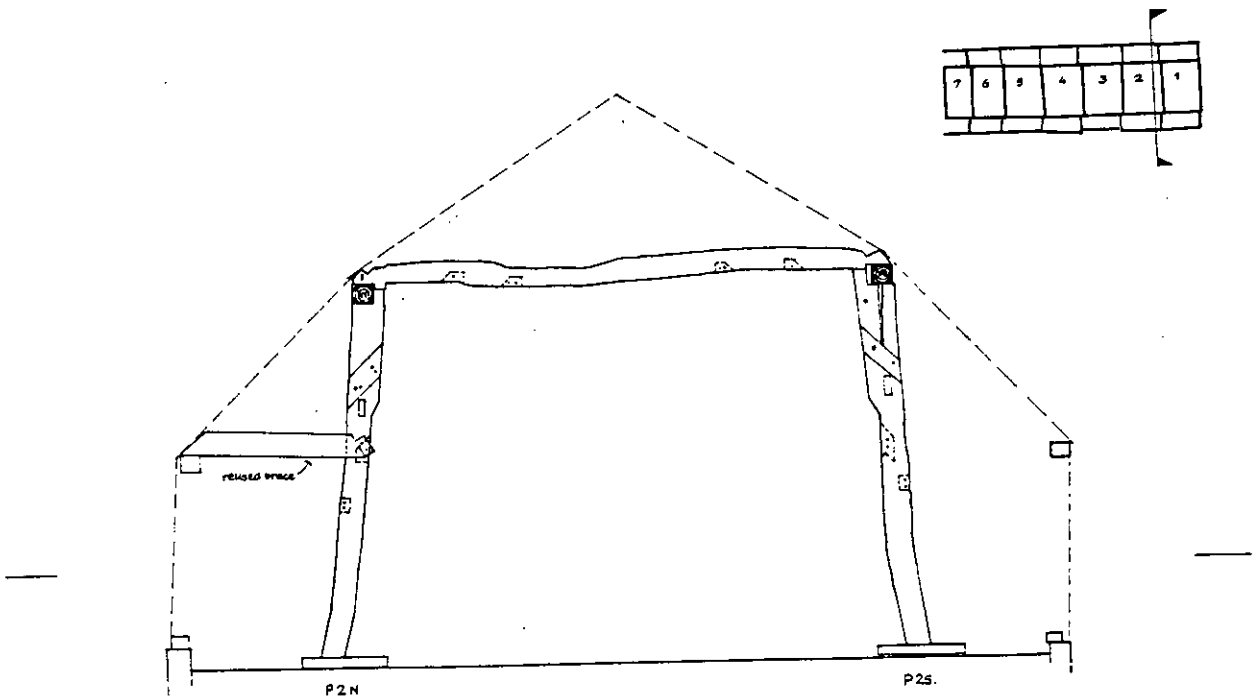


Figure 5 North and South arcade elevations



CROSS FRAME 1

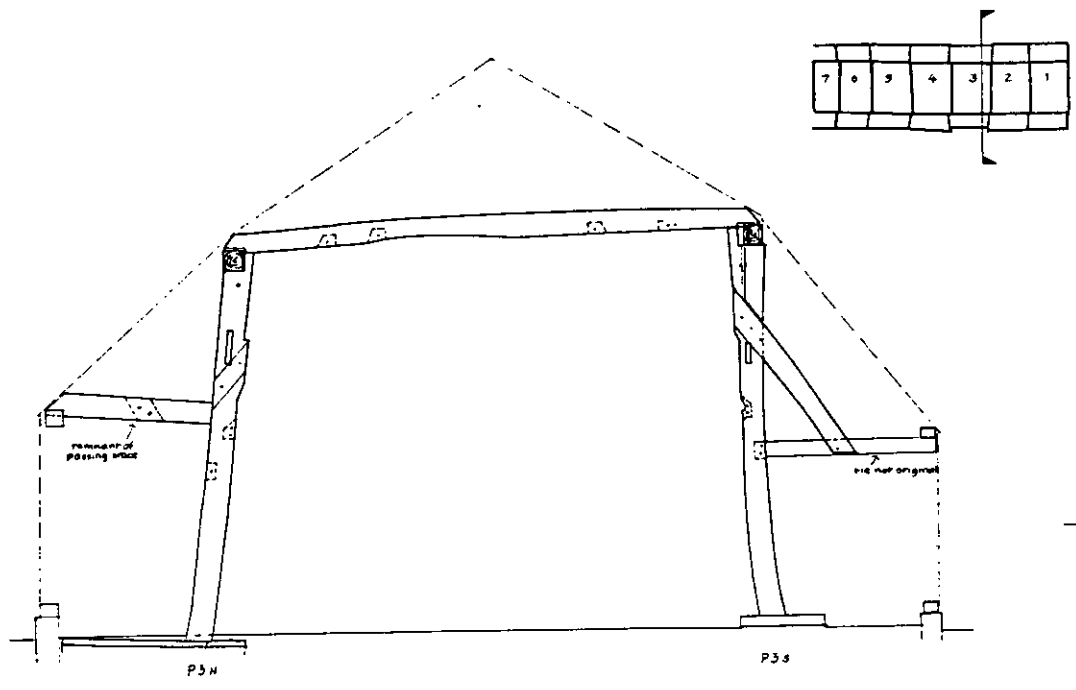
0 1 2 3 4 5 metres



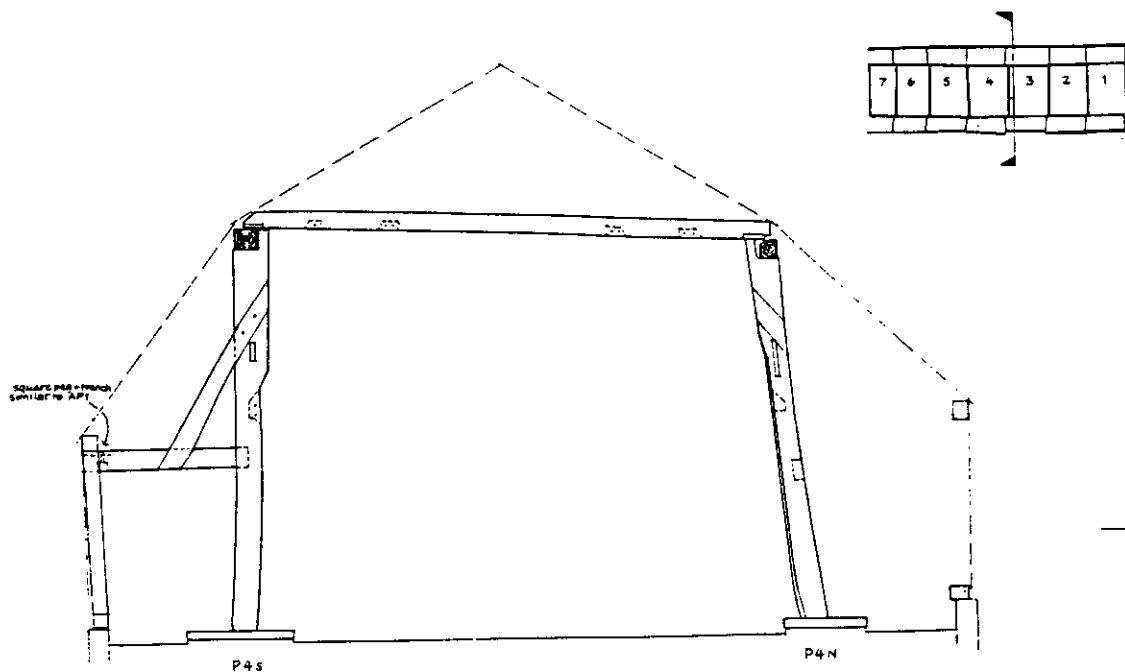
CROSS FRAME 2

0 1 2 3 4 5 metres

Figure 7 Cross-frames 1 & 2



CROSS FRAME 3
 0 1 2 3 4 5 metres



CROSS FRAME 4
 0 1 2 3 4 5 metres

Figure 8 Cross-frames 3 & 4

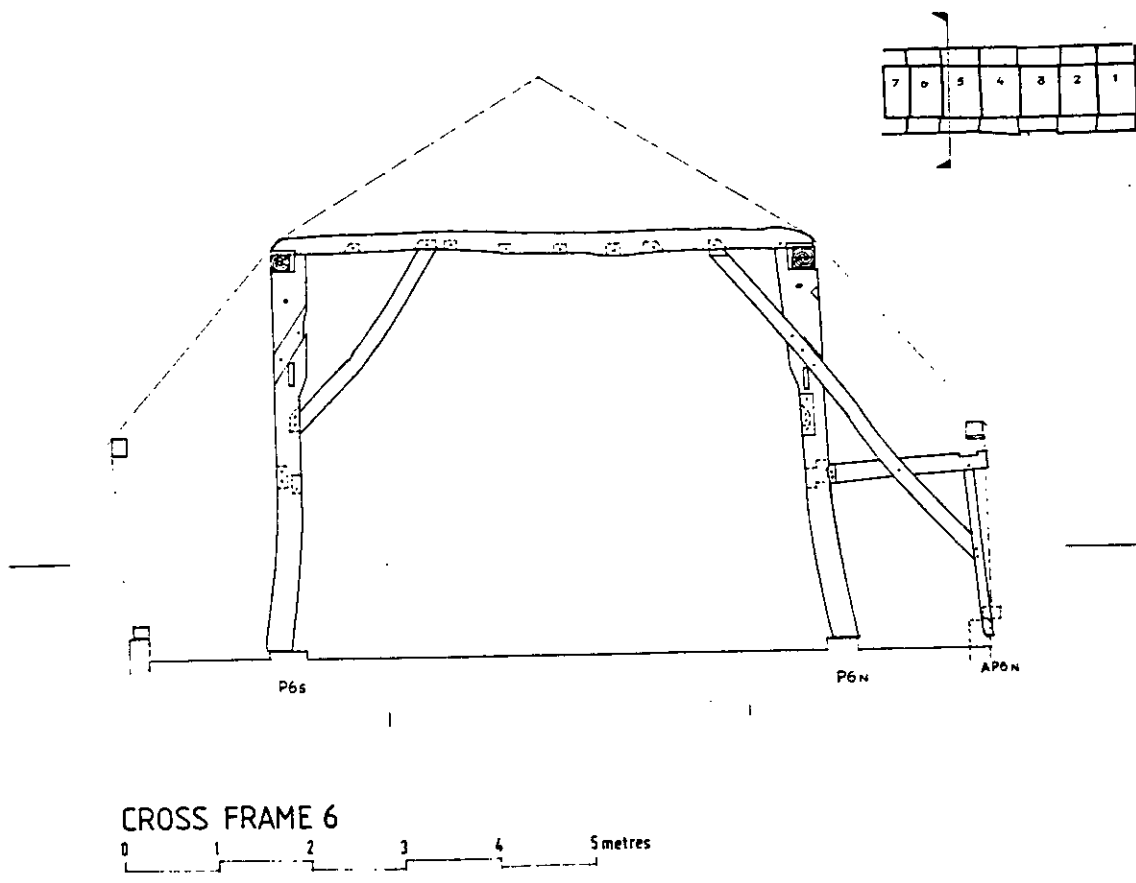
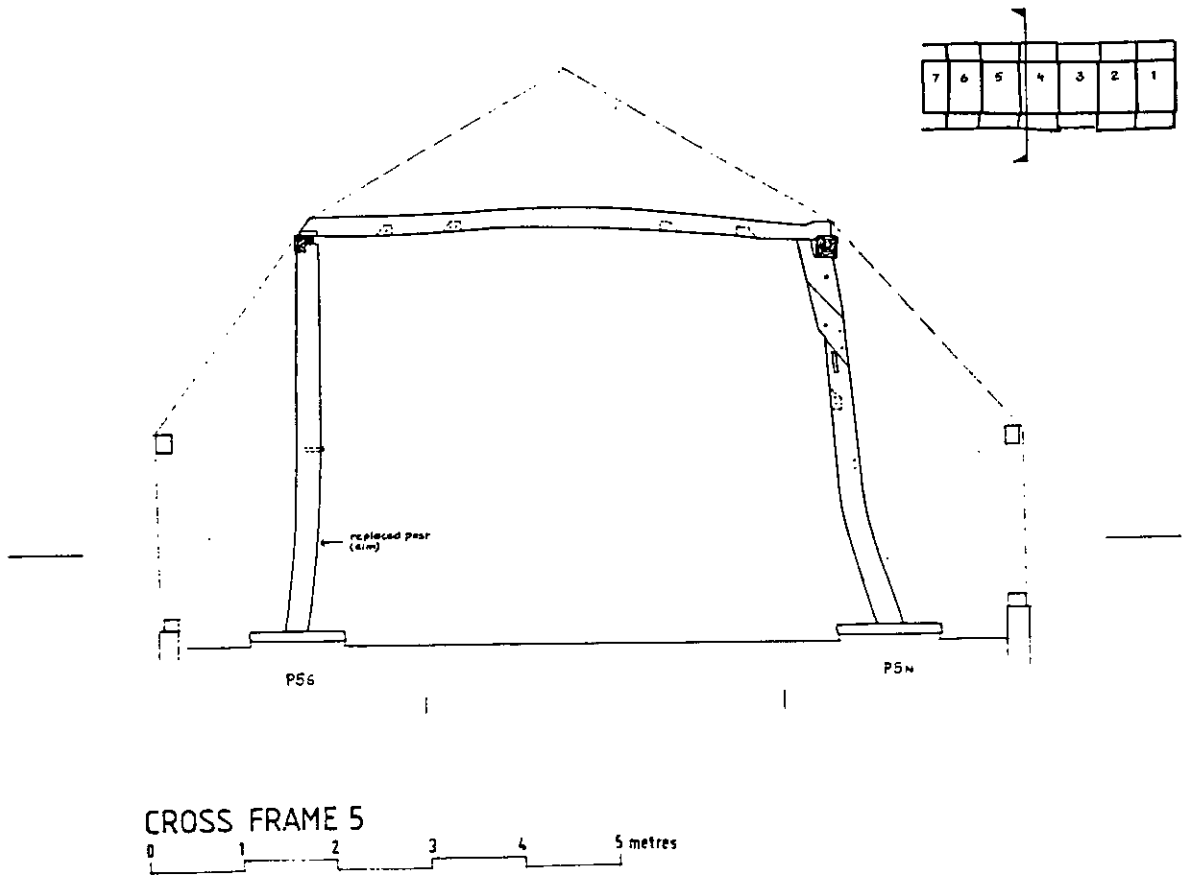


