



The Barns at the Ashdown Forest Centre



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Introduction

In October 2015 the Ashdown Forest Research Group held its first exhibition at the Ashdown Forest Research Centre, Wych Cross.

The topics covered by the exhibition reflected the diverse nature of the group's interests: local families affected by the Great War; the barns of the Ashdown Forest Centre, their use, history and construction; traditional forest occupations; the development of turnpike roads around Ashdown Forest; and houses on the forest edge.

We have now taken the exhibits (photographs and accompanying text) that were put on display for each topic and compiled them into booklets.

The present booklet is about the origins of the barns at the Ashdown Forest Centre. It is written by Pam Griffiths and draws on research commissioned from the group by the Conservators of Ashdown Forest who wished to know more about the provenance of the three buildings – the Education Barn, Information Barn and the Administration Barn – that were erected at Wych Cross in the early 1980s. These barns were the new base for the conservators, their offices having previously been located in Forest Row, but while it was obvious that the barns were old, little was known about them. The research carried out by Pam, with the invaluable help of Dr Annabelle Hughes, an expert in Wealden timber-framed buildings, has shed new light on these historic buildings.

The English Barn

Barns have always been an integral part of the English rural scene, which is why it seemed appropriate for the Forest Centre to choose three such buildings to create this complex in the 1980s. Many date from the heyday of timber-framed buildings – i.e. from after the Black Death in 1348 up until Tudor times (16th C).



Photographic copy of an engraving of a threshing barn, 19th century From MS 823/1/4/39 (<https://www.nottingham.ac.uk>)

Most people think of barns as a space for storing crops, but they were also used to store ‘implements of husbandry’ and provided a useful dry space for working in, especially when the weather prevented outdoor work. The barn interiors would also be used for food-processing – with threshing carried out throughout the winter. Storage was often temporary as raw materials would be moved once they became finished products.

Aisled barns, built as box-frames, are found predominantly in the southern and eastern counties of England, but were particularly common in Kent. Aisles account for between a third and a half of the building space and were used to store crops once they had been threshed.

