

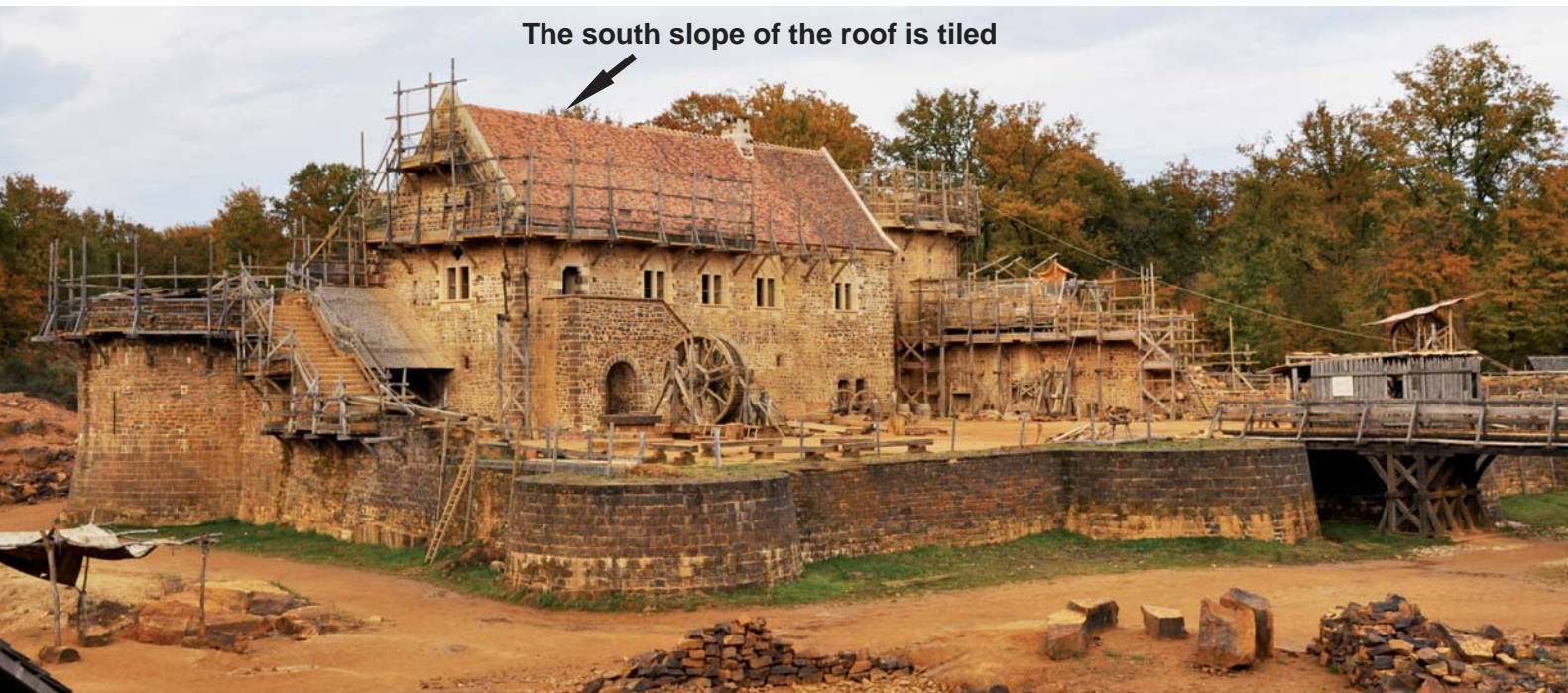
A castle in the making

Dear virtual visitors,

Our 13th season comes to a close, and the progress made this year is clear for all to see. Each day's work at Guédelon marks a step towards the castle's completion; sometimes progress may be almost unnoticeable: an iron chisel re-sharpened; a barrel-load of clay dug from the forest floor or a basketful of mortar hoisted onto the castle walls. However, occasionally there is a dramatic leap forward. On Thursday 7th October, in a mere 2 ½ hours, the final 14 roof trusses on the north range filled the gap between the gable walls. Experimental archaeology is at the heart of the Guédelon venture and the whole operation was an excellent demonstration of how our building site proposes practical solutions to unanswered questions regarding medieval construction. Guédelon castle is a testament to our team's energy, craftsmanship and hard work. Whilst we celebrate our achievements, we do not shy away from debating what might have been done differently. The *faux pas* of our early days are evidence of the lessons we have learnt on this extraordinary journey.

Maryline Martin, Managing Director

The south slope of the roof is tiled



The season in close-up

The great tower – a rib vault for the lord's chamber



View of the lord's chamber after the dismantling of the first scaffolds. The corbels and the base of the ribs can be seen around the chamber; on the left, the fireplace's flue is under construction.



View of the new putlog scaffold in the lord's chamber during its construction. The scaffold is made up of vertical and angled scaffold poles joined to **putlogs***. This structure will support the vault's centering.



The centering is in place above the chamber; the same framework was also used during the building of the ground-floor rib vault in 2005. It has been adapted to fit the larger dimensions of the lord's chamber.

Putlogs: horizontal timber projecting from a wall on which scaffold planks rest.