Figure 9 Cross-frames 5 & 6

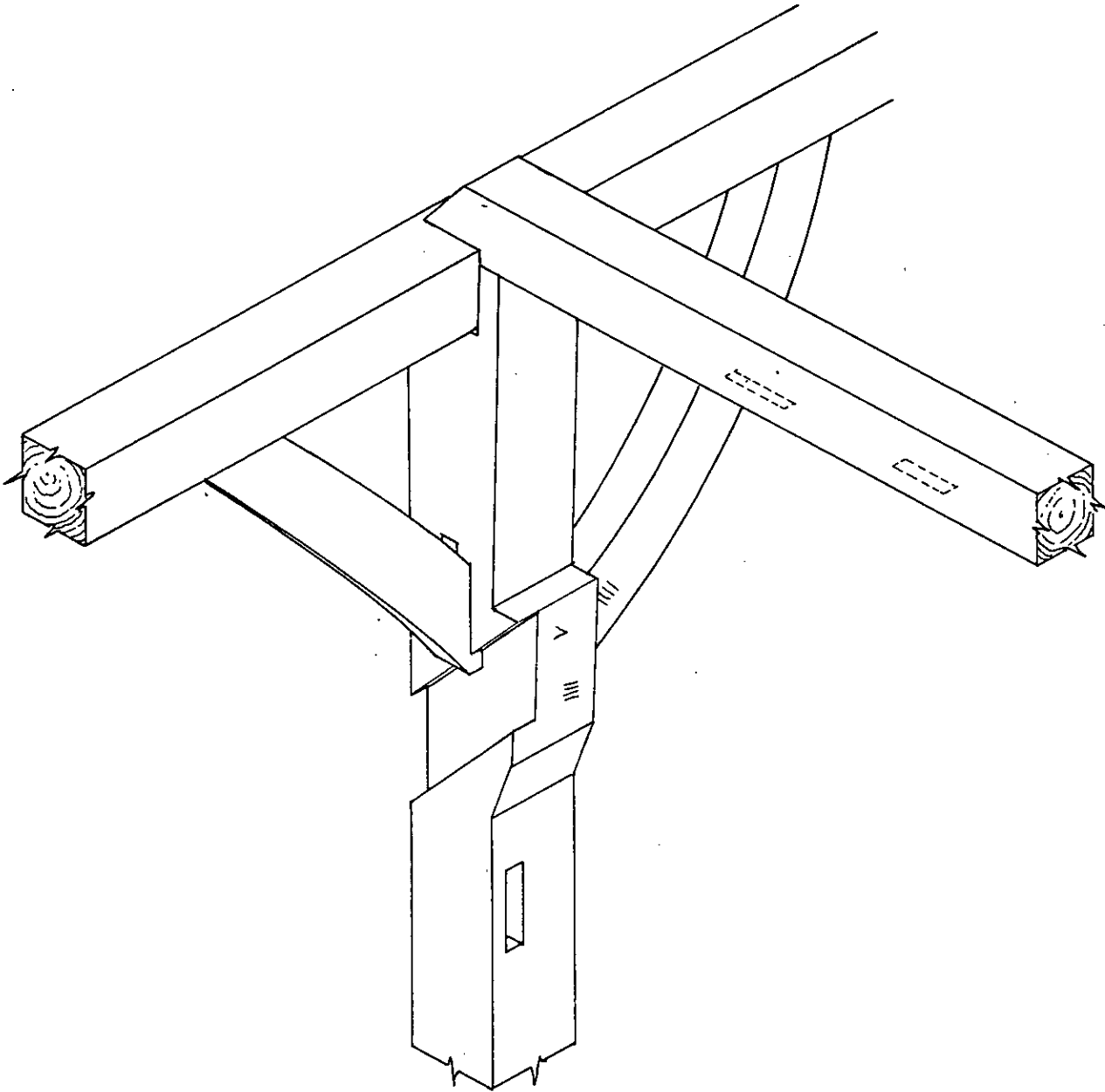


Figure 10 North arcade post assembly at P3

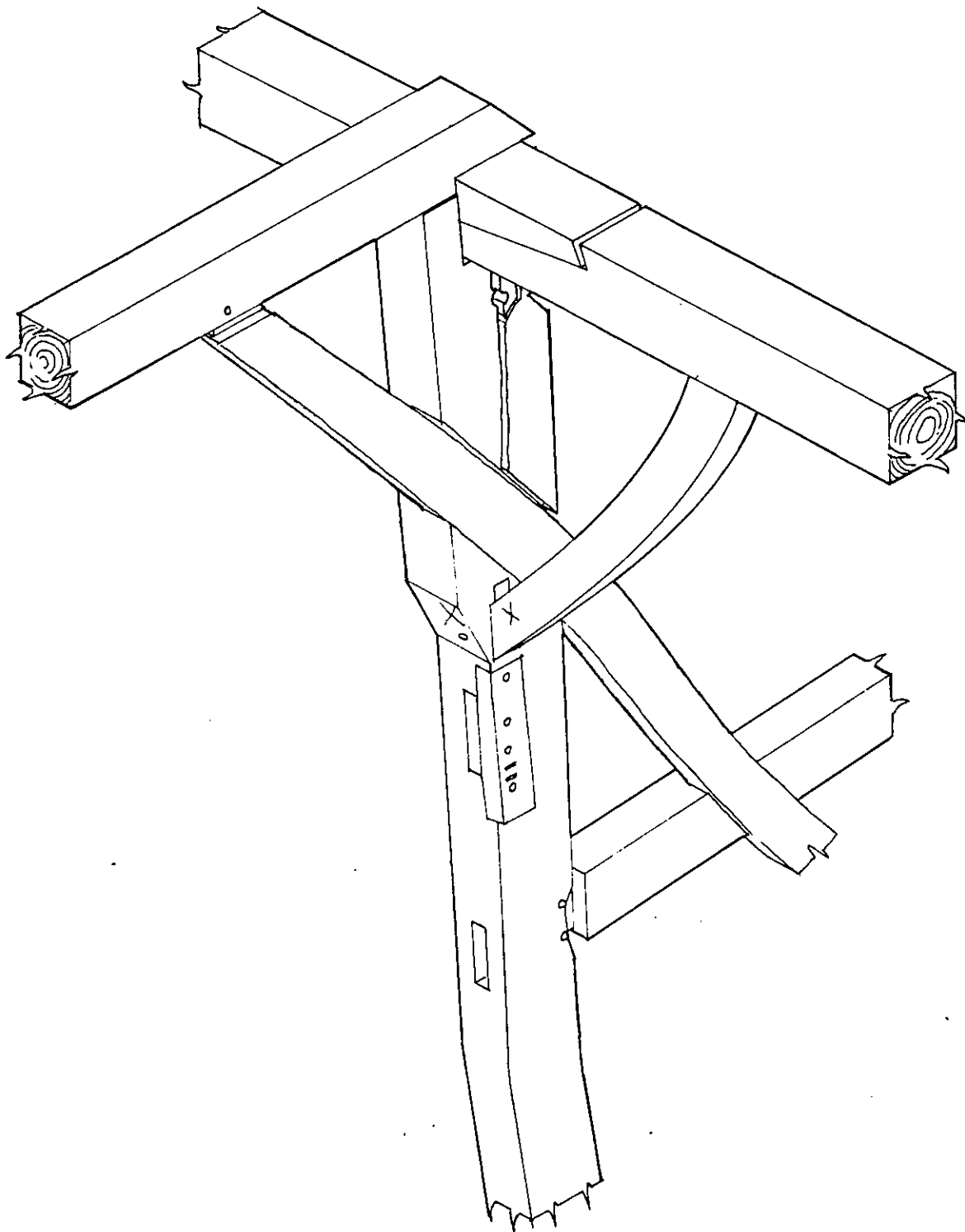


Figure 11 North arcade post assembly at P6

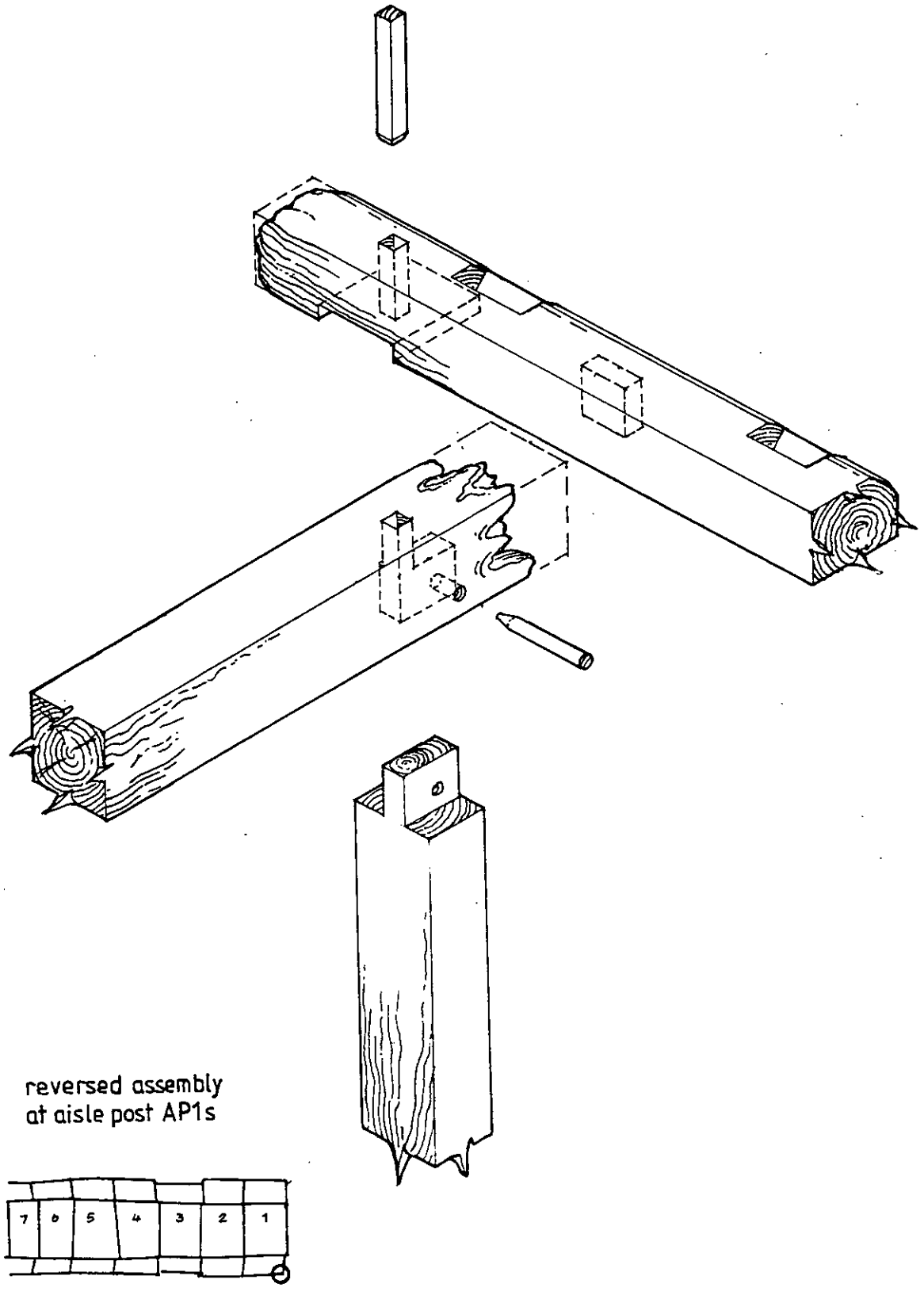
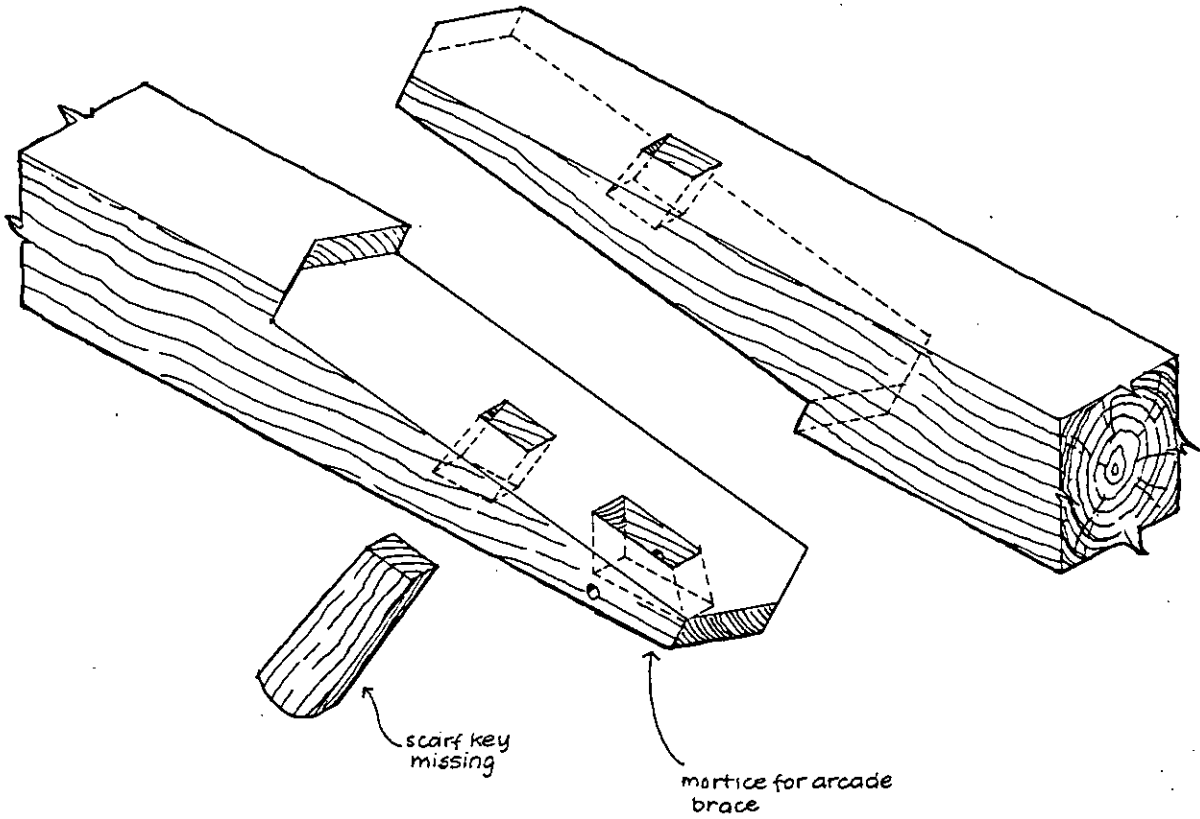


Figure 12 Aisle post assembly at AP1 S



SCARF JOINT, Arcade Plate, Bay 3 north
 stop splayed, with under-squinted sallied
 abutments & scarf key.

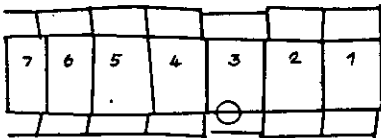


Figure 13 Scarf joint. Bay 3 North

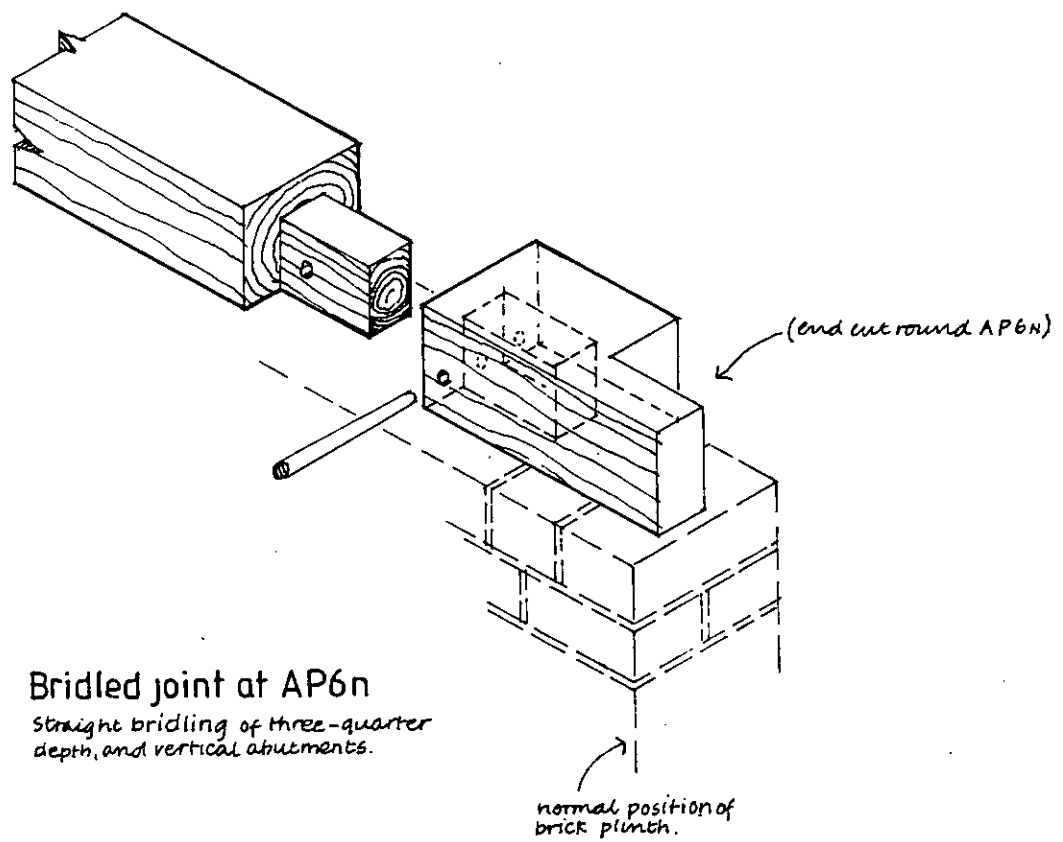


Figure 14 Bridled joint at AP6 N

	ARCADE ASSEMBLY			CROSS FRAME ASSEMBLY							OTHER LOCATIONS / NOTES.
	ARCADE POST	ARCADE BRACE	ARCADE PLATE	ARCADE POST	SHORT BRACE	PASSING BRACE	TIE BEAM	AISLE TIE/MIDRAIL	AISLE POST	AISLE PLATE	
P1N				Y Y	Y			Y	⊙ check		foot of studs above E wall Mid Rail.
P2N	 	 									
P3N	 Λ	 Λ	 								on plate adjacent to post E. side
P4N	Λ Λ	brace missing Λ		⊙ Λ	— aisle tie	— monitor					
P5N	Λ Λ	brace missing Λ									on aisle stud just west of APSN
P6N	X	X		 on repair							Λ locate top of joint - undisturbed
P7N	re-used plate										on tie-beam dovetail of reused plate ? relates to P6s
P8N	later post										
P1s											
P2s	 	 									on post? post w. face? Arcade plate N side Arcade plate w/s
P3s	 Λ	 Λ		φ							
P4s	Λ Λ	brace missing Λ		 on rear				 			Arcade brace - replacement put in after entrance was made in south? w/s arcade plate
P5s	replace- ment post.										Λ Arcade plate brace monitor?
P6s											
P7s											
P8s	later post.										