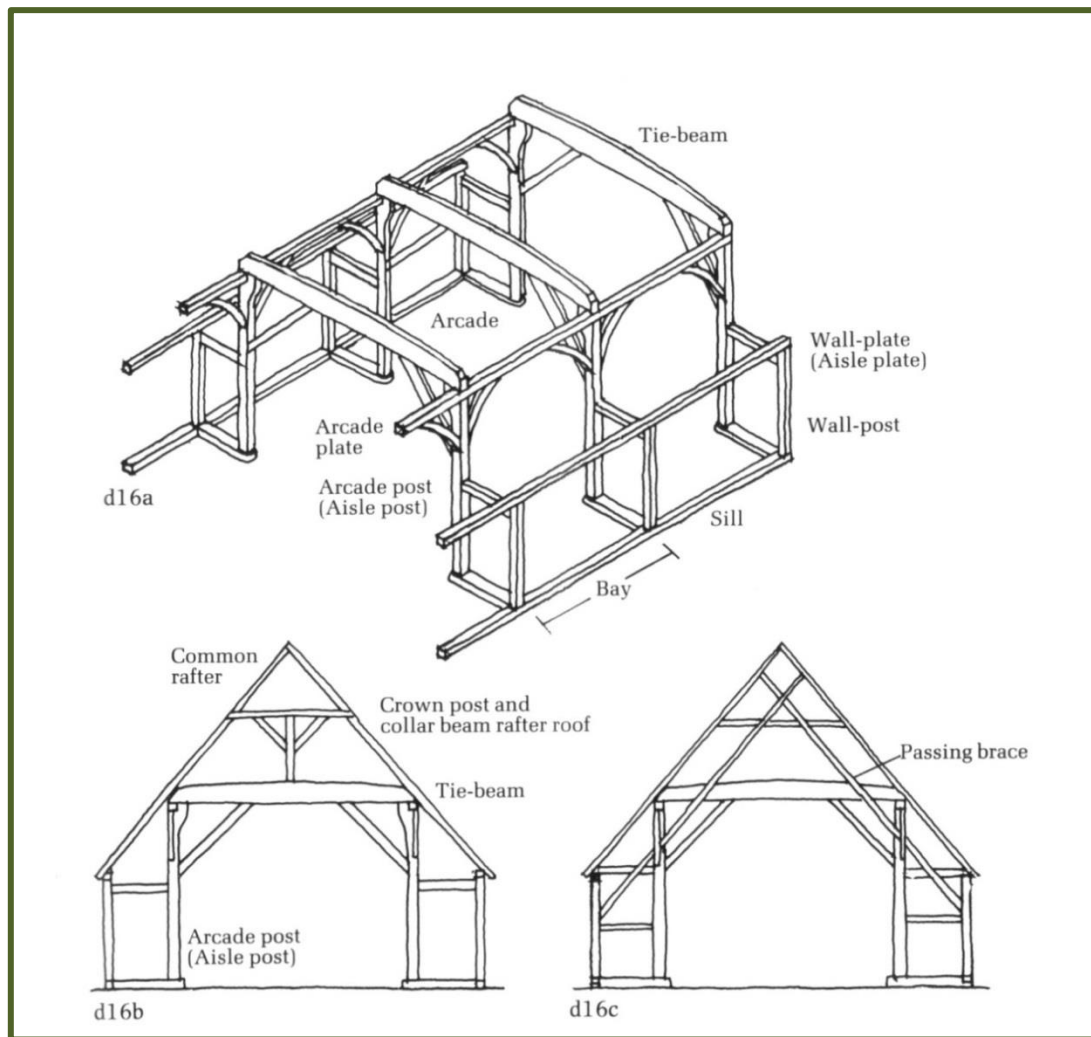


Illustration from Timber Building in Britain R W Brunskill

Box frames, like the ones at the Forest Centre, were the flat-packs of the day, constructed off-site as individual bays and then erected in situ. These were pegged and then strengthened by braces between the posts and tie beams across the space. Once the roof was on, upright posts from the tie beam to the collar beam were further rigidified by braces, creating elegant crown posts in the roof.



The bay of the barn which contained the threshing floor was called the **midstrey**. There was often a room built in above this – at Lenham it is over the church end porch. This presumably was for the ‘security guard’ employed to deter thieves.

The barn at Lenham also has a hipped roof of pegged, clay tiles. A close look at the roof shows where the angle changes marginally where the arcade plates for the aisles are positioned.

Other parts of the country favoured cruck-framed buildings, such as at Leigh Court in Gloucestershire.



The Barns of the Ashdown Forest Centre

The three barns making up the **Ashdown Forest Centre** (Education, Information and Administration barns) were erected on behalf of the Conservators in 1981 by Durtnell and Sons of Brasted, with help and advice from local builder Steve Comber. Originally, a barn from High Hurstwood was to be bought, but a price could not be agreed, so two 'Sussex barns' were purchased for £10,000:

'and a third is being given, as a gift in kind by the company supplying the two.'

It is likely that the Education Barn was the 'gift in kind'. The trustees agreed to expenditure of £18,000 to re-erect the barns.

The **Education Barn** seems to have been constructed from recycled wood from other barns. A close look at the timbers shows empty mortice joints, birdsmouths on vertical timbers instead of horizontals, where they should support rafters, and weathering on internal beams.





This shows a **birds-mouth** (so called as the shape looks like a baby bird's open beak) as it appears in the Education Barn – on a *vertical* post.

Below is roughly how it should be positioned – as a horizontal V-shaped slot designed to support a rafter.





The Education Barn's half-hipped roof, long run of tiling, and weatherboarding are all authentic features. Nevertheless, this building is a construct, made of a mixture of timbers from different buildings.

The Information Barn

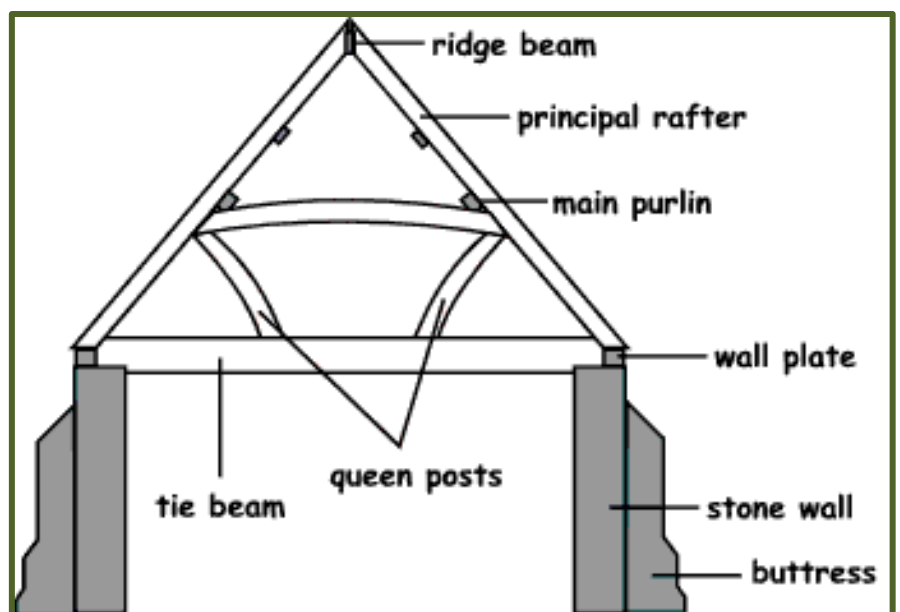
From the outside, the Information Barn looks similar in style to the Education barn, but this is the genuine article, although a large window has been set in place of the original threshing doors. If there had originally been a fifth bay, they would have been in the centre, as was the norm.