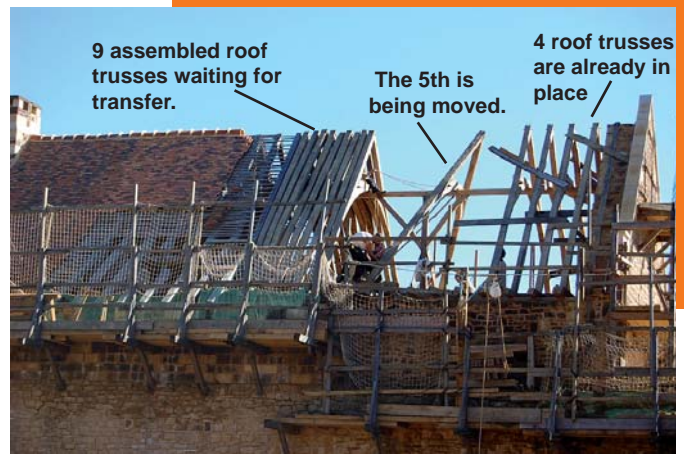
The North Range – raising the roof

The first roof **trusses*** were positioned in 2008 and a further series in 2009. The roof timbers were first made up in the carpenters' lodge, then each piece was hoisted up using the treadmill winch, and the trusses were re-assembled on a temporary floorboard at **eaves*** level and then hauled up into position. An unanswered question remained: how would the carpenters manage to pull the last trusses up into position, as they would be blocked by the west **gable*?**

roof truss: a framework of rafters.

eaves: the junction of wall and roof, usually overhanging a supporting wall.

gable: the triangular end of an exterior wall of a double-sloped roof.



Guédelon's head-carpenter, Nicolas, suggested the idea of assembling all the remaining trusses and then sliding them into position along a specially constructed rail. Thanks to this technique, the final 14 trusses slid – like files in a filing cabinet – along the rail and into their permanent positions. This remarkable operation was closely observed by Frédéric Epaud – archaeologist and member of Guédelon's scientific committee: "There is no definitive answer to the question of how medieval roof timbers were fitted in position. At Guédelon - the pace of work, the rhythm of the construction site, the different technical operations - have allowed us to test a range of theories, and filled gaps in our knowledge."



1 The worker sat up on the collar beam had a dual role: he was there to kick the roof truss along the rail and also to help guide the truss with a rope as the carpenters below move it along.



2 Once the truss is moving, two carpenters armed with forks, push it easily along the rail. The truss is lined up with the joints.



3 The forks are used to lift one side of the roof truss in order to fit the **tenon*** at the end of the rafter into the **mortise***. The carpenters then nail a board between two roof trusses to temporarily keep them in place.

Tenon: a projecting piece of wood made for insertion into mortise.

Mortise: a hole designed to receive the tenon.



4 The carpenters then fit curved angle braces to each rafter. They can then check the distances between the roof trusses. **Battens*** are then nailed to the rafters and the tiles hung in place.

Batten: strips of timber on which tiles are held in place.



A door for the great tower

The castle's third door has been fitted. The wood for the entrance to the great tower is made from cleft oak planks. The door itself took 3 weeks for the carpenters to prepare; the iron strapwork represents a month of work at the forge; it took a further week to fit the strapwork and hang the door. The strapwork is in part defensive and in part a show of wealth and prestige.



The door was not made from sawn planks, but from cleft logs. The faces were finished with a side-axe. The advantage of using cleft wood rather than sawn wood is that it works with the grain of the wood rather than cutting across it, it maintains the strength and reduces its exposure to rot.



Meanwhile the blacksmiths forged the door's hinges and decorative strapwork. The main hinges are then fixed to the door.



With the help of the carter, the door was then transported from the carpenters' lodge to the base of the great tower.

Experimental archaeology in action

To recreate a 13th century castle door is quite a feat; very few examples exist from this period. In designing and making the strapwork, Guédelon's blacksmiths, Olivier and Adrien, respected the spirit of early 13th century blacksmiths, but also replicated the production techniques of that age, and referred to precise archaeological models: church doors from Lignac, Jaleyrac, Ydes and Serandon in the centre of France.

The new door is the third to be fitted at Guédelon. A door from the lord's chamber to the wall-walk was hung at the end of the 2009 season and the first door was installed on the ground-floor of the chapel tower in 2003. We realise now that, strictly speaking, this first door has no place in a 13th century castle: it is made from sawn planks of wood; it lacks defensive iron strapwork and any assailants would be delighted to find the lock on the outside!



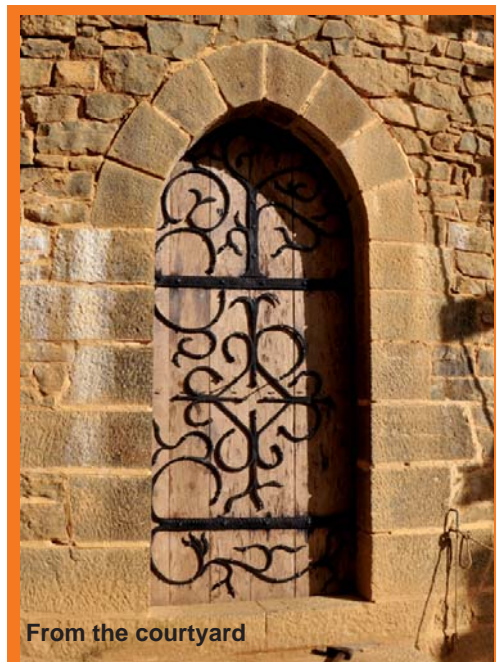
The first door may well be modified later in the building programme; however it will remain in the castle. It is an important part of our story and is evidence of the steep learning curve we faced when we took on this monumental task.



The carpenters could make last minute adjustments and the blacksmiths could then fix the strapwork in place.



At the end of each branch are forged grotesque heads. There are 20 in all and not one is the same.



From the courtyard



From the corridor