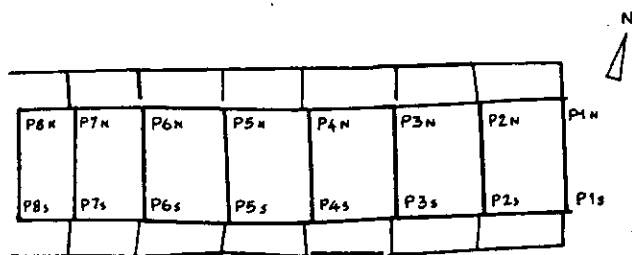
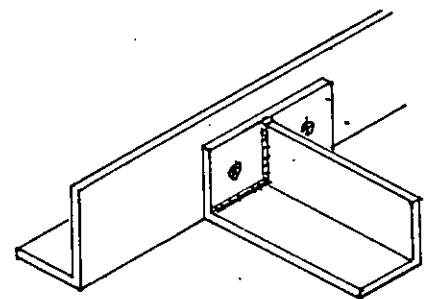
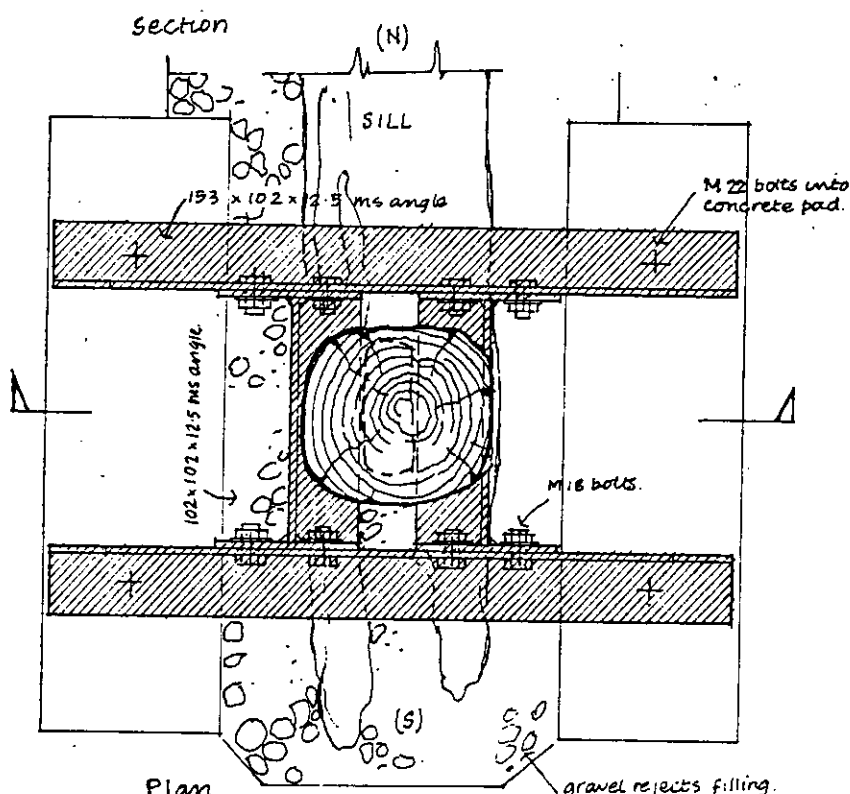
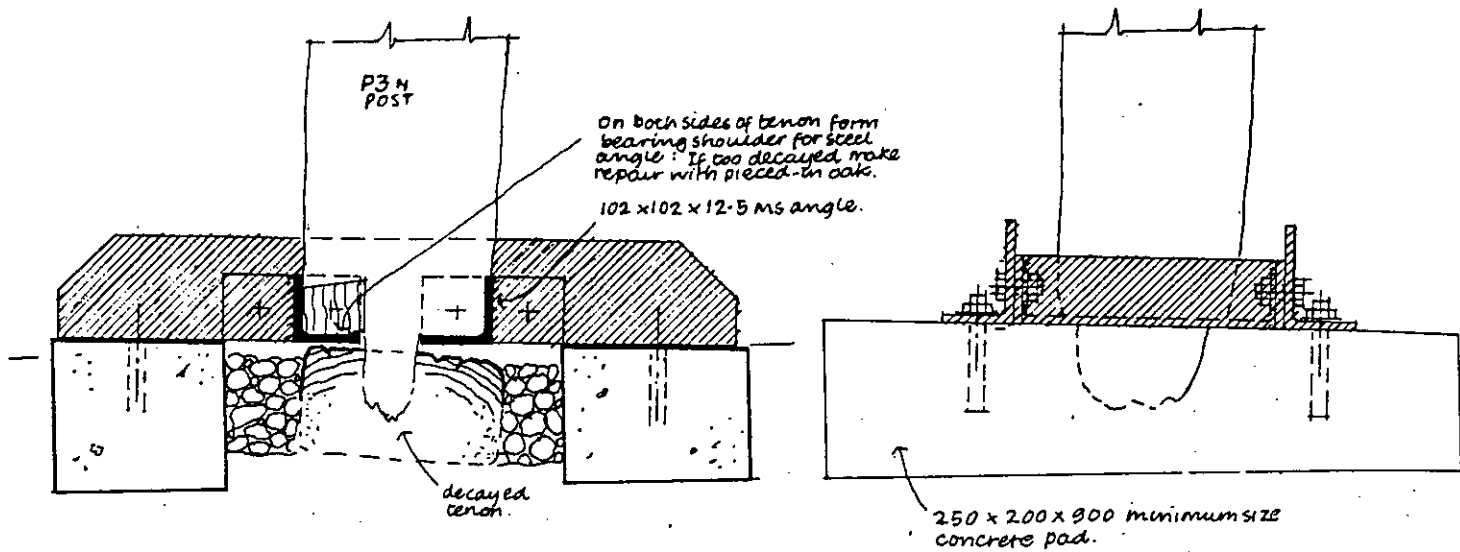


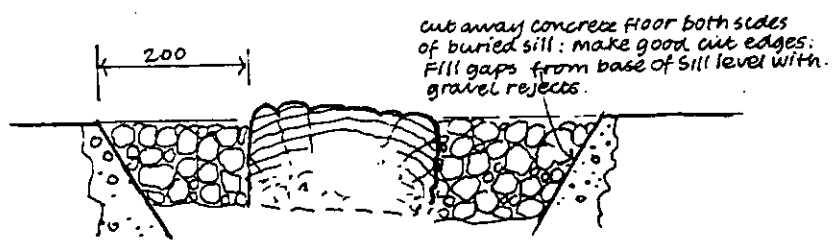
Figure 15 Schedule of carpenter's marks



bolted connection between Angles.

Steel Cradle support over decayed sill to Arcade Post P3N
scale 1:10.

- Archaeologist to survey buried Sill below P3 N, before any excavation by contractor.
- Before installation of Cradle, prop area plate on both sides of Post, and support self weight of Post.
- Decayed and infested friable timber to be treated with Rotafix Consolidation Resin, slow set.

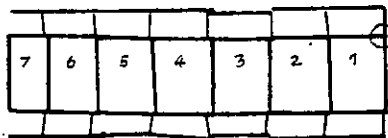
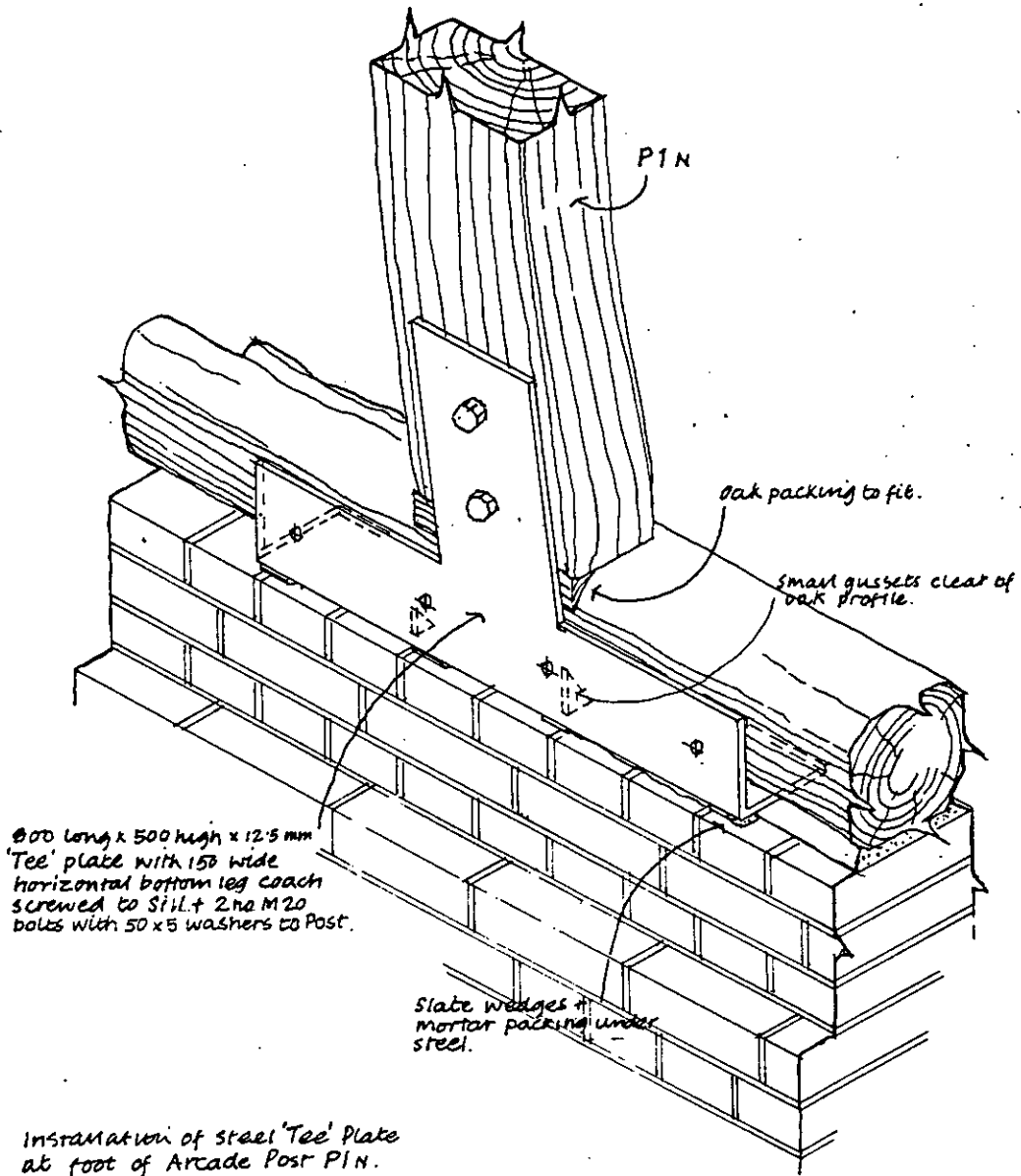


Section thro' Sill: between P3 N and N. Aisle Wall.

ABBAY FARM BARN, SNAPE
Repairs:

Drawing no **ABS 4.33** Date **July 00**
Graham Hussey ARCHITECT
The Barn Gallery 3611 Lane Busley Woodbridge Suffolk IP12
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Figure 16 Repairs to sill P3

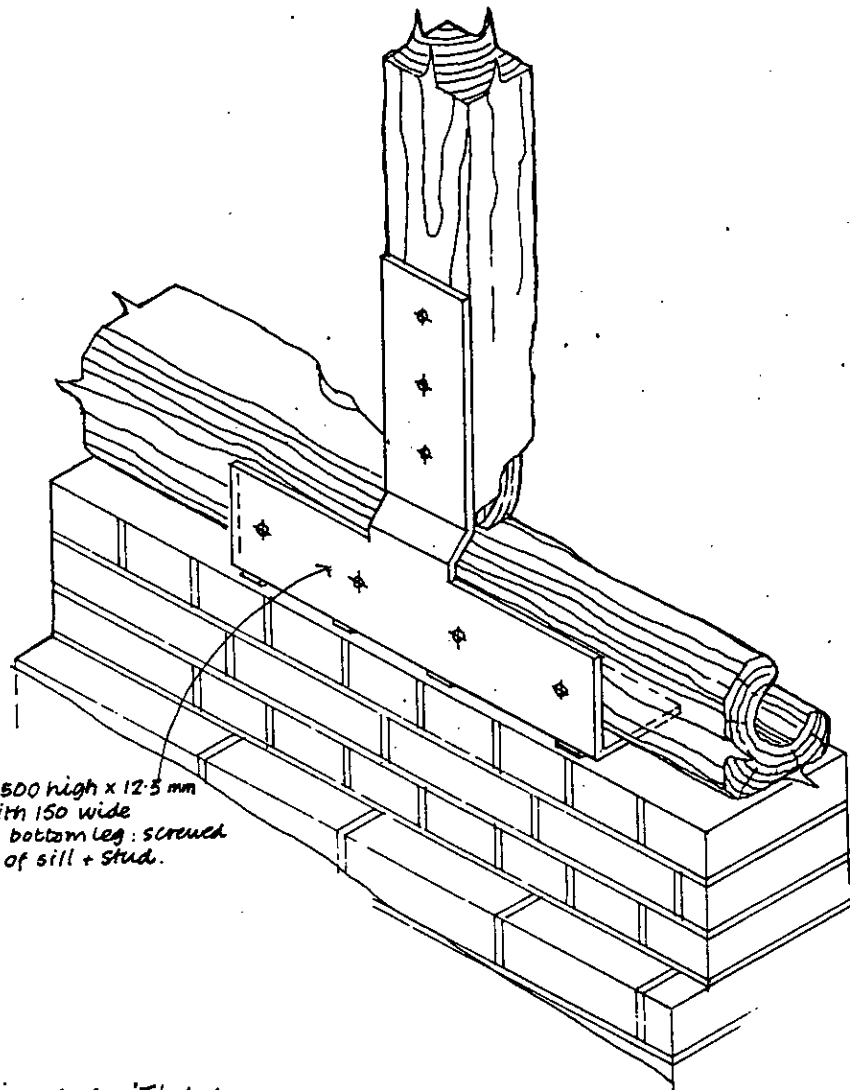


ABBEY FARM BARN, SNAPE
Repairs:

Drawing no ABS 1.34 Date May 00

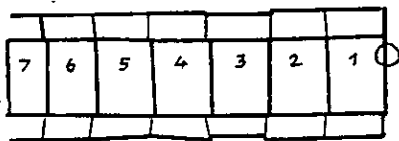
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Figure 17 Repairs to sill at P1 N



600 long x 500 high x 12.5 mm
 'T' plate with 150 wide
 horizontal bottom leg: screwed
 to outside of sill + stud.

Installation of steel 'T' plate
 at foot of stud in Cross Frame 1

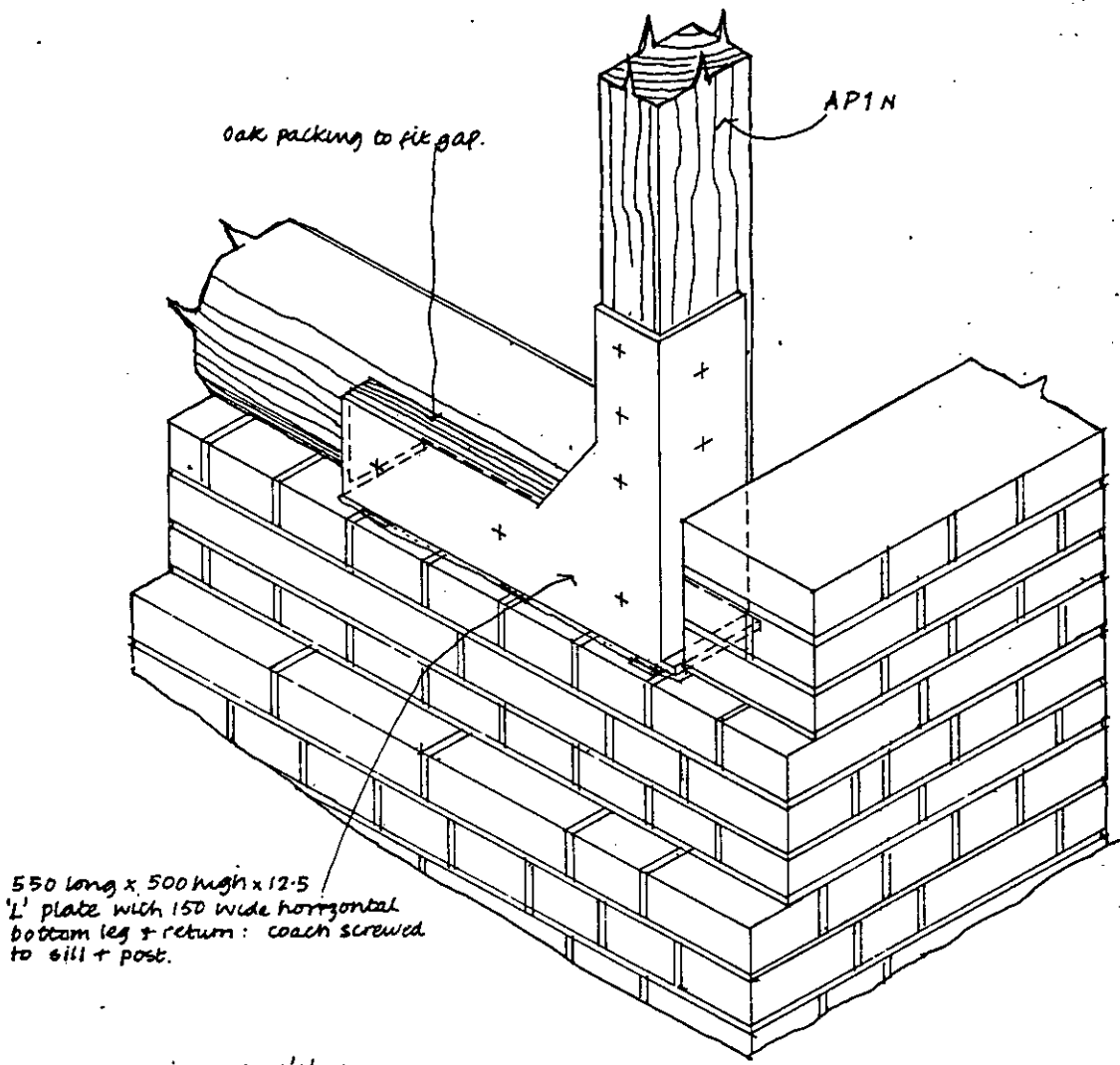


ABBEY FARM BARN, SNAPE
 Repairs:

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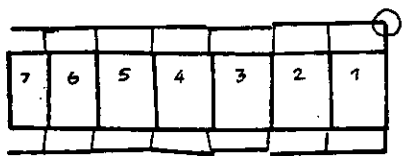
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 The Barn Gallery Mill Lane Butley Woodbridge Suffolk IP12
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Figure 18 Repairs to sill/stud at
 cross-frame 1



550 long x 500 high x 12.5
 'L' plate with 150 wide horizontal
 bottom leg + return: coach screwed
 to sill + post.

