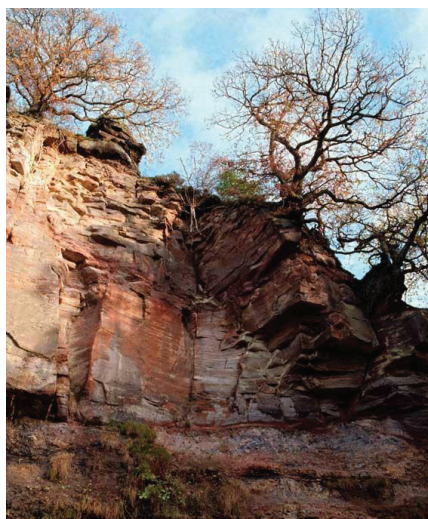


# A Walk Round the Chapel with our Stone Conservator

Our Learning Manager took a walk round with stone conservator, Nic Boyes, in 2010 to find out more about the Chapel's unusual architecture. We think his thoughts are still interesting today.



Nic Boyes, stone conservator.



Walk through Roslin Glen today and you can see the same rock that was quarried to build the Chapel.

## How would you describe the job of stone conservator?

It's a cross between a stonemason and archaeologist. A stonemason is trained to expertly cut out any decayed stone and recarve an exact replacement. Conservators make practical repairs. A stone conservation company like mine has to do both.

The east window is a good example of that. Our task is to deal with the 'friable carved detail' (friable means decayed). Part of the tracery was too far gone and so we have had to carve a replacement piece.

## Sitting here outside the Chapel in the sunlight, I see that there are several different colours of stone used in its construction. What can you tell me about this?

The sandstone from which the Chapel is built probably came from Roslin Glen. We can see the various colours of stone in the rock formations of the glen. The stone would have been quarried out. Perhaps one day we will find an indentation that looks rather like a Chapel shaped jelly mould and we will have found the quarry!

All the sandstone is of the same origin. The colours come from the deposits within each stone. For example, the red sandstone contains iron oxide, while the yellow has calcium-based deposits.

The stonemasons would have chosen their stone carefully. The red sandstone was most prized, because it was easy to carve, and they could create the most intricate detail which would look clear and crisp. Sadly, this sandstone is also the most vulnerable to decay, and has not survived as well as the other sandstone colours.

## Who designed and built the Chapel?

We do not know much at all about who actually designed the building. It is popularly believed that Sir William St Clair was the designer. If this were true, it might explain some interesting mistakes in the structure – parts that don't align properly, for example.

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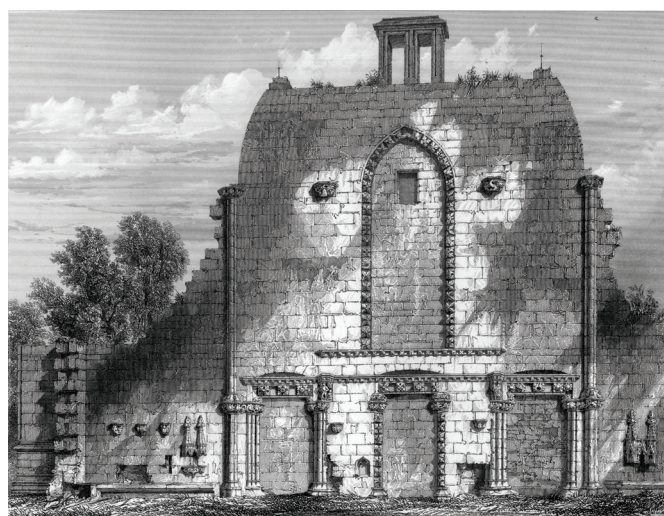
**It's said that Sir William intended to build a much larger Chapel. Can we tell, just by looking at the building?**

If you look at the baptistery, then look along to the left. You can see which part of the wall was intended to be external. There is a string course which is intended to protect the walls from rain coming off the roof. But closer to the baptistery, there is no moulding, and you can see the original door which has been blocked up. Sir William's son Oliver simply finished off what was there, so that the building could operate as a collegiate church.

