

Meet the Barn



We are Carpenters and Joiners

I'm the Great Wheel Walker



Come and meet all of us and find out how the Great Barn was built!

I'm a Mortar Maker and Builder



I'm a Purlin



Meet the Barn

This activity consists of mini biographies of parts of the barn and tools (that have been granted the power of talk) and people related to the building of the barn. These are draft descriptions and we will in some cases need more information. I am currently reading up the role of women who did nearly all of these jobs as well as men and will give the characters names.

While searching for pictures I found a lot of information on a site about a medieval castle being built in France using only medieval techniques. They have already been building since 1997 and hope to finish in 2025.

Go to:

<http://www.guedelon.fr/en/>

to discover videos and images which give a very clear idea about how the barn was built except that their stone is much harder to work than the Bradford limestone. There are also lots of videos of medieval building processes like charcoal and lime burning on the net.

The webaddress for this activity is:

<<http://www.collaborativelearning.org/meetthebarn.pdf>>

This is one way among many of using these biographies. Every pupil in the class gets a card (or two or three depending on your pupils) to read and then present themselves in role to another pupil. It's very good for their language development to only glance at the card if they get stuck when they present. Then the pair of pupils can introduce each other to two more pupils and vice versa. In this way they meet a variety of items/people and can begin to make links.

If the role play on parts of the barn is done before a visit, then the pupil with the 'purlin' card could research their part during a visit and become an expert to share their research later with other members of their class.

Webaddress: www.collaborativelearning.org/meetthebarn.pdf

Last updated 5th March 2017

Our collaborative talk for learning activities are designed to:

...build on prior knowledge.

...move from concrete to abstract thinking.

...ensure everyone works with everyone else.

...extend social language into curriculum language.

...provide motivating ways to go over the same topic more than once.

For more details go to: www.collaborativelearning.org

Meet the Barn Role Play

21 People:

Abbess
Carpenter
Carter
Charcoal Burner
Forest Keeper
Great Wheel Walker
Labourer
Hewer
High Steward
Lime Burner
Oxdriver
Mason
Master Builder
Master Mason
Mortar Maker
Pegmaker
Quarryman
Rope Maker
Sawyer
Smith
Tree Feller

11 Parts of the Barn:

Buttress
Cruck Blades
Limestone
Mortar
Oak Tree Curved and Straight
Purlin
Rafter
Stone Roof Tile
Tie Joint
Windbrace
Wooden Peg

12 Tools:

Broad Axe
Chisel
Felling Axe
Great Wheel
Mallet
Pincers for lifting stone
Pitsaw
Plumb Line
Saw
Set Square
Stone Saw
Wooden Pulley

The tool descriptions are written in the passive whereas all the other items are written in the first person,

Abbess



My name is Dionisia la Blunde and I have been Abbess of Shaftesbury since 1329. I am planning to build a new barn at Bradford for threshing and storing wheat, oats and barley. The abbey has 42 hides of land there and the harvest is good. We have our own wood and stone and there are good masons and carpenters in the town.

Carpenters and Joiners



You can see us here sawing a joint in a beam. We are using a big frame saw which needs two people. This barn is full of joints so we will be very busy. The green oak is soft and easy to work. We lay the beams on the ground and join them with pegs. Then they are hoisted into place.

Carter



Horses are better company than oxen and also more obedient. They also move more quickly. They respond to my lightest touch. We have been spending the last week carrying wheat from the fields, across the packhorse bridge to the old barn. The new great barn is rising quickly and will be ready next year. Tomorrow I will carry brushwood to the lime kiln.

Charcoal Burner



First I put up a post and build up piles of logs around it. I cover them with straw and soil. I take out the post and put a fire into the hole. When the logs are burning well I stop up the hole. The fire must burn slowly so the wood turns into charcoal. Charcoal burns hotter than wood. The lime burner and the smith both need charcoal for their furnaces.



Forest Keeper

I look after the Manor of Bradford forest. The Abbess of Shaftesbury wants to build a great barn here and I am looking for good oak trees. I need six or seven large curved trees to make crucks but can only find three. This means more work for the joiners because we will have to cut smaller trees and join them with pegged joints.