Installation of steel 'L' plate
on outside face at foot of
Aisle Post AP1 N.

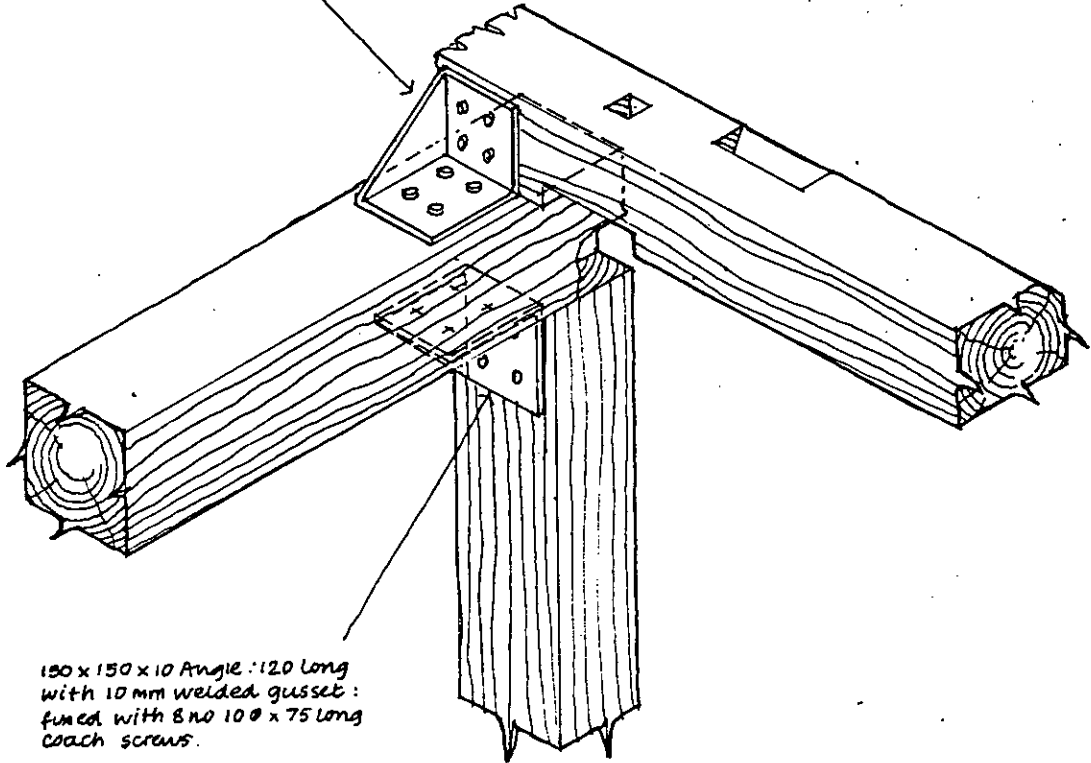


ABBAY FARM BARN, SNAPE
 Repairs:

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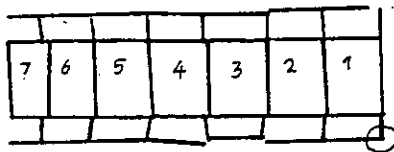
Figure 19 Repairs to sill at AP1 N

150 x 130 x 10 Angle : 120 long with
welded 10 mm gusset fixed with 8 no
10 Ø x 75 long Coach screws.



150 x 150 x 10 Angle : 120 long
with 10 mm welded gusset :
fixed with 8 no 10 Ø x 75 long
Coach screws.

Installation of steel cleats
at AP1s : plate level.



Fabricated steelwork and fixings
to be galvanised to BS. 729.

Decayed and infested friable timber
to be treated with Rotafix Consolidator
Resin Slow Set.

ABBAY FARM BARN, SNAPE
Repairs:

Drawing no **ABS 1.38** Date **May 00**

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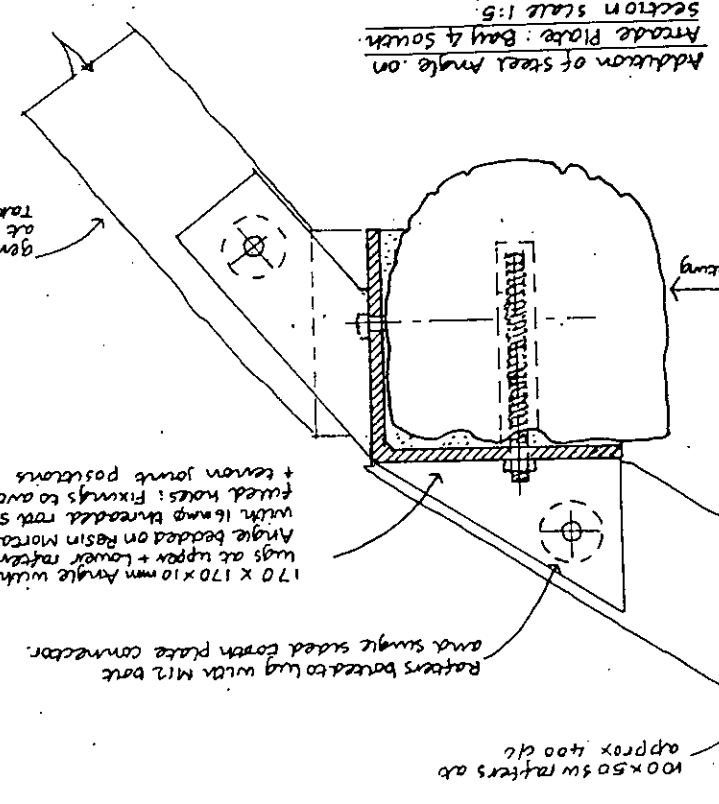
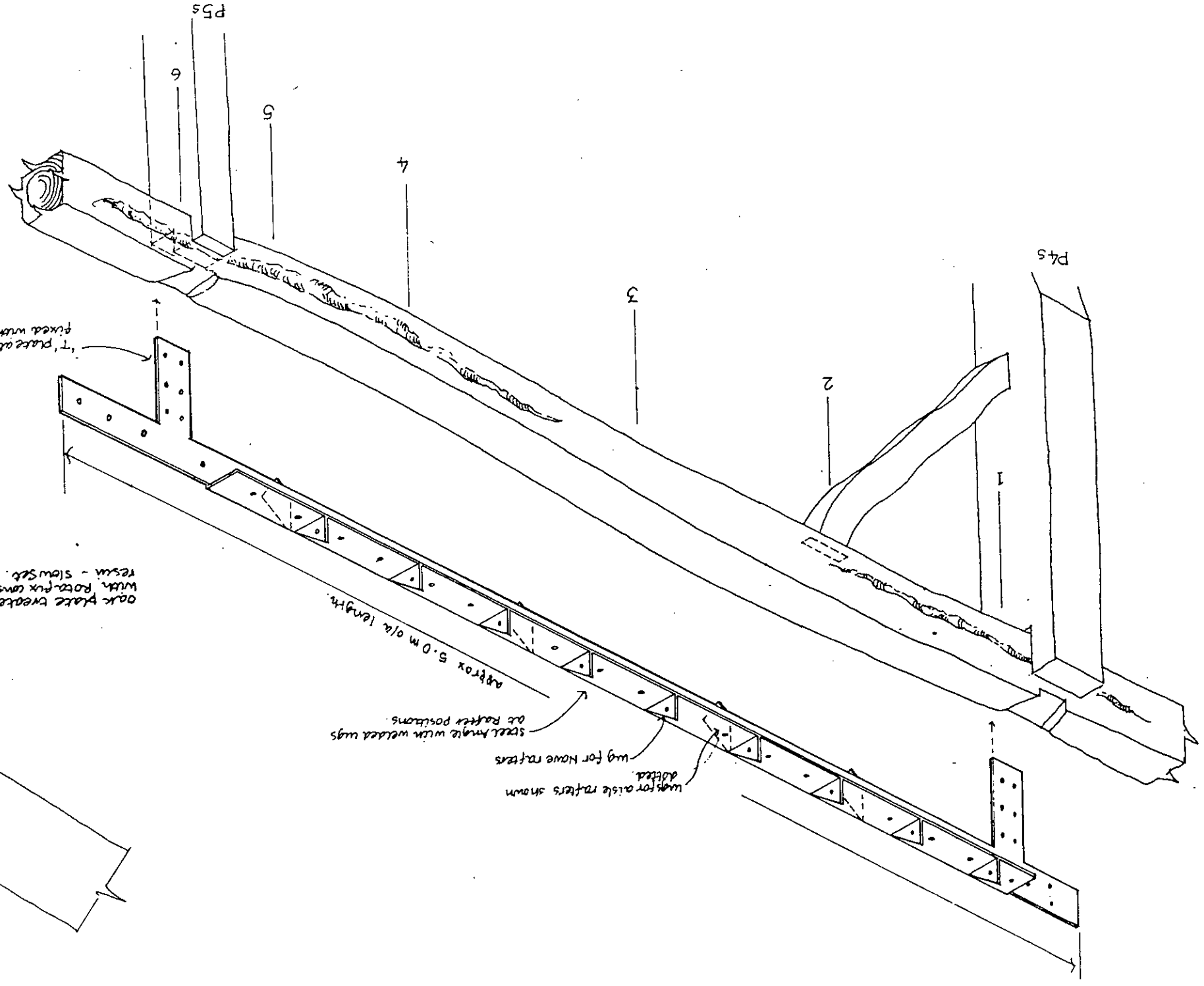
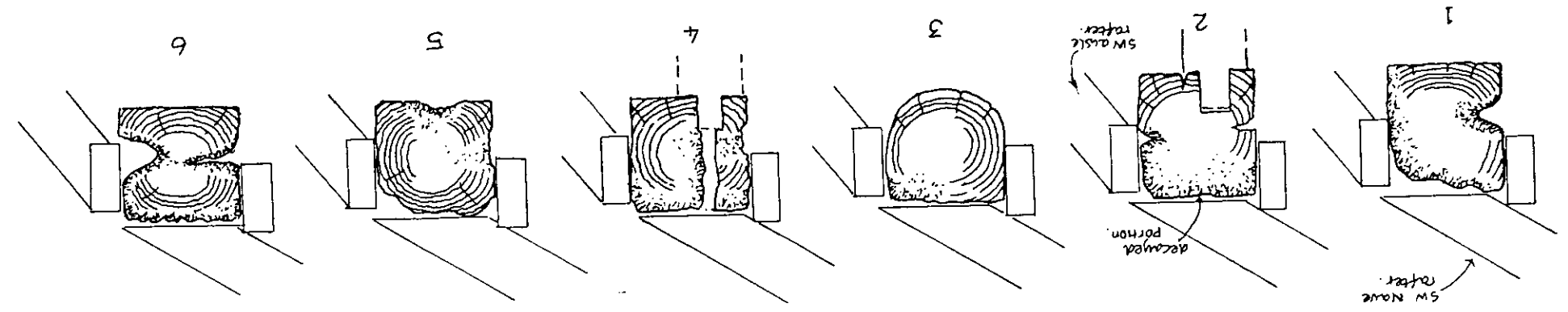
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Figure 20 Repairs to aisle assembly
at AP1 S

Figure 21 Repairs to arcade plate at Bay 4 South

as existing.



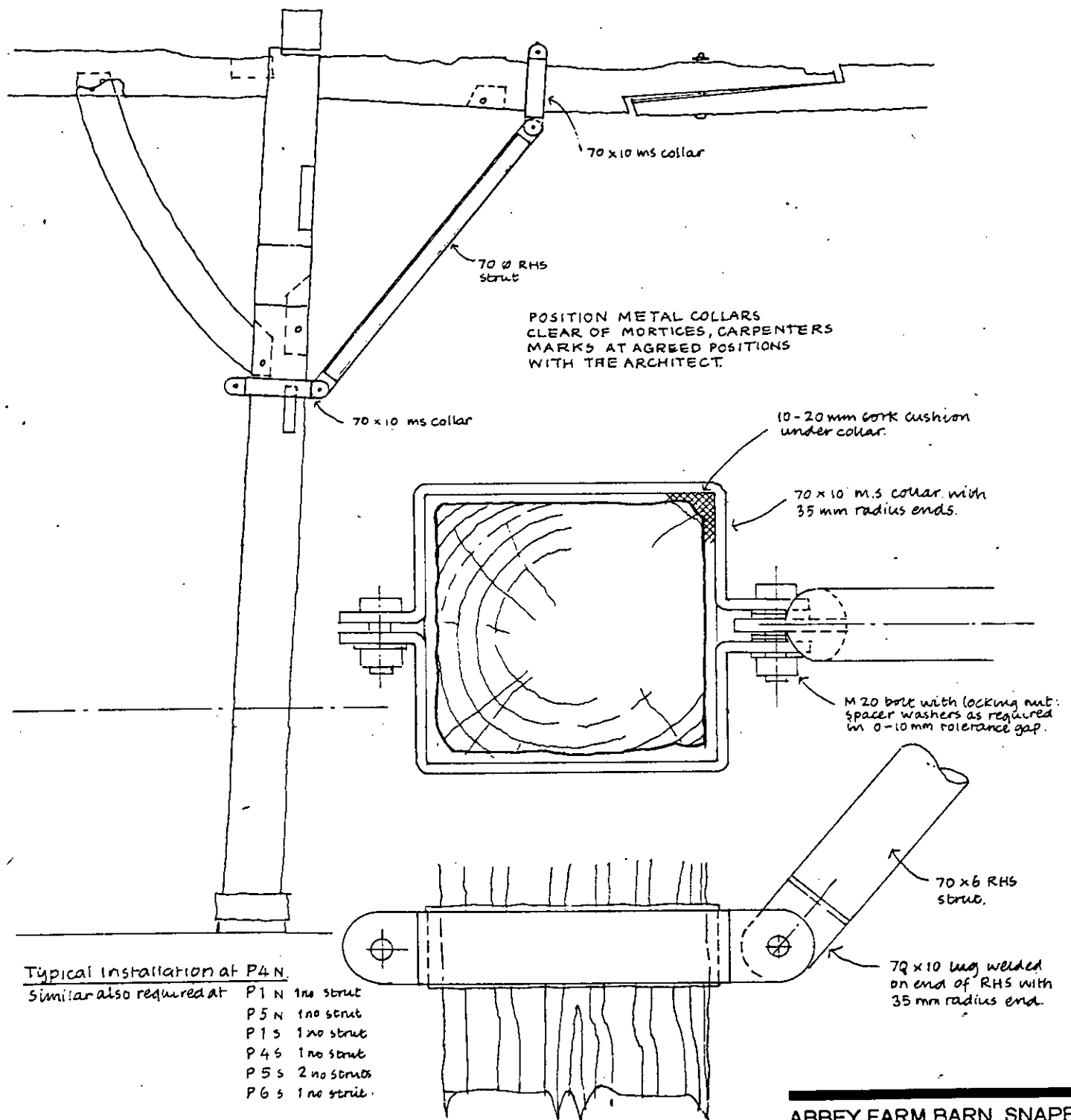
Addition of steel angle on Arcade Plate: Bay 4 South. Section scale 1:5. Lays out in conjunction with replacement of steel roof sheeting Bays 3-7. 'T' plate at post position fixed with coach screws.

