

A STUDY OF THE STADDLE STONE GRANARY IN HAMPSHIRE

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ABSTRACT

The author has collected details of nearly 300 Hampshire staddle stone granaries. The article discusses the significance of the role of the granary in the farm, and explores the origins and function of staddle stones. A general chronology of surviving British staddle stone granaries is suggested. Thereafter, discussion concentrates on the design and construction of both staddles and granaries, the Hampshire examples being classified by constructional materials and size. A gazetteer of sites is provided on microfiche.

THE STADDLE STONE GRANARY

A granary, quite simply, is a building in which grain is stored, but its significance to agriculture until fairly recently has been substantially underemphasised. Nicholson (1963), for instance, argues that 'The granary is probably the most important building in history. The safe storage of seed grain which is the function of the granary is the key to the success of agriculture.' In addition to the seed corn for the next season's planting, the granary stored the cereals which the household would require during the year. Grain, with its hard protective husk intact, is easier to store than flour, and a sack or two of corn would be ground at the local mill as it was required. Moreover, for centuries on both arable and mixed farms the main cash crop was generally corn, and the price the farmer obtained for his cereal depended in part on good storage facilities. Protection was needed from the two major threats to stored grain: vermin and damp. This the staddle stone-mounted granary achieved.

The origin of the staddle stone granary derived from the practice of building stacks of unthreshed corn. The usual place to store such corn

was in the barn (Harvey 1970), but where no purpose-built barn was available the corn was stored in the loft space above a cart shed, though not above livestock for fear of contamination. Where indoor space was limited, it saved a lot of hauling, and was more convenient, to build the sheaves into a rick or stack in the farmyard. The stack was raised for protection on a timber platform laid across a grid pattern of stone pillars or staddles, as they came to be called. On this platform the corn could be stacked and thatched in the same way as a haystack, and there it could wait quite safely until the farm labourers had time to thresh and winnow it during the winter months. The height of the staddles – between two and three feet above ground on average – was enough to prevent the rodents from jumping into the stack, but not from climbing the supports. However, by the simple addition of a mushroom-shaped cap to the stone pillar, this problem was solved. Although it might project as little as six inches all round, the overhang proved to be an impassable barrier to rats and mice. At the same time, air circulating freely below the platform helped to keep the stack dry, a crucial consideration since the presence of moisture encouraged the development of moulds and fungus.

It is thought that for centuries cornstacks were built in this way on staddle stones, protected from vermin and damp until such time as the threshing could be done, after which grain would be transferred to sacks or bins and stored in the upper storey of the barn, or in a suitable loft. The remaining straw would be restacked on the ground, the staddles not needed now that the ears of corn had gone. The strawstack was then thatched again for use as animal bedding through the winter.

It was a short step from the corn stack to the

introduction of similar permanent structures for the storage of threshed grain. They were more accessible and offered more protection than lofts, and the staddle stone granary thus provided the farmer with a simple but highly efficient solution to the age-old problem of grain storage. The basic design of the staddle stone granary was widely used for at least three hundred years, and although regional variations evolved according to the building materials available, the original concept was not modified or improved upon until modern times when concrete, corrugated iron and asbestos sheeting revolutionised the construction of agricultural buildings. The majority of surviving staddle granaries date from the 18th and early 19th centuries, in particular between 1793 and the repeal of the Corn Laws in 1846, during which British agriculture was protected by high tariffs from foreign competition, and when capital investment in agriculture was considerable. Mechanical, and especially steam threshing caused an increase in the size of granary, some becoming a cross between a granary and a barn. They were certainly raised on staddle stones, but they also possessed threshing floors between their opposite pairs of double doors large enough to accommodate a loaded wagon. Vancouver (1810) provides evidence of the trend:

wheat barns as well as cornstacks (are found) upon stone stands or staddles. The barns thus constructed are usually of beech, elm and fir boards, with oak, beech or elm plank for threshing floors . . . they are sometimes covered with tile but more frequently thatched.

Subsequently grain imports increased, especially after the 1860s with the opening up of the American and later the Canadian Prairies. Grain was stored in bulk at the ports, British farmers diversified out of grain production, and the staddle granary became a general storehouse.