Great Wheel Walker



I spend my day walking inside the great wheel. The wheel turns a rope on a cylinder and it is used to lift stone, wood and mortar to the top of the building. I have to balance well and when it is lifting heavy stones the walking is very hard work.

Labourer



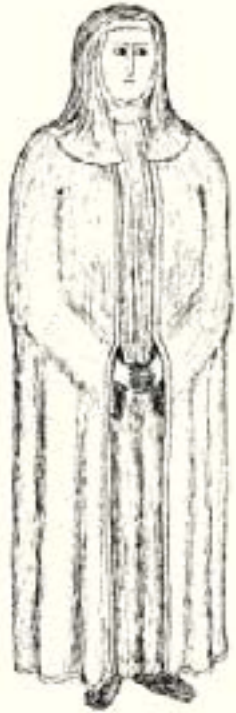
I am not skilled like a carpenter nor a mason but just someone who is strong and willing to work. The barn building needs labourers like me to lift and push and pull. Here I am lifting dressed stone. I have dug trenches and carried wooden beams. Tomorrow I will be asked to do some other job. I earn my penny and my family can eat.



Hewer

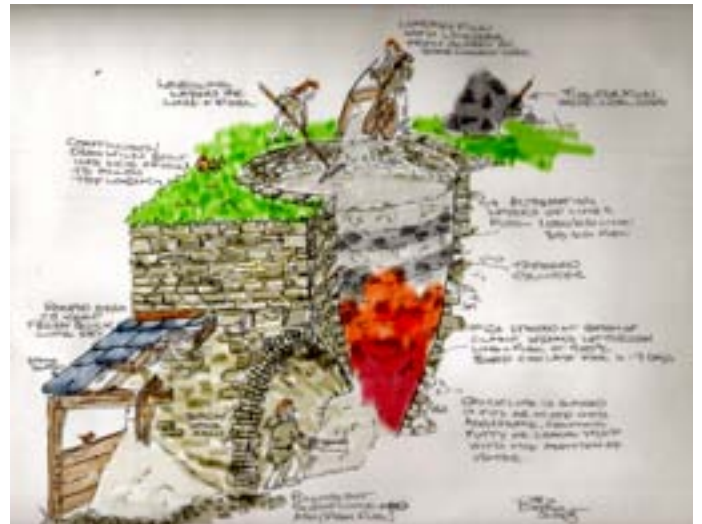
My job is to make square beams from round logs. I work in the forest where the tree is felled. First I cut notches in the log and then slice off the bark and outside wood with my broadaxe. I have hewed curved beams for crucks, queenposts and windbraces. The new great barn is keeping us hewers very busy.

High Steward



I look after all the manors of the Abbey of Shaftesbury. Bradford is our biggest manor with forty hides. At the moment I am arranging the building of a great barn to store our grain and wool. I ride to Bradford every two weeks to check progress and pay the masons and carpenters.

Lime Burner



I burn limestone in a kiln to make quicklime. This is mixed with sand, clay and water to make mortar. Mortar sticks all the stones in the barn together, so I have a very important job. I have to be careful because lime smoke can kill and quicklime can burn you.

Oxdriver



Oxen are stronger than horses. Usually my oxen pull a plough, but at the moment I am pulling hewn beams out of the woods for the new great barn. The sawyers have nearly split the cruck blades so we shall be pulling them to the site next. Last month my oxen pulled loads of heavy dressed stone down from the quarry. This new barn is going to be very big and will use hundreds of trees.

Mason



We are masons and you can see our most important tools. One of us is using a set square to make certain the stone is square. One of us is using a mallet and chisel to shape the stone. We can also see the Bradford stone because it is not too hard.