Decayed and infested friable timber to be created with Rafter consolidating Resin/Stowset. Take out and re-use: generally oak rafters at approx 1000 c/c.

Repairs: ABBEY FARM-BARN, SNAPE

Drawing no: ABS 1.40 Date: May 00

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Typical installation at P4N

Similar also required at

P1N	1 no strut
P5N	1 no strut
P1S	1 no strut
P4S	1 no strut
P5S	2 no struts
P6S	1 no strut

Detail of Collar + strut.
1:5

ABBNEY FARM BARN, SNAPE
Repairs:

Drawing no ABS 1.42 Date May 00.

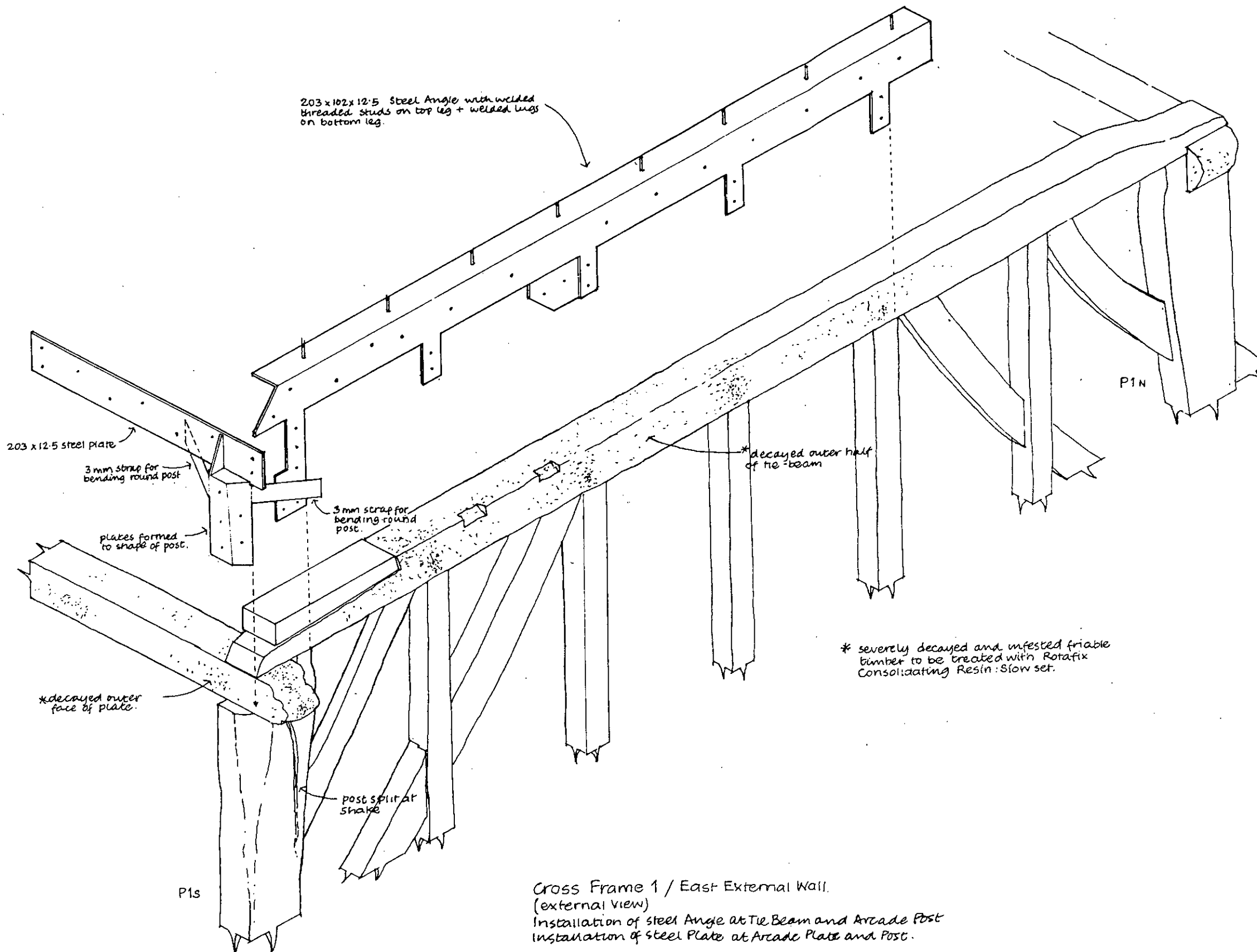
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Figure 22 Repairs to arcade bracing



7	6	5	4	3	2	1
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ABBEY FARM BARN, SNAPE
Repairs:

Drawing no ABS 1.43 Date May 00.

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The Barn Gallery Mill Lane Bulley Woodbridge Suffolk IP12 3PA
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Figure 23 Repairs to tie beam and arcade post P1 S

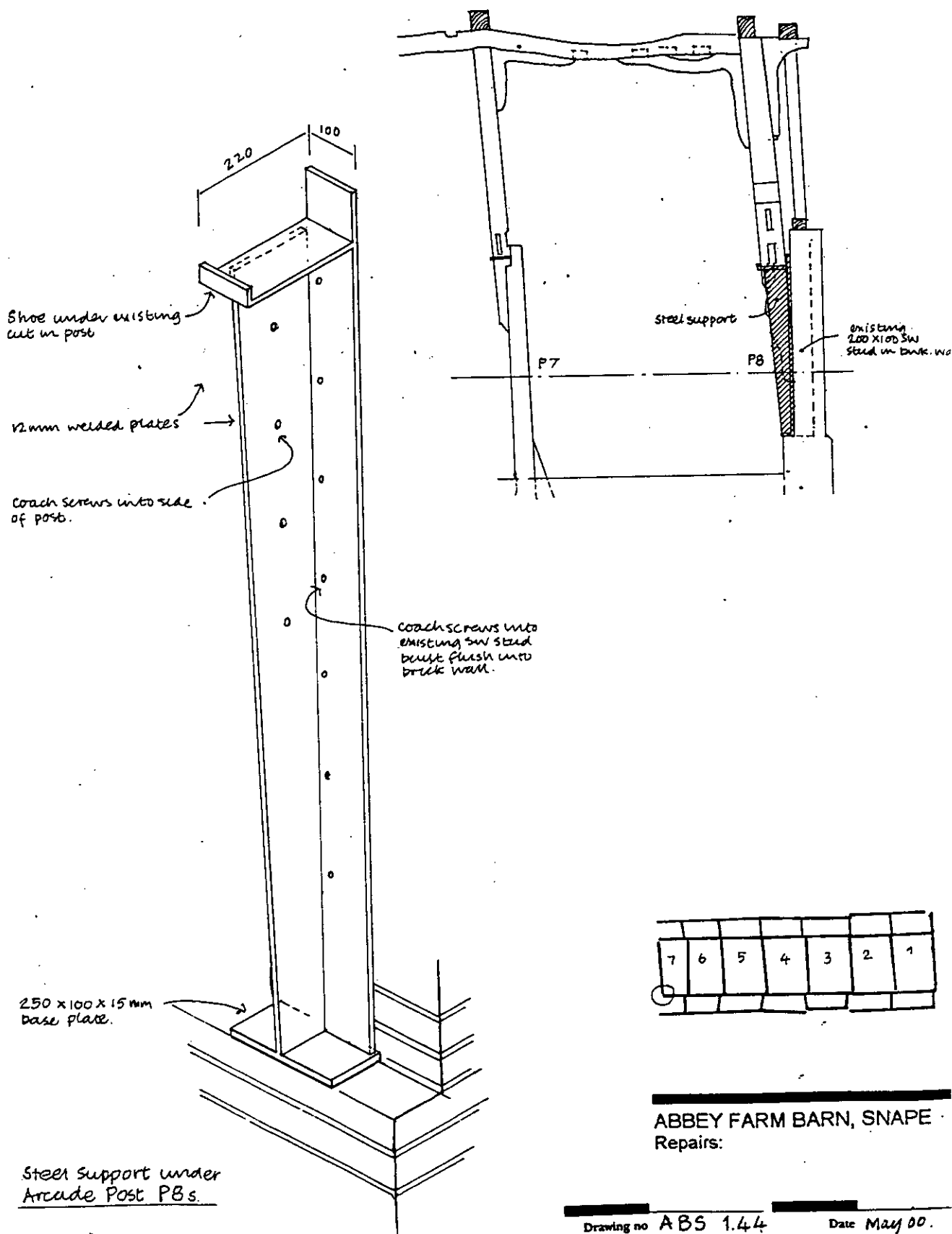
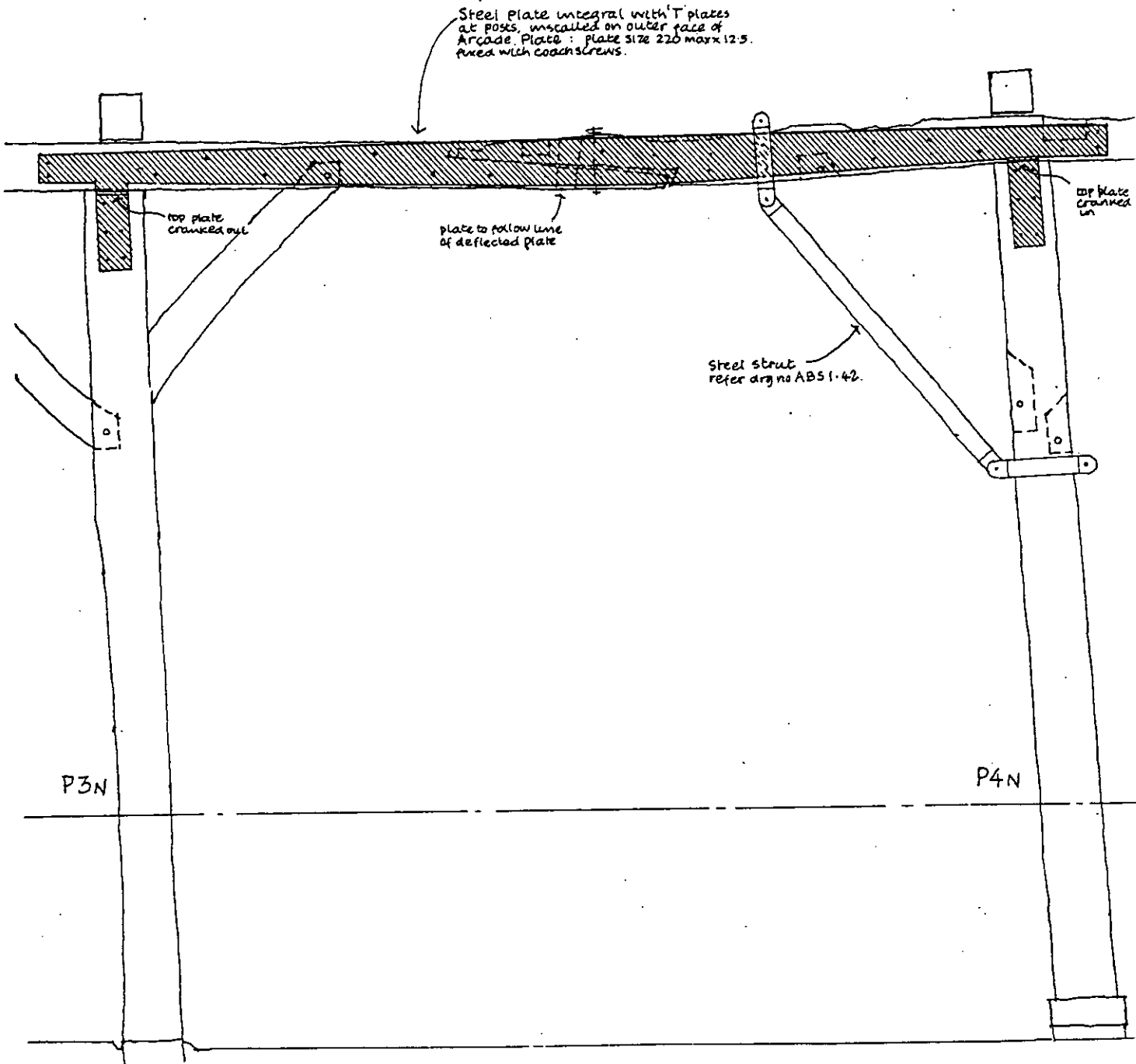


Figure 24 Repairs to arcade post P8 S

ABBEY FARM BARN, SNAPE
Repairs:

Drawing no **ABS 1.44** Date **May 00.**
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Installation of steel plate
on Arcade Plate Bay 3N.
Scale 1:25

ABBAY FARM BARN, SNAPE
Repairs:

Drawing no ABS 1.45

Date May 00.