The Information Barn is probably from Sussex originally. Now sporting four bays, there may have originally been a fifth, making it a high status threshing barn, belonging to a farm of at least 100 acres. Several features, e.g. the lack of a ridge board along the apex of the roof and the pegged rafters, suggest a date between 1650 and 1750.



Another feature of the Information Barn is the **Queen Posts** holding the tie beam to the rafters; the example shown is from the roof of Salisbury Cathedral, but the principle is the same – two uprights rising from the tie beam



beam to the collar beam, making a shape not unlike the π symbol.



Where the wall was too long for a single beam to be used, scarfing (joining of two timbers) took place along the wall plate;

this example is from the Information Barn. Higher up, it is possible to see staggered purlins in the roof.

Another feature to be seen in the Information Barn is the use of root stocks or jowl posts in the corners. The tree trunks used as timbers here were fitted the wrong way up so that the post splayed out, creating enough bulk at the top for all the necessary joinery.



The Administration Barn



This barn is also authentic, although the covered way was added to link it to the Information Barn. The interior has been changed considerably in order to divide the area up into meeting rooms and office space.



Despite supposedly being a Sussex barn, it has distinctly Wealden, even East Kentish features. One of these is the **close-studding** - upright timbers in the wall - which in this instance runs the whole height of the wall. This barn would have been a high status building, originally having at least four and probably five bays, which suggests it belonged to a farm of around 100 acres in size.

It also has some beautiful, naturally-shaped **knee braces**. These would have been put in to replace the original arched braces when the first floor offices were inserted. Timber-framed buildings often seem over-engineered to our eyes, but they were built to last. The Administration Barn probably dates from between 1650 and 1700.



This picture also shows diagonally placed wind braces running between the principle rafters and the purlins, a feature of the



Administration Barn.

An Expert View

Doctor Annabelle Hughes, whose PhD is in timber-framed buildings, visited the Ashdown Forest Centre barns in 2014 and gave considerable insight into the buildings.

The Administration Barn

Although it is harder to see key features in this space because of the way it is used as office space, this is clearly an authentic barn. Dr Hughes was convinced that the **close-studding** was indicative of this barn coming from Kent originally.

This is a four or five bay building (it is difficult to tell whether the far end consists of two small bays or a larger one), which makes it consistent with having belonged to a farm of at least 100 acres.

Features include:

- **knee braces** - these are probably not original and would have replaced the carved braces put in at the time of building. Left in situ, these would have made the upper floor impossible to use as they would have cut across stairs and work areas.
- **wind-bracing** (curved struts between the rafters) which prevent the roof 'racking' – i.e. the rafters tipping out of vertical due to pressure from the wind.
- a **pegged apex** to the roof, a feature which suggests the barn was built before 1750.
- **clasped purlins**, i.e. the horizontal beams which support the rafters are held or 'clasped' by a collar beam – the piece of wood which crosses the roof space, making the cross-piece of an A shape to the rafters' uprights.
- **scarfing** - two pieces of wood joined together to make a long enough piece to run the length of the building.

The ties crossing the space at eaves level have been prepared to fit into a supporting beam, but in the bay at the western end this is no longer present.

The Education Barn

According to Dr Hughes, the following points show that this barn is made up of timbers from other buildings:

- **Mortices** carved into beams didn't match up and had no braces in them
- Weathering was evident on internal posts
- A **lateral eaves beam** with **birdsmouths** was being used as a vertical upright
- The **roof braces** were too small and the holes in the **tie braces** weren't being used as intended
- There are **queen posts** supporting roof timbers in some bays but not others

The Information Barn

This was seen by Dr Hughes as authentic, although there was evidence of beams having been replaced at some time. Her reasoning included the following:

- The proportions are in keeping with being a **Wealden** barn
- **Mortices** on the vertical beams either side of the window are on the window side; braces were fitted on the edge closest to the door.
- The **braces** are substantial, and fit in the mortices made for them in most cases, though some are missing at the far end.
- The **queen posts** are consistent with the rest of the barn
- There are **butt purlins**, i.e. horizontal longitudinal beams in the roof. These are very slightly staggered to avoid all the pressure coming on one point of the rafters. This staggering became more intensified over the years which helps date the barn.
- The **eaves plates** have been scarfed at each point where two timbers join.

Did You Know?

Did you know that the **threshold** was a strip of wood or stone across a doorway? The door in question may have been in a barn or a house, but the purpose was the same, to keep the threshed straw (used on household floors as well as for animal fodder) from escaping.

Did you know that the term **barn doors** has migrated from farm to theatre? The flaps around the Fresnel stage lantern, used to direct the light, are known as barn doors.



Did you know that a **barn gallon** was a term for two gallons of liquid – like a baker's dozen only better!



Did you know that a second-rate or ham actor is called a **barnstormer** as travelling players often performed in barns? Later the term was used to describe daredevil pilots and stuntmen who performed aerial tricks.

Did you know that a **Barn Owl** is also known as a Screech Owl? This is because of the eerie screeching and hissing noises it makes. Barn owls are popular with farmers as they help to keep down the rat and mice population in their barns.





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