Master Builder

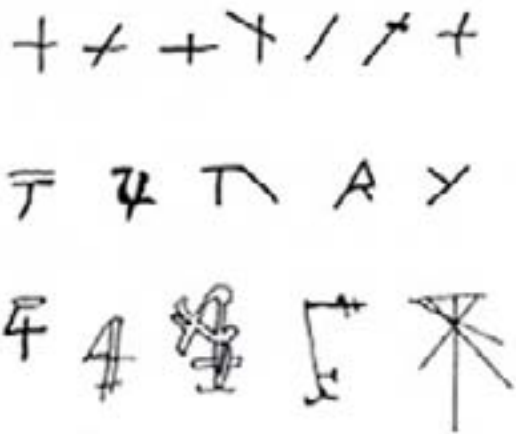


I started as a stonemason but now I am a master builder. I have built part of Salisbury Cathedral and Shaftesbury Abbey but now I am building a great barn for the abbess of Shaftesbury. I make the plans and decide how much stone and wood we need. I keep an eye on all the work. Today I checked the joints in a pair of crucks before they were hoisted up onto the walls

Mortar Maker and Builder



I have made mortar and now I am building the wall. The dressed stone goes on the outside and a mixture of small stones and mortar in the centre of the wall. I am using a plumbline to make sure that my wall is straight.



Master Mason

I work in the stone quarry and on the building site. I select the stone and supervise its cutting and shaping. All my masans have their own mark to put on their stones. I check their stones and make sure that they get paid for their work. You can find some of their marks on the stones of the barn.

Peg Maker



I make the pegs that the carpenters use to fix their joints. I make them from the heartwood of oak trees and shape them with a spokeshave. The holes are drilled with an auger. They are made of green wood so as they dry out they can be knocked in further to make a tighter fit.



a spokeshave

Quarryman

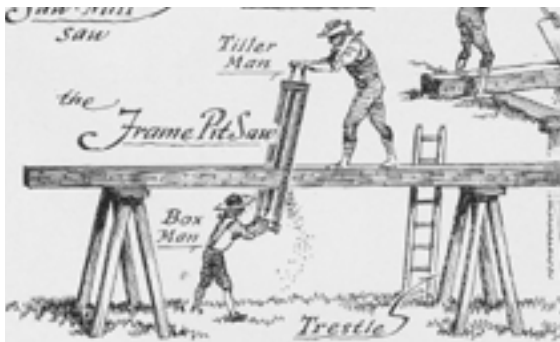
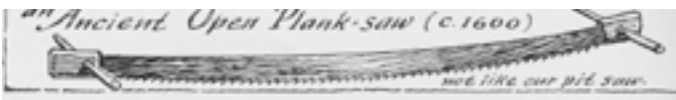


My job is to split the stone so that it only needs a little work afterwards to make it straight and square. I hammer wedges into the stone until a crack appears. This is less work than sawing the stone. Sometimes I am successful and sometimes I end up with a lot of small pieces!

Ropemaker



The barn builders need a lot of rope. They tie the wooden scaffolding together with rope. The great wheel needs rope to wind around its pulley and the big pincers for lifting stones is attached to a rope. I make rope by twisting and twisting hemp and bast strands together until I have a thick strong rope.



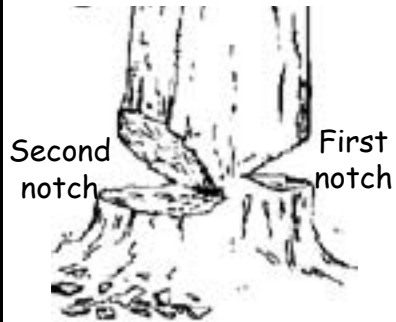
Sawyers

We work in pairs. In the picture we are sawing a small beam, but last week we worked in the woods sawing a large curved beam to make two cruck blades. One of us stands under the beam and pulls the saw down. I am usually top sawyer, but I also have to put in wedges and make sure the saw goes in a straight line.



Smith

I hit the hot metal on an anvil with a hammer to bend it and shape it. I make all the tools for the masons, fellers, hewers, sawyers and carpenters building the barn. My apprentice puts charcoal on the fire and pushes up and down on the bellows. It is hot work.