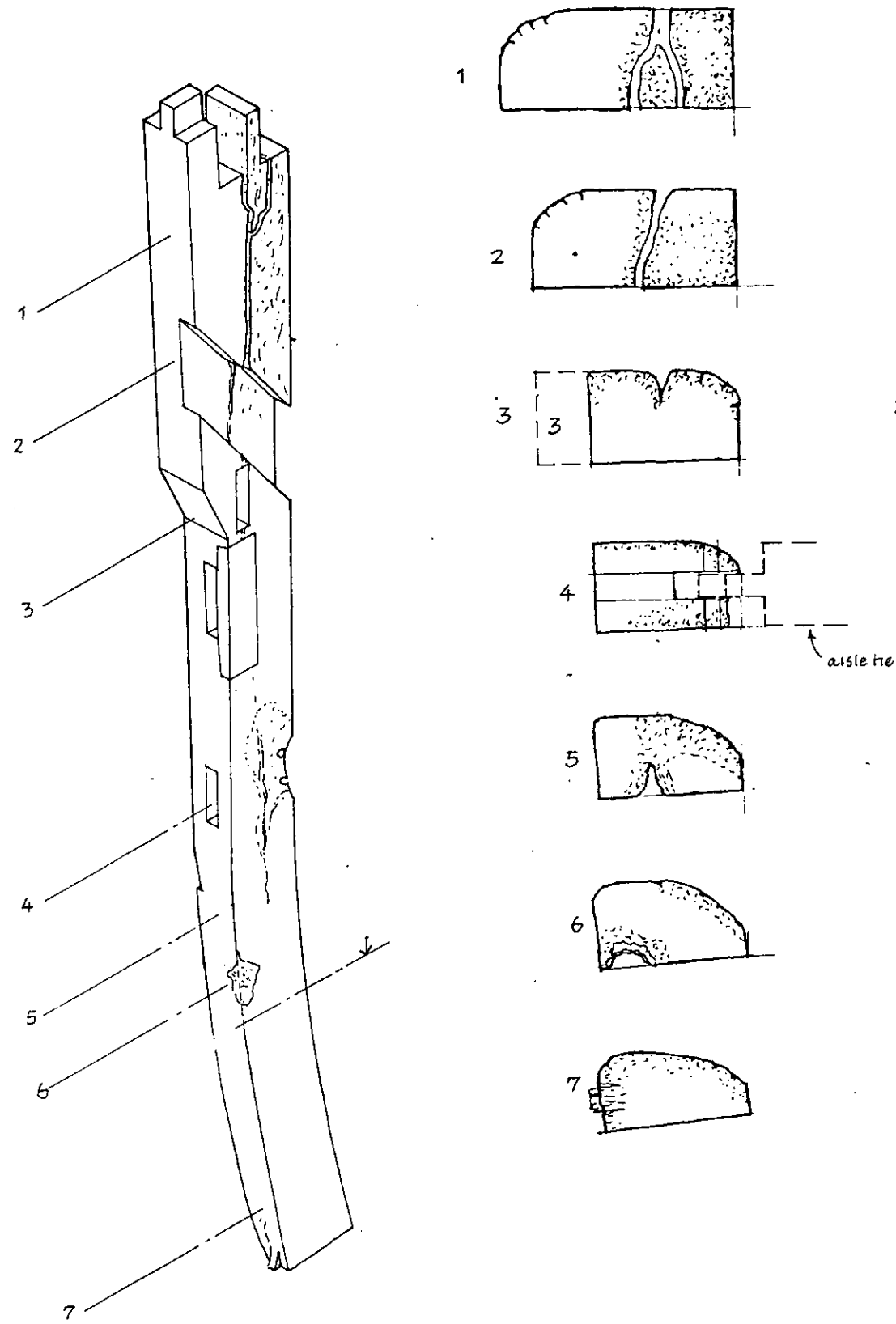
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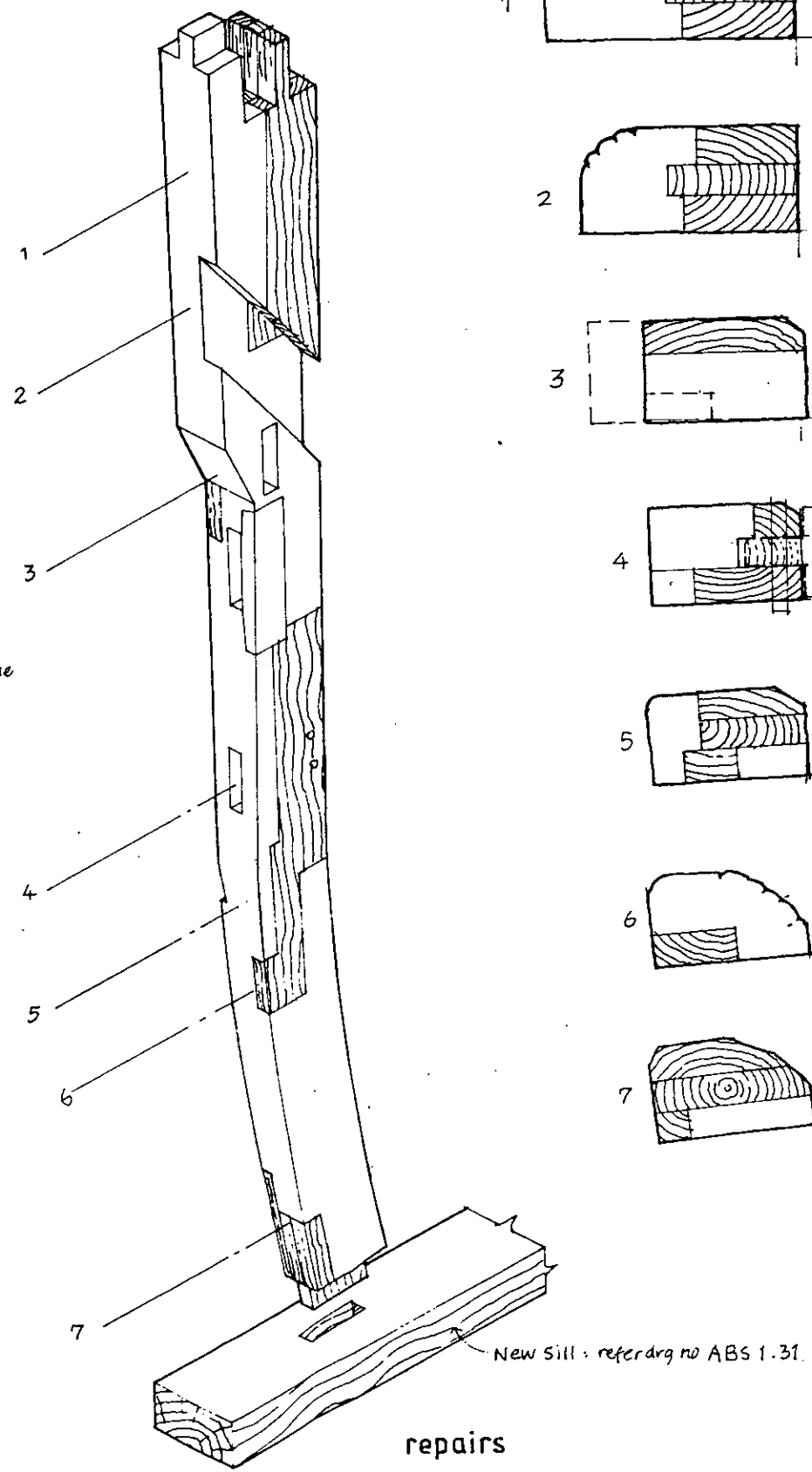
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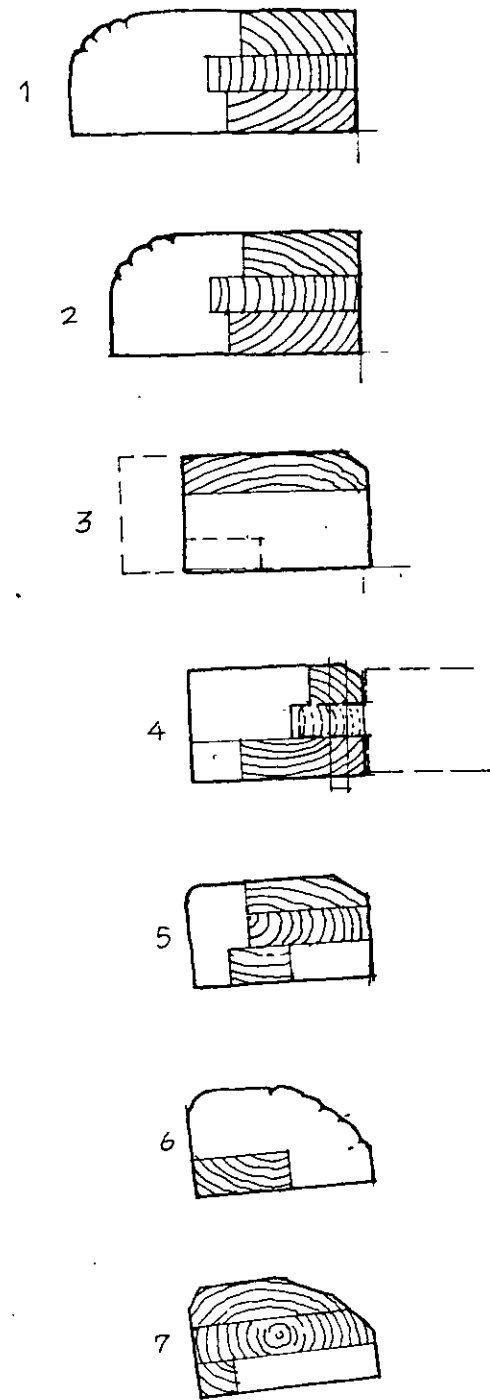
Figure 25 Repairs to arcade plate
Bay 3 North



POST P6N as existing

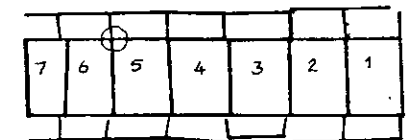


repairs



- Read with proposals for Adjustment of Cross Frame : drg no ABS 1.31.
- Complete adjustment of frame to re-engage joints, before commencing repairs on Post P6N
- Use Rotafix fillers and Adhesives: severely decayed and infested friable timber which is not to be removed, should be treated with Rotafix Consolidating resin slow set

Superseded by ABS 1.47A



ABBNEY FARM BARN, SNAPE
Repairs:

Drawing no ABS 1.39 Date May 00

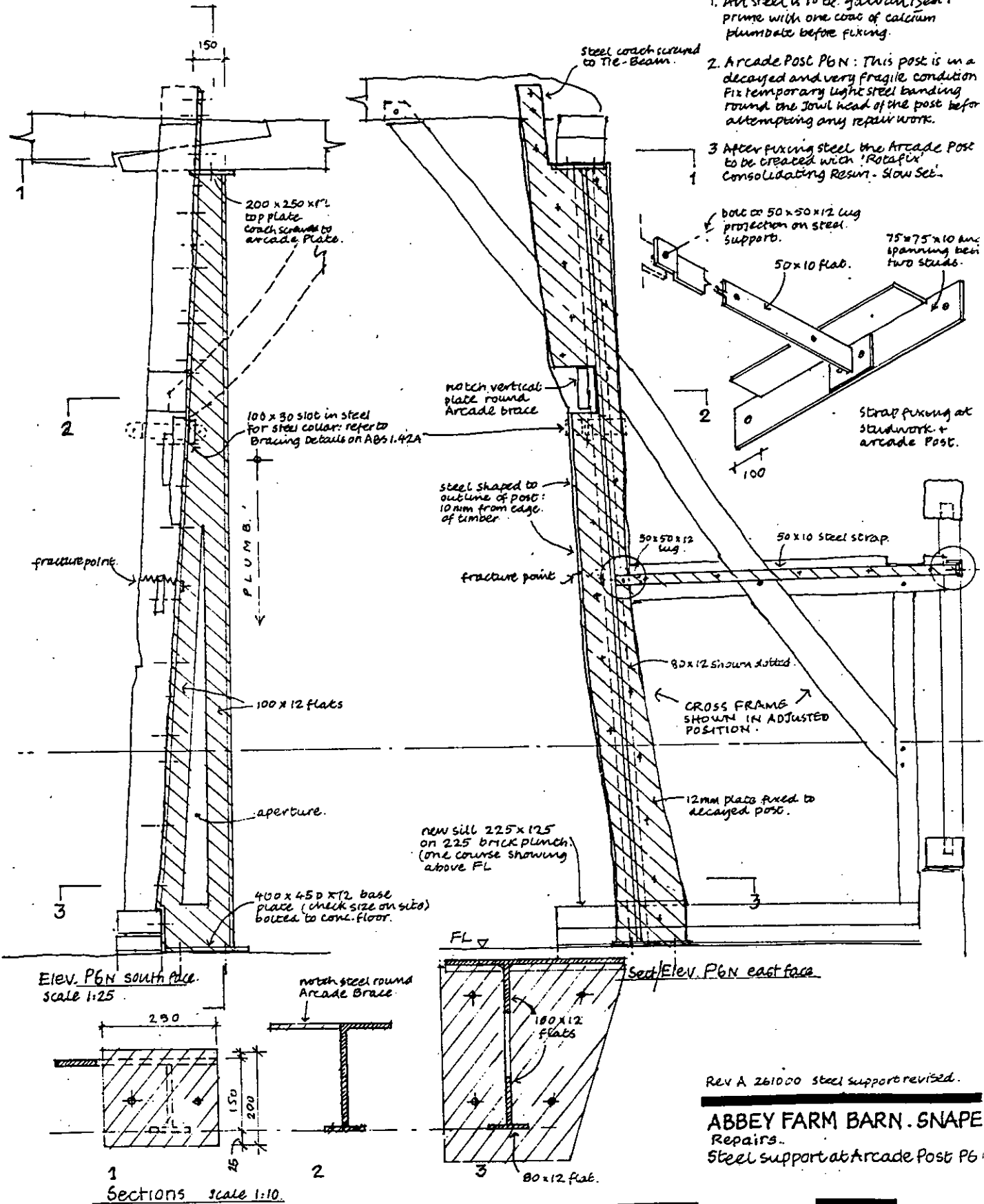
Graham Hussey ARCHITECT
The Barn Gallery Mill Lane Butley Woodbridge Suffolk IP12 3Y

© Graham Hussey Telephone and fax 01394 450843

Figure 26 Repairs to arcade post P6 N (superseded detail)

NOTES:

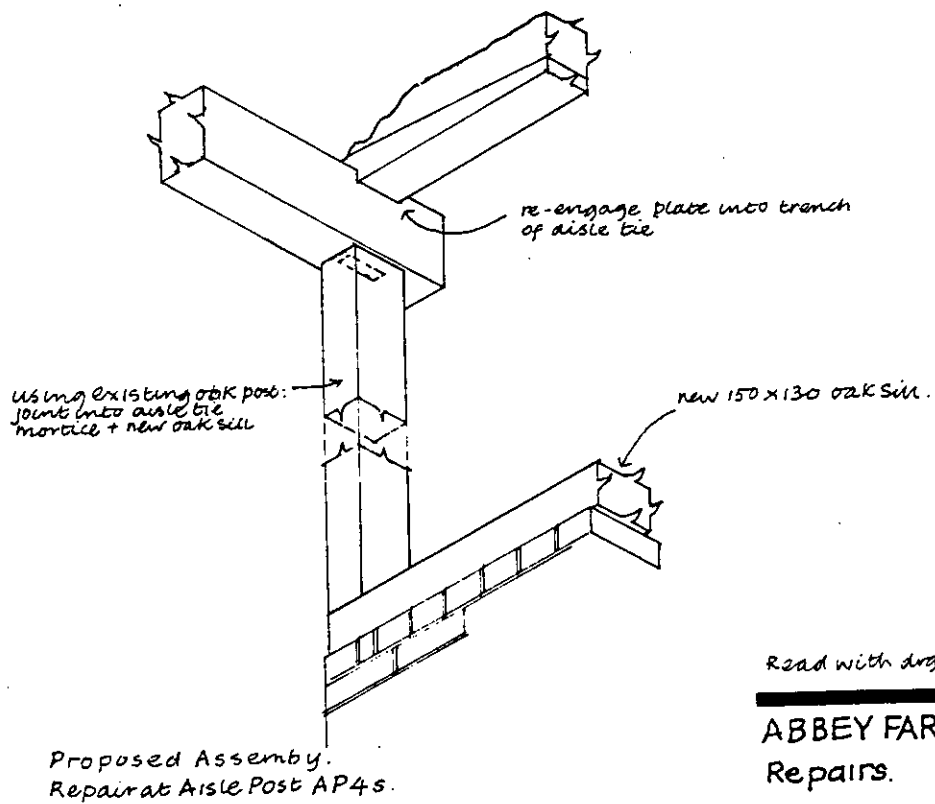
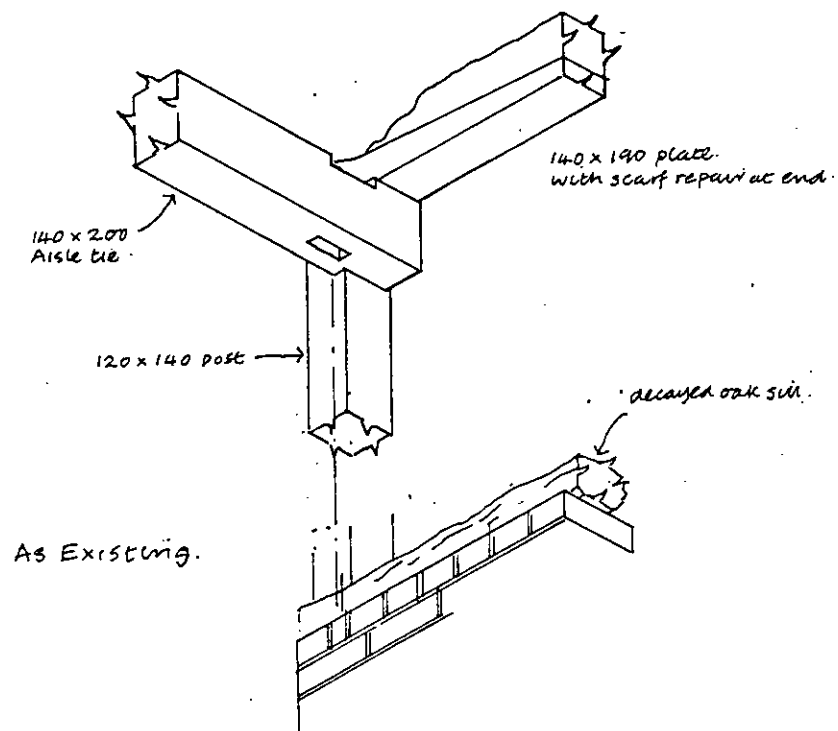
1. All steel is to be galvanised; prime with one coat of calcium plumbate before fixing.
2. Arcade Post P6N: This post is in a decayed and very fragile condition. Fix temporary light steel banding round the Jowl head of the post before attempting any repair work.
3. After fixing steel the Arcade Post to be treated with 'Rotafix' Consolidating Resin - Slow Set.



REV A 261000 steel support revised.
ABBEY FARM BARN. SNAPE
 Repairs.
 Steel support at Arcade Post P6

Drawing no **ABS 1-47A** Date **October 00**
Graham Hussey ARCHITECT
 The Barn Gallery Mill Lane Butley Woodbridge Suffolk IP11
 © Graham Hussey Telephone and fax 01594 450843

Figure 27 Repairs to arcade post P6 N
 (adopted detail)



Read with dwg no 1.22.2

ABBAY FARM BARN. SNAP Repairs.