THE STADDLE STONE

The success of the granary and its unmodified survival over many centuries is a measure of

the efficiency of the staddle stone. The design of the staddle stone is eminently simple, a stone mushroom constructed from a cap and a stem. These two components were easy to manufacture, easy to transport and easy to assemble on site. The height of the stone may range from 2ft to 3ft 6ins above the ground, sometimes half as much again being buried below the surface. The staddles were highly adaptable and a granary could be erected on virtually any terrain. On a hillside, for example, the lower staddle stones were raised on brick piers, while those higher up the slope were partially sunk into the ground so that a level platform could be laid across them for the granary floor. At the same time staddles have proved both strong and long-lasting, some granaries having stood since Tudor times. For all that time, the staddles have borne not only the weight of the buildings themselves, but for a good part of each year the additional weight of the stored grain.

Moreover, the staddle was a very flexible base and when necessary the whole building could be moved to a new site with very little trouble. One old farmer encountered in Medstead could remember a granary being jacked up when he was a boy, the staddles removed to the other side of the farmyard, and the weatherboard and tile store-house being trundled on rollers to its new location.

Generally the building was carefully balanced on its staddles – not pegged or pinned or attached in any way – and held in place by its own weight alone, although in a few instances a shallow groove is found in the staddle cap into which the timber for the granary floor was fitted. In the oldest examples especially the weight was considerable. Stout oak timbers were used for the frame and the floor, and additionally the rafters were of heavy timber. Further, there was the weight of the wattle and daub, replaced eventually by brick in-filling, and of the roof itself, of thatch, of tile, or of slate.

Early staddle stones, whether they were to support cornstacks or granary, were roughly tooled from local stone. The shaft or stem was almost invariably square in section, and this is

a fairly reliable indication of age, especially in those examples where the tooling marks are rough and irregular. A good deal more skill was required to produce a round-stemmed staddle stone, and although some of these are roughly tooled too, they are probably the products of the quarries of Purbeck and Portland, tooled by experienced masons, referred to by Charles Vancouver (1810) in his report on the agriculture of Hampshire.

The Scaffold Stones, or legs and caps (as they were usually called), are supplied from the quarries of Purbeck and Portland, and cost at the sea-ports or wharfs at the head of the marine navigation about 7/- per pair, exclusive of the base or foundation on which they are placed and which is either of mason-work, or of flat stones collected in the country and formed for the purpose.

Considering the enormous weight that each staddle stone had to bear, compared with conventional buildings in which the weight is evenly distributed along the exterior walls, this 'base or foundation' was indeed of great importance. Without a firm and wide underground plinth the stem of the staddle would undoubtedly have gradually been driven into the ground.

With the use of steam power came the machine-cut staddle stone, mass-produced to meet the growing demand. These are easily recognisable by their smooth finely-tooled stems, their roundness in section, and their evenly shaped caps. These in turn were superseded by uniform staddles of pre-cast concrete. By the mid-19th century some cast-iron staddles were on the market, but no more than a handful of these seem to have survived.

The staddles under a granary do not always match. Rough-tooled square-stemmed examples may be found under the same granary as smooth slender concrete ones. There are at least two possible explanations for this. The older stones could have been re-used from an earlier granary which has been demolished. Replacements may have been made over the years if the original stones have been broken or stolen. Weathering could also account for some

replacements. On this point, the late Frank Cottrill suggested (pers comm) that weathering might occur with those staddles which are most exposed to the prevailing south-west wind. The traditional stone staddle has sometimes been replaced by a brick imitation, a brick pillar with the projecting 'mushroom cap' built of brick too. A brick pillar, an oil drum, or some make-shift staddle may occasionally be found giving extra support to an old sagging granary, to strengthen it and prolong its life.

The design of the staddle stone is apparently based on the pentagon, or more precisely, the pentacle, the five-pointed star within a pentagon (Hugh Capstick, pers comm). Since the days of ancient Greece this shape has symbolised mystery, harmony and perfection. Small wonder then that staddle stones have become such sought-after garden ornaments, combining as they do aesthetic appeal and rustic nostalgia.