Tree Feller

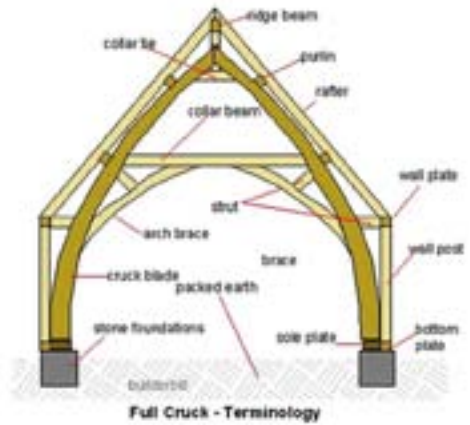
The Forest Keeper marks the trees for felling. I make sure they fall well and don't damage other growing trees. I use a felling axe. The Keeper has marked large curved oaks for crucks and straight oaks for posts, rafters and purlins.



Buttresses

Here you can see six of us! We have an important job to stop the heavy roof from pushing the walls outwards. We have done a good job for over seven hundred years! Look inside the barn and you can see we are lined up with the cruck blades.

Cruck Blades



We are a pair of cruck blades. We are curved. We were once the curved trunk of an oak tree. We were hewed square and then split down the middle with a two man saw . Now together we form a great strong arch. You can find three of us in the barn made from single trees. The other crucks are made of two or three pieces jointed together.



Limestone made of Prehistoric Sea Creatures

We lived in the sea 300 million years ago. Millions of us are in the limestone which lies under Bradford. The barn and the town are built out of us.

Lime Mortar



I am a mixture of prepared lime and sand. I do an important job. I provide the seal between the stones and the stone tiles so that my building is water and wind proof.

Oak Tree



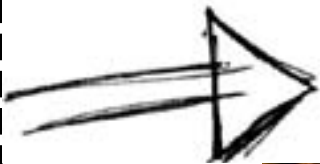
I am a curved oak tree. We are used for building ships and making cruck blades for houses and barns. The forest keeper looks after us well because we are rare trees and there is a big demand for our wood.

Purlin



You can see us purlins very clearly in this picture. We are long straight timbers that run from one end of the barn to the other. There are six of us altogether. We are made of straight oak logs. The hewers have made us square and the joiners have linked the logs together. We have an important job to keep the rafters strong and straight.

Rafters



This is picture of the barn roof turned sideways so you can see us rafters. In the barn you need to lie down or use a mirror to look at us. We rest on the purlins and the cruck blades. There are battens fixed to us and they carry the heavy roof tiles.

Stone Roof Tile



Hole for the oak peg is at the top.

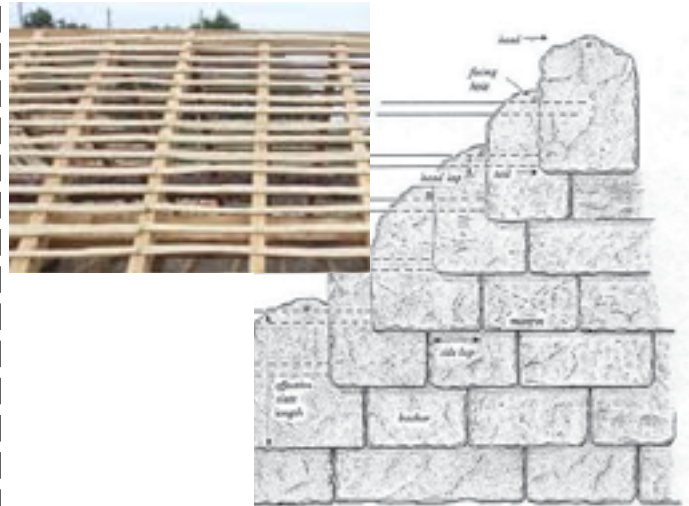
I am a forest marble roof tile. I am made of the hardest limestone in Bradford. There are many thousand of us on the roof and all together we weigh 100 tons. The smallest tiles are at the top of the roof and the biggest down at the eaves.

Joints



We joints are very important to hold all the timbers of the barn together. This picture shows how the windbraces join the purlins and cruck blades. All the joints are held together by wooden pegs.

Battens



We are long narrow strips made of cleft oak. We lie across the rafters and are fixed with pegs. A peg is fixed in each of the stone tiles and they are hooked over us.