Drawing no **ABS 1.49** Date **08.2007**

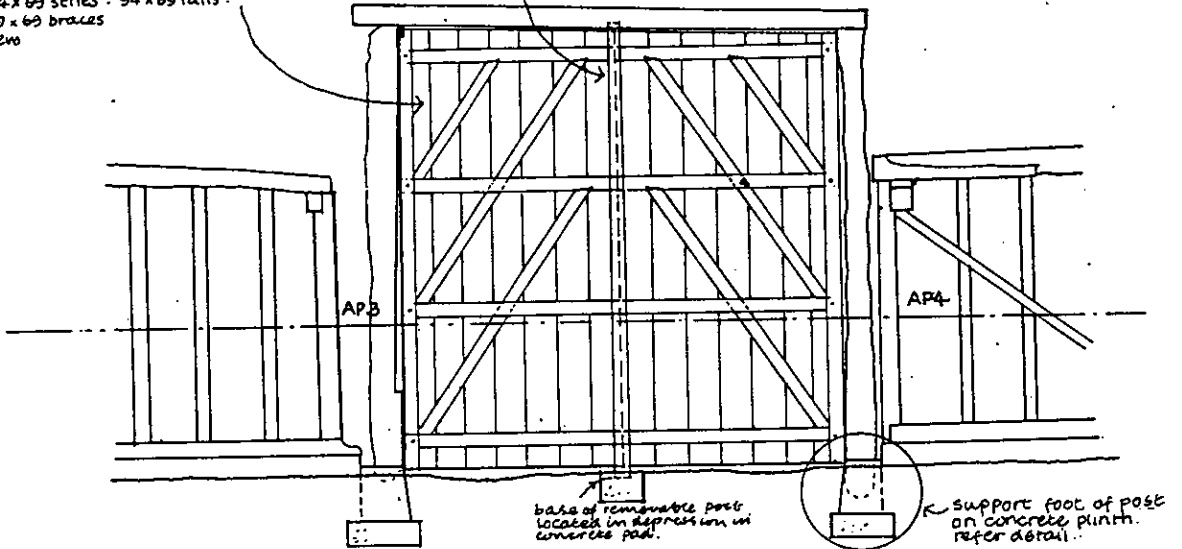
Graham Hussey ARCHITECT
The Barn Gallery Mill Lane Butley Woodbridge Suffolk IP12
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Figure 28 Repairs to South aisle wall at AP4 S

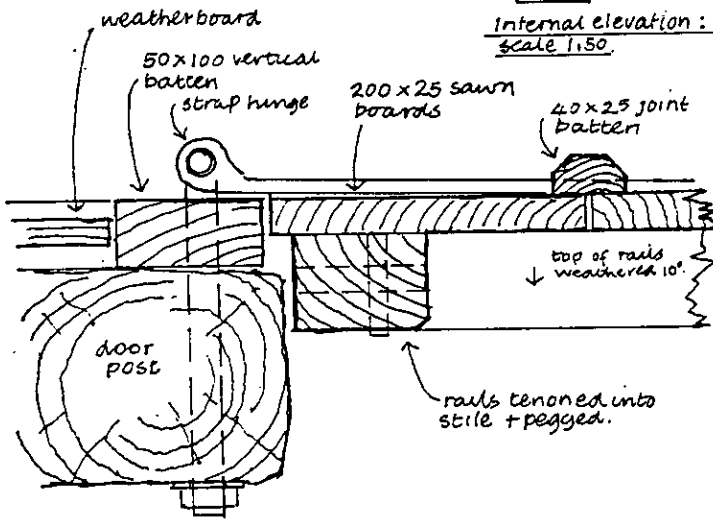
NOTES.
 Timber for doors to be Softwood - Douglas Fir or Redwood : BS 444 pt 1 Class 2 : with CCA Preservative treatment.
 Finish : 2 coats Coat-Tax on external face and edges of Boards + stiles.
 Re-use existing hinges + ironwork.

Replace existing Barn doors approx. size each 1550 wide x 3200 high.
 94 x 69 stiles : 94 x 69 rails :
 69 x 69 braces
 revo

removable centre door post
 90 x 90 tapering to top to
 70 x 70 : all four edges
 chamfered



Internal elevation : Barn Doors on South side
 scale 1:50

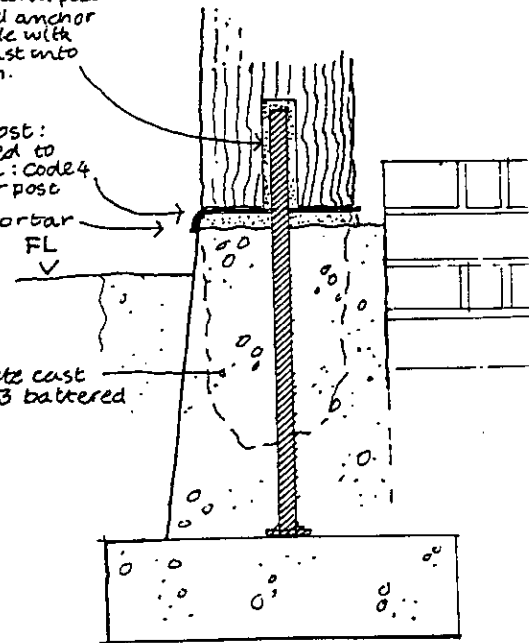


PLAN at door stile.
 scale : 1:5

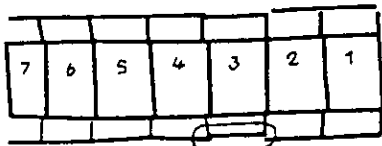
25 mm Ø hole drilled in post:
 20 mm Ø galv. steel anchor
 bonded into hole with
 epoxy resin + cast into
 concrete plinth.

existing oak post:
 bottom trimmed to
 75 mm above FL : Code 4
 lead DPC under post
 dry-pack mortar

in situ concrete cast
 plinth with 3 battered
 faces.



SECTION at foot of Right-side Post
 (Left-side similar) scale 1:10



ABBEY FARM BARN
 SNAPE, SUFFOLK
 Repairs:

Barn Doors + Door posts: South side

Drawing no ABS 1.84

Date June '00

Graham Hussey ARCHITECT

The Barn Gallery Mill Lane Butley Woodbridge Suffolk IP13

© Graham Hussey

Telephone and fax 01394 450843

Figure 29 Repairs to barn doors
 Bay 3 South

Figure 30 Repair to arcade post P3N

The foot of the Arcade Post rests on what is probably a surviving primary sill, which has decayed and is partly buried into the concrete floor. There was a need to provide a better foundation and anchorage for the post without removal of the sill or disturbance of archaeological evidence below it.

A steel cradle has been devised spanning over the sill onto two concrete pads. A back filling of cobbles set in weak lime mortar around the sill acts as a breathing fill.

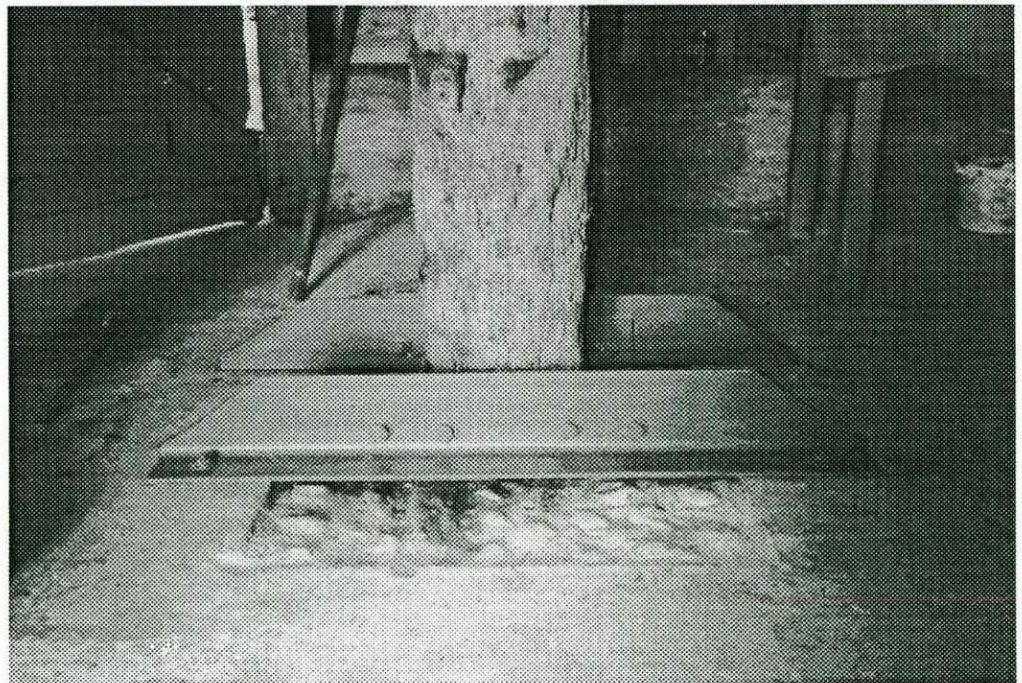
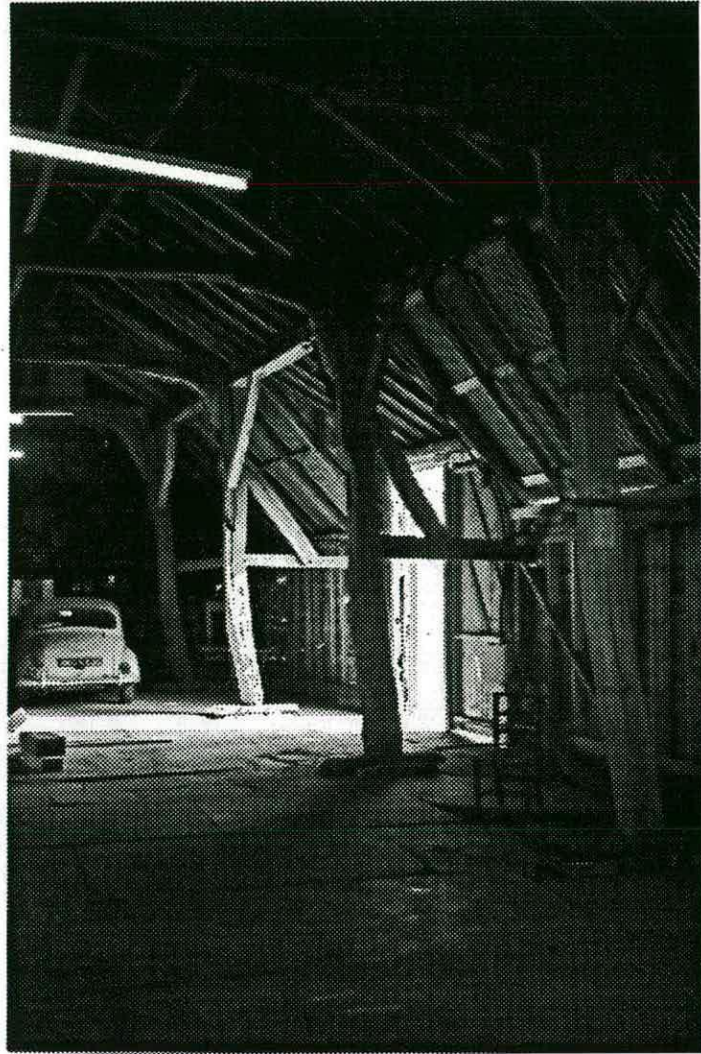


Figure 31 **Arcade bracing**

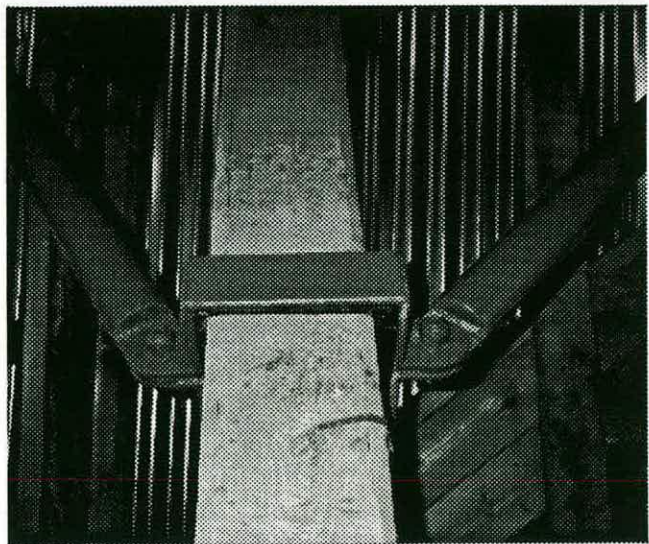
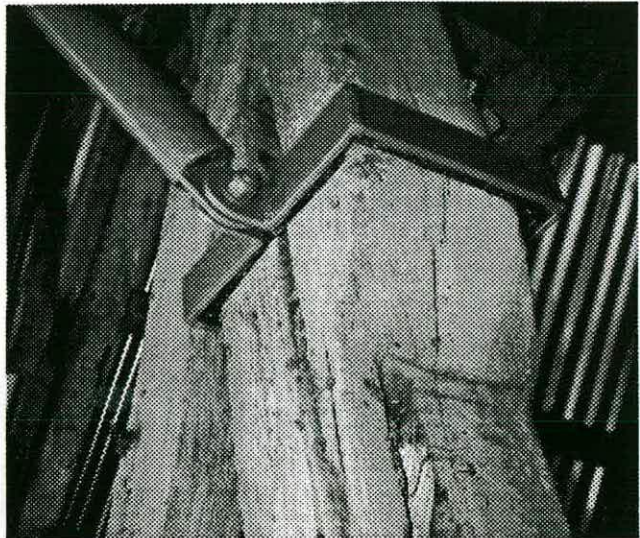


Eight of the original arcade braces were missing and there were no braces at all in the two added bays of the barn, leaving the whole structure vulnerable to distortion from prevailing wind forces. There has been no attempt to straighten up or rectify the distorted structure.

The choice of steel for the replacement braces in preference to wood was to create an honest and unambiguous repair which, by the design of its fixing method, is readily reversible. Disfigurement and concealment of structural detail has been avoided. The overall visual affect of the added steel braces is to reinforce the structural rhythm along the original five bays of the barn.



Figure 31 Arcade bracing



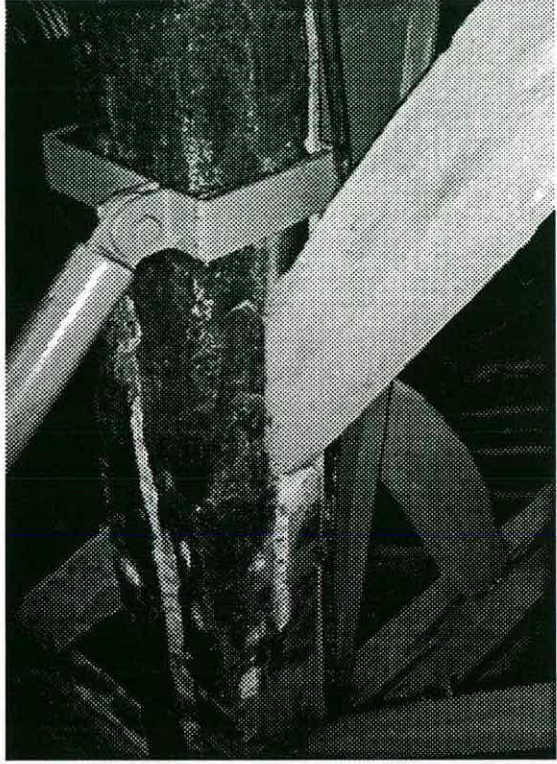


Figure 32 Repairs to arcade post P6N

Figure 32 Repairs to arcade post P6N

Part of the primary structure of this post was decayed past the point of being any structural value. Its replacement was ruled out. A steel post has been tailor-fitted alongside the original post providing a splint which serves the dual function of holding together the fractured parts and supporting the roof.