HAMPSHIRE GRANARIES

For reasons not entirely clear, a large number of granaries has survived in Hampshire, contrasting with an almost complete absence of these elegant structures in some former corn-growing areas of the country. The free-standing granary seems to have been a feature of most Hampshire farms. Generally built in a prominent position in the farmyard, it was nevertheless in the shelter of the barn on the north side, and facing south or south-east to make the most of the sunshine. It was probably in full view of the farmhouse to discourage thieves.

Structurally, staddle stone granaries in Hampshire can be divided into two categories: timber-framed with brick infilling, and weatherboarded. Some 50 of the timber-framed variety have survived, as have no less than 240 weatherboarded granaries. Fifteen barns on staddles have also been identified.

Timber-framed Granaries with Brick Infilling

The oldest surviving granaries date from Tudor times, when timber was plentiful, and

brick was becoming generally available for domestic and agricultural buildings for the first time. Trudy West (1980) describes how 'the timber-frame structure may be nogged with brick, in which case a strong oak skeleton is set up and panels of brick laid between the members. The bricks . . . had no bearing on the structure but simply served as an infilling to keep the building weathertight.'

Granaries of this type are usually roughly square, resting on either nine staddles in a three-by-three pattern, or twelve staddles set three-by-four. The stones are (or would have been originally) evenly placed, somewhere between 4ft and 7ft apart. The panels of brick infilling are approximately a yard square within a heavy timber frame usually constructed of oak. They almost always replace the original infill of wattle and daub. The building is either two or three panels high to the eaves, with the height of an extra panel in the gable ends, with access here to the loft space.

The roof of a Tudor granary is steep-pitched, with a half-hipped gable-end. Some are thatched, some are tiled, depending on the locality and the materials available. Nearly all the surviving examples appear to have been re-roofed, the original thatch or tile having been replaced with slate or corrugated iron. To assist ventilation, louvred panels were built into all four walls of the granary to provide cross currents of air which could be regulated according to the weather. In most cases these have been replaced by glazed windows. It has been suggested that simple vernacular windows may have been a common feature of early granaries, like those still to be seen at Botley Manor Farm: unglazed windows subdivided by slender oak mullions, square in section, set diamond-wise in the frame. These would have needed shutters to keep out the rain.

Wooden steps led up to the granary door. They were not fixed to the building, but could be moved into position as required (the way that steps are wheeled out to an aircraft on the runway today), which would help to reduce the possibility of vermin finding a way into the stored grain. A stout door which could be

securely locked protected the valuable commodity from thieves. The door was generally situated in the centre of one of the southerly facing walls (ideally the south-eastern one), and behind it a narrow gangway ran between the large wooden partitions which divided the interior up into grain bins, three or four on each side. To give extra storage space, the loft was usually floored over, and internal access provided by a fixed ladder in the central gangway.

At Whitchurch there are two splendid examples of the timber-framed granary with brick infilling, both recently renovated by Lord Denning. One is on the three-by-three pattern, three panels high at the eaves, with a tiled roof, half-hipped at the gable ends (Fig 1). The other is of unusually large proportions and supported by fifteen staddle stones arranged five-by-three. This granary is two panels high with a thatched roof of the same half-hipped style as the smaller one.

Timber-framed granaries are fairly evenly distributed across the county but they were not necessarily all built in the 16th century, though *heavy* framing is a reasonably reliable indication of this date. By the end of the reign of Elizabeth I, timber was becoming scarce and expensive, as enormous areas of mature oak had been felled to build vessels for her navy. The timber-framed granaries of the 17th and early 18th centuries are on the same pattern as the Tudor ones, but the timbers are lighter, and the panels more symmetrical than those in earlier examples. The well known Littleton Granary in the Weald and Downland Museum at Singleton near Chichester, West Sussex, is a good example of the later timber-framing, and it can be dated precisely from one of its bricks which has carved on it the date 1731.