Windbraces



We windbraces make the joints between the upright and the horizontal timbers much stronger. We are made with curved timber and have been cleaved with an axe

Cleft Oak Pegs



We may be small, but we do one of the most important jobs in the barn. You can find us where two timbers meet. Here we hold the joint together. We are also used to fix the stone tiles on to the battens. We are made from oak logs that have been cleft with a froe or small axe.

Froe



Broad Axe



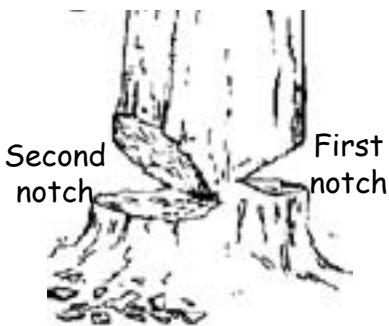
This is a broad axe. Hewers use it to turn round logs into square beams. It can cleave wood along the grain. A smaller version of this axe can make pegs and shingles. A shingle is a wooden tile.

Chisel



This stone mason is using a mallet and a chisel to shape the building stone. Another mason is holding a set square to make sure the stone is square. Carpenters use chisels to make holes in timber posts to make joints.

Felling Axe



A felling axe was used to chop down trees. The first notch was made in the side where the tree feller wanted and expected the tree to fall. Then the feller made a bigger and bigger notch on the other side until the tree began to slowly fall.

Great Wheel



This is a modern replica of the great wheels used to build castles, cathedrals and barns in the medieval period. These wheels are being used to construct Guedelon castle in central France.

Mallet



Carpenters and joiners use a mallet to hit their chisels when they make a hole in a timber post. Stonemasons use a mallet to hit their chisels when they are shaping stones. You can see the marks of chisels on some stones in the barn wall.

Pincers



Here some builders are using iron pincers to hold a stone they want to lift up. One man holds the stone steady and another winds a windlass. There are wooden pulleys to reduce the weight.

Pitsaw



A pitsaw needs two sawyers; one above and one down in the pit. The sawyer in the pit pulls the saw down and gets covered in sawdust. The top sawyer pulls the saw up. Sawyers can cut straight planks from a wooden beam with this saw.

Plumb Line



The builder needs to know that his wall is going straight up. Sometimes your eyes play tricks, but the plumb line always stays vertical. Bricklayers still use them.

Saw



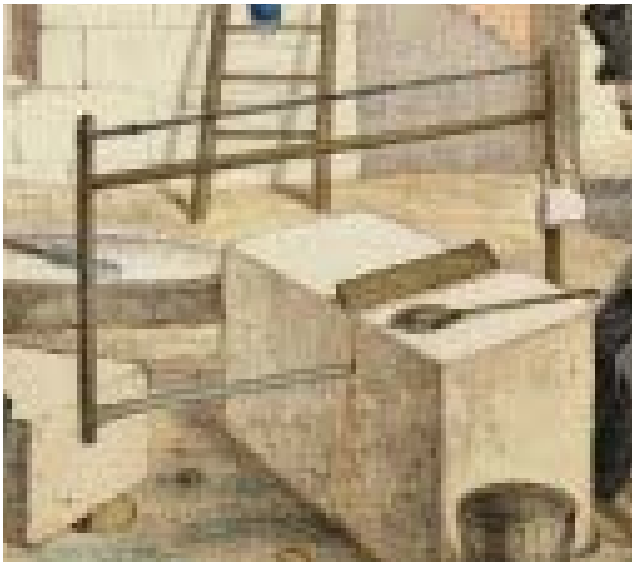
This saw is smaller than a pitsaw but does the same job when the wooden beams are not too large. It can be used for making rafters or windbraces.

Set Square



This set square helps builders make sure that their beams and stones are level and straight and that their corners are square. It is used with the plumb line.

Stone Saw



This special saw is made to cut stone. Bradford limestone is not very hard so can be cut with a saw. If you look carefully at the stones you can see sawmarks.

Wooden Pulley



Pulleys are set of wheels that make lifting heavy objects much easier. Here some builders are using two pulleys to lift stone or mortar up to the top of a tower.