

## STEART BARN, TRULL

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Until its collapse in about 1963 Steart Barn stood on the south side of a road junction between West Buckland and Cutsey House, Trull (ST 182203). The land upon which it stood sloped gently to the south, and bore evidence of having formerly been a group of enclosures or small paddocks with their own small but adequate water supply. When surveyed in 1953 the barn stood alone, and, in spite of the presence of stone debris, no definite evidence of any other building was noted.

Timber framed with a low thatched roof, the barn comprised three bays with half bays at either end to accommodate the hipped roof ends, surrounded on all four sides by a contemporary open lean-to shed for loose cattle broken only by access ways to doors on either side of the central bay of the barn proper. Prolonged use of the shelter shed had led to the loss, replacement and displacement of some of the posts around the outside which have been shown in their original position on the plan. In opposite corners of the shelter shed two posts with their attendant roof beams were missing and have not been depicted in that their former presence was implied rather than supported by visible evidence. Measurement of some of the details at the south end of the barn was never completed owing to the presence of baled hay. These are marked A on plan, but there is no reason to assume their inaccuracy to be more than an inch or two at the most. Both porches had been much repaired, and perhaps altered to meet changes in the design of waggons.

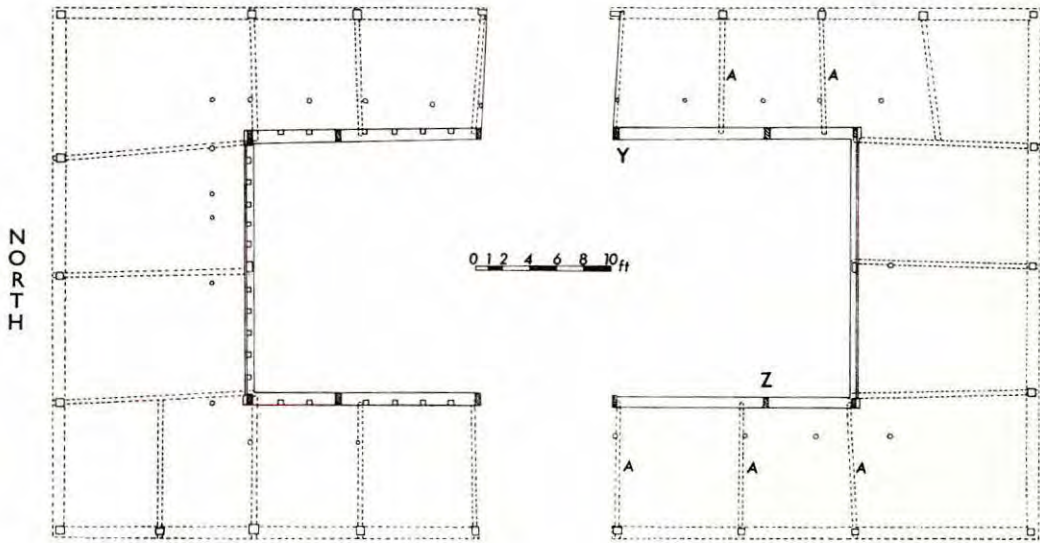
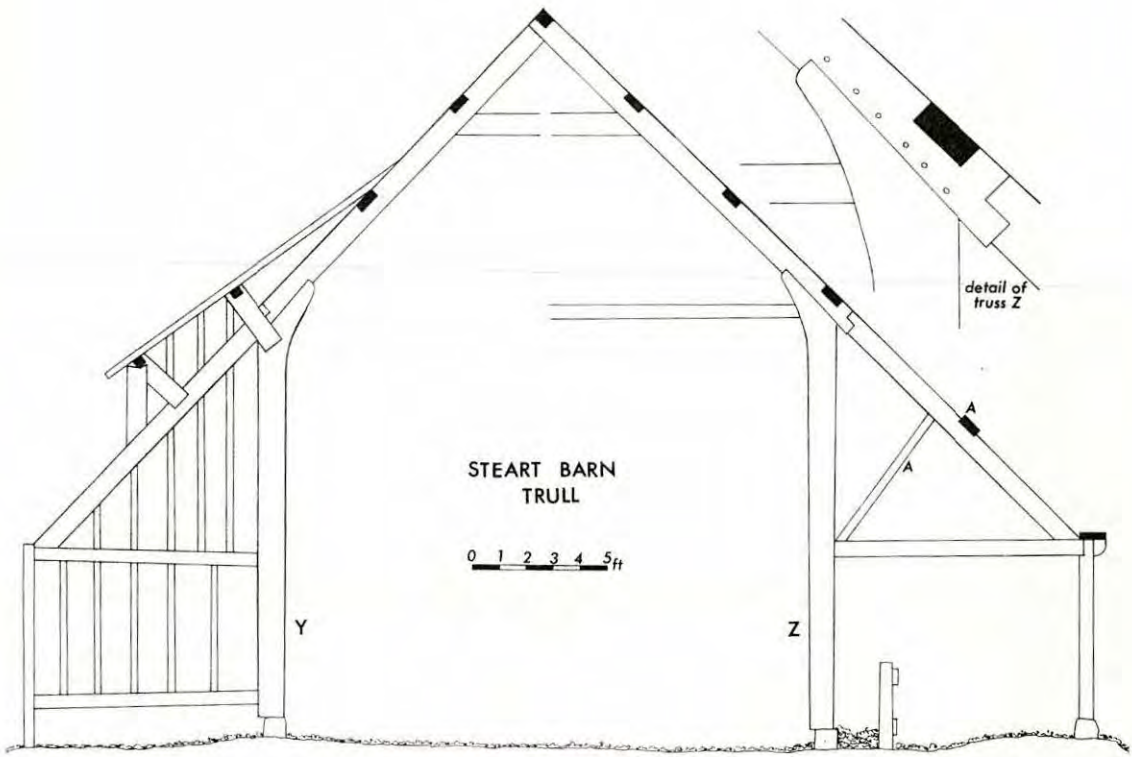
The central part of the barn, 45 ft. 6 ins.  $\times$  21 ft., contained four exceptionally fine jointed cruck trusses supported by vertical members 11 ins.  $\times$  4 ins. in section and 17 ft. 5 ins. tall. These rested on, and were presumably mortised into, sill beams of rather more than 9 ins. square section laid direct upon the natural soil or upon a course of stone which was subsequently buried by accumulations of compacted hay and dust. The ridge piece was square in section and there were three unusually wide purlins notched into the back of the roof principals, the lowest being also in effect a wall plate. The outer trusses had only a collar beam set high in order not to inconvenience the handling of hay, but those adjoining the through passage had in addition a tie beam, regarded as original but nailed into position. The scarfing of the two members of the jointed cruck truss was abnormal in that the under surface was cut to form a rolled bracket instead of the more usual continuous curve,<sup>1</sup> and that the scarf joint was held by six pegs instead of the usual four. There was no reason to suspect a slip-tenon as was noted in a far earlier example at South Bradon.<sup>2</sup>