Although houses and barns quite often bear a date, this is unusual with granaries, and I am indebted to the late Frank Cottrill for the following observation on the dating of timber-framed granaries:

There is the likelihood that a granary will be contemporary with the other buildings in the same farmyard, unless there is a marked difference in materials and construction,



Fig 1. A small timber framed granary with brick infilling at Charlcot Farm, Whitechurch, recently renovated by the owner, Lord Denning. (Photo: D G Dine).

and this rough working rule might be applied in those cases where the accompanying barn bears a date.

The granary at Pucknall Farm, Braishfield can probably be safely classified as Tudor, bearing in mind the tall ornate chimneys of the adjoining farmhouse so typical of the Elizabethan period. Manor Farm, Hurstbourne Tarrant, is likely to be of similar age judging from the architecture and condition of the other buildings on the farmstead.

Weatherboarded Granaries

The hardwood timber-frame gradually gave way in the 18th and early 19th centuries to

lighter and cheaper structures built from the more plentiful softwoods – bricks were still taxed at this time – but this type of timber needed to be protected from the elements. A softwood skeleton in a simple box-shape would be constructed to which an outer skin of lapped planks would be attached either vertically, or more commonly horizontally, and painted with pitch to weatherproof it. This process became known as weatherboarding. Reynolds (1982) suggests that timber cladding may have been used on some hardwood-framed granaries from the start. At Grange Farm, Old Basing, for example, alternating thick and thin vertical boards are still to be seen. On these early granaries elm ship-lap boarding fixed with iron nails was usual. The

combination of a less cumbersome framework and comparatively lighter cladding meant that the granary could now be built on a much larger scale. By the middle of the 18th century weatherboarded granaries were in widespread use, not only in Hampshire, but across the south of England generally.

Barns on Staddle Stones

Many of the weatherboarded granaries may come under the category of barns on staddle stones, but only the ones I am sure about have been classified in this way. There is one at Edney's Lane, Denmead, for example, and another at Silkstead, both with great double doors facing each other across the central aisle, presumably to allow the loaded carts to

draw in up a ramp on one side, and leave empty from the other side. The floor between the doors would have been used for threshing as already described.

Mr J Oliver of Guildford suggests that the very large granaries in the Denmead area were specially built for storing the barley for beer for the Navy. The victualler would be looking for large quantities of high quality grain, and ample storage was vital for this lucrative market.

The largest barn on staddles in the county is at Manor Farm, Michelmersh, in the Test Valley (Fig 2). The Manor Farm granary is about 30ft high, 30ft wide and 70ft long. It stands on fifty-five staddle stones. It is an aisled barn with five bays. A pair of double doors face each other across the central aisle,



Fig 2. The weatherboarded barn on staddles at Michelmersh Manor Farm.

which is where the corn would have been threshed in the cross draught when the doors were pinned open. The weight of the old peg tiles on the low-swept steep-pitched roof must be enormous, quite apart from the weight of the massive timbers. It is not surprising, therefore, to find that each of the staddles is resting on a large stone plinth, without which the shafts would undoubtedly be driven deep into the ground. High up in the gable and nearest the farmhouse is an opening now covered with a perspex panel. Mr A Holden who lives in the Manor House explained that when he was a boy a horse was used to tramp the corn into a firm stack inside the barn. The stooks of corn were hoisted up from the cart below and dropped through this high door onto the growing stack in the barn. The horse gradually rose higher and higher as the stack grew, until it reached the height of the hoisting machinery, when it was slung from the pulley and lowered to the ground outside, to start the process all over again. The Manor Farm granary is said to date from 1700. It is now in a sorry state: the roof sags drunkenly along its ridge beam: a large section of the threshing floor has collapsed. It is to be hoped that it will not be allowed to disintegrate further.

INTRODUCTION TO THE GAZETTEER

The granaries in the Gazetteer are listed in alphabetical order, parish by parish, together with map references. An asterisk indicates that the map reference is approximate, since not all the sites have been visited. In the absence of information to the contrary, granaries are assumed to be of the weatherboarded variety, as this type is by far the most common. The name of the person(s) providing the information on each granary is included with entry.

Despite intensive research effort over many years, it is nevertheless possible that some granaries have been omitted from the Gazetteer. Should this be the case, the author would be pleased to hear about them so that the information can be dispatched to the Hampshire County Council Treasures Section, Winchester.

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