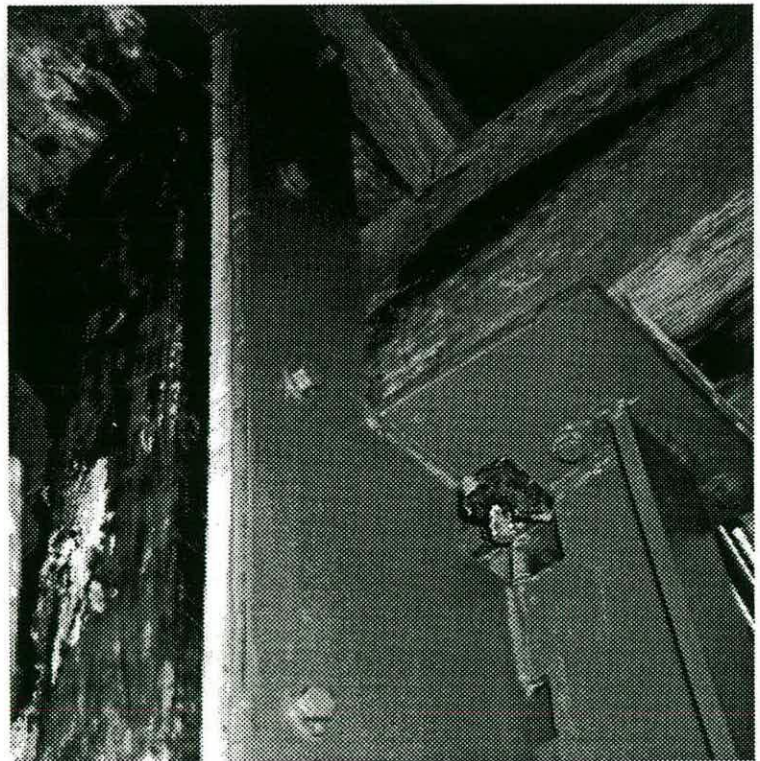
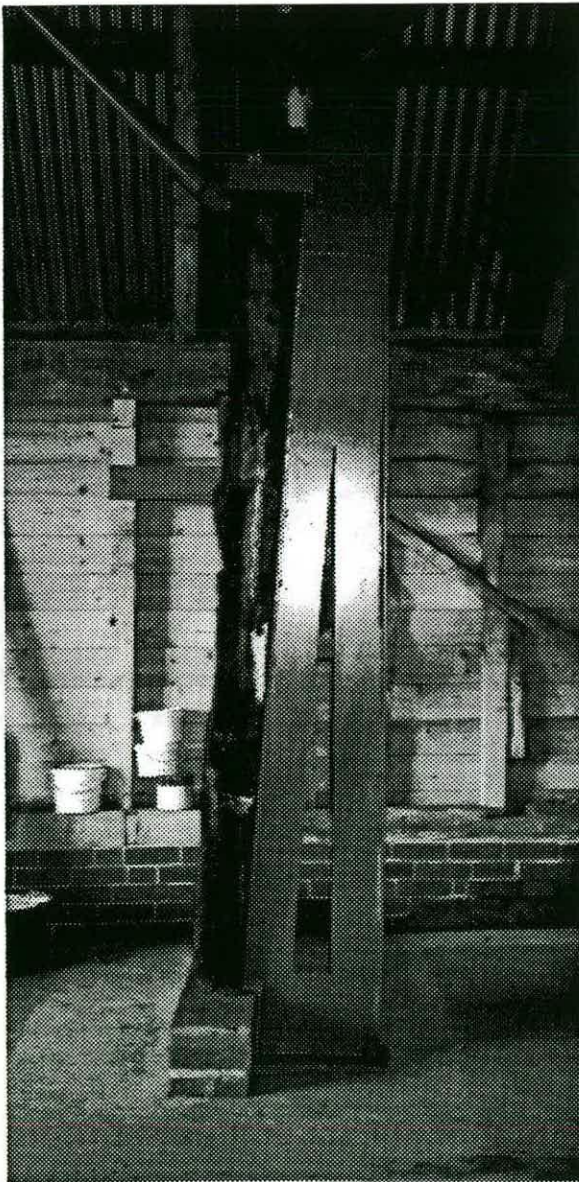
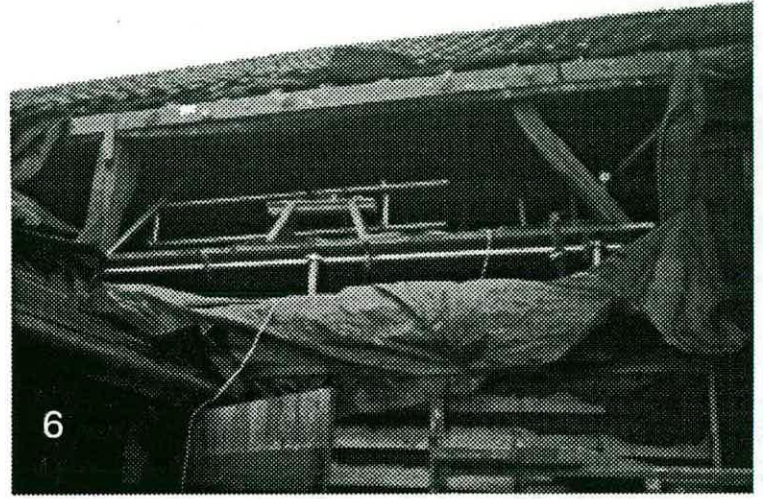
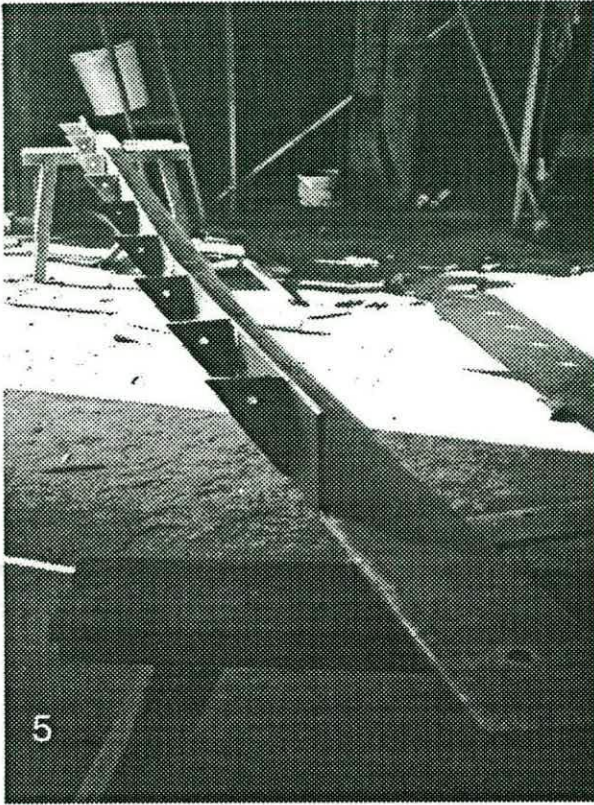


Figure 33 Repairs to arcade plate, bay 4 South



5 Fabricated steel before fixing.

6 The steel in position on the outside face of the plate.

7 After drilling, inserting the grout for bolt fixing.

8 Steel bolted into position showing lugs for rafter fixing.

Figure 34 Repair to South aisle wall

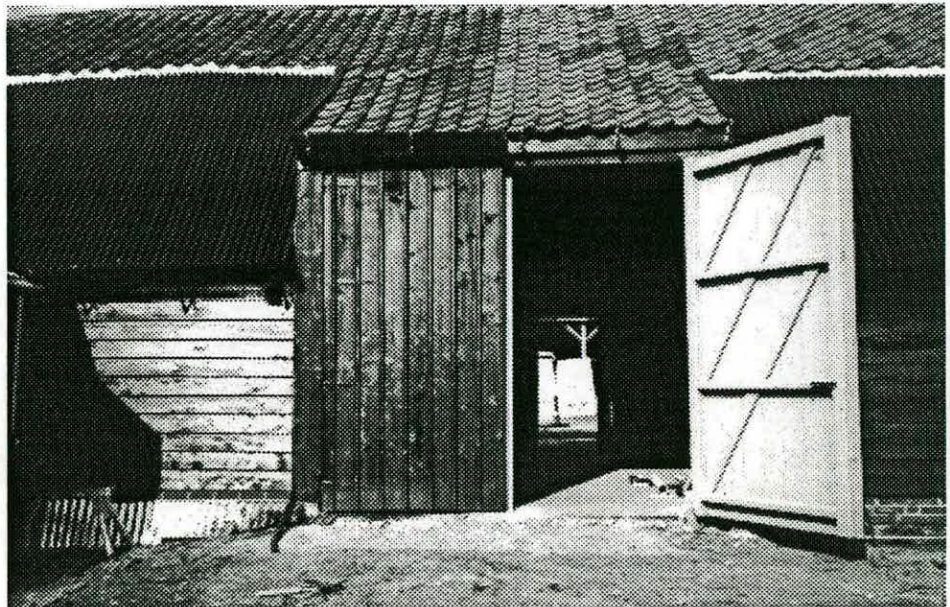


A section of the South Aisle Wall has been reconstructed due to the ravages of recent wet rot and decay. There was no primary fabric here. The construction was mainly in softwood with some surviving old oak.

The repairs by our contractor are a good example of carpentry skills and ingenuity in dealing with an already distorted and haphazard structure.



Figure 35 Exterior of the barn from the South



The pantile roof has a much lower pitch than the original roof which would have been consistent with the present aisle pitch.

General repairs have been carried out which includes the renewal of some metal roof sheeting over the aisles, part of the weather board and new barn doors. All external timber has been painted with coal tar.

Repair costs

To give an idea of the costs involved for repair work on this Project, the priced Schedule of Work has been included. This was the lowest of three Competitive Tender prices received in July 2000.

Generally, the final repair works have followed the Contract Drawings and Specification with few variations needed. The eventual final cost of the Project is 5% over Contract figure.

SCHEDULE OF WORK

External Fabric Repair

1.0	Roofing		
1.1	On North and South roof slopes, lift bottom course of pantile resting on upper edge of steel roof sheeting: fix Glidevale Comb Filler to top of steel sheeting and bed tiles to correct pitch on lime mortar above filler.		702-00
1.2	Adjust position of pantiles to close gap at inside face of barge board at East and West Gables.	includes removal + replacement of pantiles + ridge tiles for 5.0m run from each gable.	1890-00 ?
1.3	On North roof slope, Bays 3-7, replace profiled steel roof sheeting.		592-00
1.4	Replace timber rails under steel roof where required: allow for 25m length of 50x50mm treated timber rail.		120-00
1.5	On South roof slope, Bays 3-7, replace profiled steel roof sheeting (in conjunction with construction of extended Cart Shed roof and repair of Arcade plate).		592-00
1.6	On East gable replace barge board and 100x25 capping with SW treated timber.		300-00
1.7	On West gable provide code 4 lead flashing over pentice board and dressed up under weatherboard.		270-00
1.8	At abutment of shed roof to East gable, provide code 4 stepped lead flashings dressed over roofing and up under each weather board.		240-00
1.9	On South roof slope provide 100x25 treated SW capping over barge board to raised pantile roof over door.		150-00
2.0	Rainwater disposal		
2.1	At North and South roof slopes install Eternit 2000, 150 dia. half-round gutter, and 75 dia. rainwater pipes complete with all necessary bends, swan-necks, shoes: refer layout drg. no. ABS 1.83.		1665-00
2.2	Provide purpose made gutter brackets: refer detail on drg. no. ABS 1.83.		540-00
2.3	Provide Hepworth clay hopper and low back P-trap at each rainwater pipe position and lay PVC-U underground surface water drainage pipes to discharge into soakaways: refer layout on drg. no. ABS 1.83.		1650-00
2.4	At abutment of shed to East gable. refix plastic gutter and check discharge of water from rainwater pipe.		126-00
3.0	Weatherboard		
	In replacing weatherboard, allow for irregular studwork packing as required, bottom board tilting fillet, end/corner battens to cover endgrain of boards.		
3.1	North side Bays 1 and 2: renail existing 10.0m length of board: replace lower half of weatherboarding: 100m run of board.		506-00
3.2	North side Bays 4 and 5: retain top three courses of board and replace remainder 96m run of board.		486-00
3.3	North sides, Bay 6: reinstate weather boarding to whole Bay (in conjunction with frame reconstruction): 43m run of board.		218-00

10,047-00

1.

3.4	West gable: renail existing: 10m run of board.	51.00
3.5	East side: replace lower half: 30m run of board, (in conjunction with frame repair). Refer drg. no. ABS 1.81.	482.00
3.6	East gable above tie beam: replace complete area of board: 30m run of board including replacement of 100 x 50mm softwood studs and planted-on bottom plate (in conjunction with frame repair). Retain existing opening to owl nest box: fix lead covered pentice over opening.	838.00
3.7	South side Bays 1-2: renail existing: 85m run of board.	430.00
3.8	South side Bays 4-7: replace complete area of board: 174m run of board, (in conjunction with frame repair).	881.00
4.0	Cart shed on South Side of Barn	
4.1	On south side of Barn extend slated cart shed roof to form a valley intersection with aisled barn roof as detail drg. no. ABS 1.82.	1733.00
4.2	Construct concrete plinth and replace missing post at end bay of cart shed.	213.00
5.0	Shed on East Side of Barn	
5.1	Over a 2.5m length of eaves on the South Side abutting the SE corner of the Barn: repair 6 no. rafter feet, replace fascia board and tilting batten under bottom course of tiles, replace missing length of plastic gutter including stop end and gutter brackets: make good bottom courses of slates and lead flashing at abutment.	640.00
Frame repairs and strengthening		
6.0	Generally	
6.1	Arcade Frames: installation of steel 'T' plate on outer face of Arcade plate and post: refer drg. no. ABS 1.37	377.00
6.2	Arcade Frames: installation of steel braces at locations where timber Arcade braces are missing: refer drg. no. ABS 1.42	528.00
6.3	Arcade Frames Bays 6-7 North and South: installation of steel wind bracing: refer drg. no. ABS 1.41	1266.00
6.4	18 th century knees at Cross Frames generally: check bolt fixings for knees at P2n, P2s, P3n, P3s, P4n, P4s, P5n, P5s. Tighten iron wedges on bolt tails and introduce larger washers if required	251.00
6.5	Pegs: insert new pegs only where there is correct alignment in joint components	251.00
7.0	North Arcade	
7.1	Cross Frame at P6n: provisional scheme for adjustment of Cross Frame in situ, to engage joints, correct alignment of Aisle Post and restore sole plate: refer drg. no. ABS 1.31	2219.00
7.2	Arcade Post P1n: installation of steel 'T' plate at foot of post: refer drg. no. ABS 1.34	158.00
7.3	Arcade Post P3n: installation of steel cradle support over decayed sill plate and repair to foot of post: refer drg. no. ABS 1.33	758.00
7.4	Stud at Cross Frame 1: installation of steel 'T' plate at foot of stud: refer drg. no. ABS 1.35	158.00
		11,234.00

(2.)

7.5	Aisle Post AP1n: installation of steel 'L' plate at foot of post: refer drg. no. ABS 1.36	158.00
7.6	Arcade Post P6n: repairs to post: refer drg. no. ABS 1.39	790.00
7.7	Arcade Plate Bay 3 North: installation of steel plate on outside of Arcade Plate integral with 'T' plates at P3, P4: refer drg. no. ABS 1.45	315.00
8.0	South Arcade	158.00
8.1	Aisle Post AP1s: installation of steel cleats at plate level: refer drg. no. ABS 1.38	
8.2	Arcade Plate Bay 4 South: installation of steel angle on outside of face of plate integral with 'T' plates at P4, P5: refer drg. no. ABS 1.40	1389.00
8.3	P6s: repair foot of post: refer drg. no. ABS 1.32	1074.00
8.4	P8s: installation of steel support: refer drg. no. ABS 1.44	315.00
8.5	P5s: correct position of sill, square to frame	1004.00
8.6	Cross Frame 1: installation of steel angle at tie beam and Arcade Post P1s and installation of steel plate at arcade plate and Arcade Post P1s: refer drg. no. ABS 1.43.	1265.00
8.7	Arcade Post P8s: installation of steel support at foot of post: refer drg. no. ABS 1.44.	315.00
	<i>Duplicated by 8.4</i>	
9.1	North Aisle wall: reconstruction of missing section of external stud wall: refer drg. no. ABS 1.22.1	1390.00
9.2	South Aisle wall: repair of decayed external stud wall: refer drg. No. ABS 1.22.2	3010.00
10.00	Brickwork	
10.1	North side, Bays 1-2: brick plinth: repoint at NE corner 1.0m ² area.	43.00
10.2	North side, Bay 4: brick plinth: rebuild 0.3m length of plinth	96.00
10.3	North side, Bay 5: brick plinth: rebuild end on left side of iron sheeting 0.6m length of plinth	192.00
10.4	North side, Bay 6: take down iron wall sheeting and supporting rails: off existing footing, build a brick plinth to match existing plinth construction (in conjunction with frame re-construction): 3.5m length, six courses high	1120.00
10.5	North side, Bay 7: full height brick panel: replace 8 no. eroded bricks: repoint 1.5m ² area	121.00
10.6	West side, left side of door NW corner: replace 10 no. eroded bricks and 1 no. plinth brick: repoint 5.0m ² area	285.00
10.7	West side, right side of door: repoint 4.0m ² area	172.00
10.8	South side, Bays 1-2 brick plinth: repoint 2.0m ² area	86.00
10.9	South side: Bays 4-5 brick plinth: rebuild top two courses (in conjunction with frame repair)	336.00
10.10	South side, Bays 6-7 brick plinth: rebuild seven courses height (in conjunction with frame repair).	1176.00
10.11	East side brick plinth: rebuild top three courses for 3.0m length (in conjunction with frame repair)	216.00
10.12	Arcade Post P6s: reconstruction of plinth below post: refer drg. no. ABS 1.32.	141.00

15,167.00

10.13 Under sills of Posts P4n, P5n, P7n: repoint with lime mortar using tile slips where necessary

11.0 External painting

11.1 Existing and replaced steel roof sheeting: paint one coat of coaltar.

11.2 New weatherboard, prior to fixing: prime external face one coat of coaltar.

11.3 Existing and fixed new weatherboard: paint one coat of coaltar.

11.4 Existing and new barge board and cappings: paint one coat of coaltar.

11.5 Pair of sliding doors, West side

Pair of barn doors, Bay 3, North side

* -> Pair of barn doors, Bay 3, South side

Small door, Bay 7, South side

2 windows, North side

To the above: rub down, undercoat and one top coat microporous paint

12.0 Glazing

Two windows North side: reglaze two panels in 4mm glass.

13.0 Addendum.

* 13.1 Barn doors: Bay 3, South side: re-support door posts on concrete plinth; replace pair of Barn Doors: refer drg. no ABS 1.84

176.00 -

972.00 -

510.00 -

1434.00 -

240.00 -

288.00 -

160.00 -

1804.00

PRELIMINARIES

Contingency Sum

Person in Charge

Site Accomodation

Scaffolding

2000.00

1800.00

330.00

1625.00

11,339.00

SUMMARY

Total From Page No
1
2
3
4

10,047.00

11,234.00

15,167.00

11,339.00

TOTAL CARRIED TO FORM OF TENDER

47,787.00