**Some people say that the Chapel is out of proportion – the buttresses are too large and the flying buttresses too small. What do you think?**

There is what is known as a golden ratio. (In mathematics and the arts, two quantities are in the golden ratio when the ratio of the sum of the quantities is equal to the ratio of the larger quantity to the smaller quantity). If you apply that rule, all the buttresses are in proportion.

We have to remember that the building we can see is one third of the size of the building that had been planned. So it may be that the buttresses look a bit out of proportion. In reality, they are not. The flying buttresses are thin, and not intended to take the weight of the roof.



This etching of Rosslyn Chapel was made around 1845 and shows what the Chapel looked like before the baptistery was added. The three lower openings would have formed the central and two side aisles of what was intended to be a much larger church.

**Some historians thought that the building was not designed by an architect, because it does not conform to traditional church design. They claim that the design seems to use techniques more commonly known in domestic or castle design, such as large lintels and the barrel vault.**

**What do you think?**

We tend to believe that the Chapel did have an experienced and qualified designer. The barrel vault is not a crude construction. But, like the collegiate church it became, we think that the creation of the Chapel was a collegiate effort. There would have been many stonemasons in training. The Chapel you see took 40 years to build, so many young boys would have started out working on the building under the tutelage of more experienced craftsmen. So it would not be unexpected to see some examples of work which did not quite go to plan.

The internal barrel vault responds to the five bays inside and the five buttresses outside. There is clear evidence of design here. Also, Rosslyn is an example of Scottish craftsmen working to their own imaginative designs, with evidence of influence from such buildings as Glasgow Cathedral. Its not at all like the design of English churches. That is why some historians more familiar with English Gothic tend to think that the design was not the work of a craftsman.

**Do you think it is true that the Chapel design was based on French Church building of the time?**

There is certainly evidence of international references in the stone carving, not just French. Some historians thought that the French Mason responsible for Melrose Abbey was involved, but the dates just do not match – he is unlikely to have been alive by 1446. Scotland had many international influences, not just French. Of course, not far from here is the area known as Little France – Mary Queen of Scots came with her entourage, and that in itself was a huge influence on Scotland.



# A Walk Round the Chapel with our Stone Conservator

You had quite a bit of work to do on the east window. The tracery is not original. Would there have been tracery there originally?

Some historians have said that there was none originally, but it is a very large space and would have been cold and dangerous without window treatment. In addition, there are some photographs of earlier restorations which show evidence of original tracery.



The original stone had fragmented, weakening the whole window.



The carver skillfully works the sandstone using finer chisels for detailing.



The finished stone is in position, ready to be hoisted into place.



The magnificent east window complete with its new, strong, load-bearing stone.

What do you think about the carvings of Maize and Indian Corn? Not everyone thinks they are true representations of plants unknown in Scotland at the time of building.

As stone conservators, we don't take a view on all the theories surrounding the Chapel. What we do is have awareness of the form as carved. So, what can we say about the Maize and Aloe Vera? Some carvings stand out. The builders have taken very great care to ensure that

they are 'in your face' – that you cannot fail to notice them. These carvings will have had particular significance. The Maize and Aloe Vera are such carvings. The builders intended us to notice these particular carvings. They are not part of the run of the mill foliage carving in the Chapel, so could it be that they represent an important event in St Clair History, a voyage to the New World, perhaps? This would be in keeping with traditions of stone carving at the time.



The Indian corn is one of the most accomplished carvings in the Chapel.

## A Walk Round the Chapel with our Stone Conservator



One of pinnacles from the roof of the Chapel being removed ...



to reveal a 600-year old beehive built by the medieval masons.

### The conservation process continues. What are you doing at present?

For the next year or so, the scaffolding will cover one bay at a time, and the conservators will work from top to bottom. For example, each pinnacle will be carefully removed and brought down to the conservation pavilion in the grounds. Its condition will be carefully recorded. Conservation work will be carried out, the pinnacle will be strengthened and then replaced. The finished work will then be carefully recorded. We will therefore have a detailed illustrated record of the conservation work which has been undertaken.

### What are we learning during this process?

One of the things we are learning is just how many intricate carvings have been created that were never visible to people on the ground. For example, while working on a pinnacle, Nic could see an intricate pair of carved heads facing into the roof – they would never be visible yet they were carved in the most wonderful detail.

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