At each end of the barn were three uprights, set on a sill beam, supporting a cross beam. The corner posts were nailed to the lower purlin/wall plate of the side walls, and the diagonal hip ridges passed over this end framing without support.

Between the main posts of the barn was an abnormal type of infill, consisting of a series of 4½ in. studs rising from the sill and nailed at the top to the lower purlin/wall plate without any horizontal rail or bracing. The outer surface of the studs was in a plane with that of the main posts, and across all was nailed a wall of planks laid edge to edge.

<sup>1</sup> *c.f.* Beecham's Cottage, Pitney. *Proc. Som. A. & N.H.S.*, 97 (1952), 79-89.

<sup>2</sup> *Proc. Som. A. & N.H.S.*, 114 (1970), 68-73.



There were gaps over the end walls which were closed by fixing sloping joists with boarding, resting at one end on the cross beam, and at the other upon a rail fixed across the under side of the hipped roof.

The open shelter shed around the barn was supported by a series of posts resting on dressed stone bases. The top of each post was deeply mortised to take a tie beam, the full width of which projected beyond, where it was dressed to a quarter roll, and upon which rested a conventional wall plate. Principal rafters rose from above each post, eight of them being notched onto the lower ends of the jointed cruck trusses. The hip ridges were small in section, and served as trimmers for the purlins and common rafters rather than for their support. Their ends met those of the other hip end principals in a cluster, nailed together at the ridge, with no trace of a gablet. Along the sides, the principals of the shelter shed supported one purlin only, but with two purlins at each end where the sheds were much deeper. The inner ends of the tie beams were not mortised or otherwise fixed to the main posts of the central barn, but were nailed to the nearest wall stud. Along the barn wall were remains of a low feeding crib, some of the posts of which were still tall enough to be nailed to the tie beams. Hay had been fed to the stock through holes in the boarded walls, but this feature does not appear to have been part of the original design.

*Conclusions:* A consideration of the use of nailed joints, usually regarded as symptomatic of a late date (though early exceptions have been noted) sheds light on a possible origin. The basic frame of both the barn and the shelter shed relied upon mortise and tenon joints. The roof purlins were placed with a certain regularity ignoring the absence of the conventional wall plate not only in the side walls of the barn but in the two ends as well. If we now turn to the studs and planking of the barn walls, mortise jointing appeared to be non-existent. These walls had been conceived as nothing more than screens to enclose the central area. Such a view is supported by the irregular positioning of the tie beams of the shelter shed. They were only nailed to the wall studs at their inner end, and were therefore conceived as being in compression, to press inwards against the barn wall rather than to tie in the perimeter of the shelter shed. There were also a number of nailed raking struts between the principal rafters and the tie beams of the shelter shed, and these, both original and inserted, were in compression.

This difference in constructional techniques suggests that the barn was produced from a design, plan or description, a theory which is all the more likely since it was totally unlike anything known to the writer. Jointed crucks were common in the area, even if on the decline by this time. They might well have been chosen either for their construction, for their structural strength, or because this method of jointing did not interfere with nor weaken any notches placed upon the back of the roof member. If we assume that a local builder was given a plan and section of the desired building, there are many factors that would have drawn heavily upon his initiative and ability, and it is not surprising that there were anomalies, such as at the ends of the central barn, brought about by the use of timbers of inadequate length or by the placing of roof beams in positions which were later found to be far from ideal.

The barn must date from the 18th century. The main trusses could hardly be expected after c.1750 unless this out-of-date style was chosen intentionally for structural reasons. Farm planners were few at this date, and the combination of shelter sheds with barns etc. did not become popular until the third quarter of the century. A closer date may perhaps be arrived at by research into the agricultural history of the area.