Castle view

Marlene:

Hi, welcome to Walking Woods. I'm Marlene Cramer and I'm taking you for a walk. Not in the woods, but in Edinburgh.

This time it should be quite obvious which building you're looking at. Whether you're standing down in the end of Grassmarket, up at the Vennel viewpoint, or pretty much anywhere else in the city centre, the Edinburgh Castle is dominating the scenery of the city. It is perched high on Castle Rock and the most important street of the Old Town, the Royal Mile begins at its entrance and runs for almost exactly 1 mile, or 1.6 kilometres, down to Holyrood Palace. Some of the oldest surviving buildings in Edinburgh are found here, inside the castle grounds and along Royal Mile. But how do we know how all these buildings are exactly? Well, I'm here with Anne, whose job it is to find out exactly that.

Anne:

Well, my name is Anne Crone. I'm an archaeologist by training, but I specialise in dendrochronology. So I study wood from archaeological sites, but also from historic buildings. And I use the dendrochronology to provide me with absolute calendar dates where I can, and on archaeological sites relative dates. So relative to other structures on the site. And I also look at, sort of, details of woodworking, how changes in woodworking techniques happened over time as well.

Marlene:

Anne mentioned that she uses dendrochronology to date timbers. A very quick explanation on how that works:

Anne:

Dendrochronology is the study of tree rings. We measure the tree ring sequences in timbers that we've taken from archaeological sites or from historic buildings. And we measure the ring widths and this is a reflection of the, sort of, climatic and other influences going into the tree rings. And we build up graphs, patterns, of the fluctuations in the tree rings and we're able to match them against other well-developed and, well, dated sequences from Europe and from the rest of Scotland and England. And by matching the tree ring patterns, we can achieve a date for the outermost ring of the tree. And that tells us when it was felled and therefore an idea of when the building or structure was constructed. And also you can use it to provenance the timber to say where it is coming from. And that's really important in Edinburgh as you'll come to hear.

Marlene:

And Ann has looked at quite a few interesting buildings.

Anne:

Well, mostly it's been the roof spaces, the roof timbers. So, there are quite a lot of buildings all the way along the Royal Mile from Edinburgh Castle all the way down to Holyrood Palace. And in most of those it's been the rafters and the ceilings, the board and beam ceilings, that still survive in many of the buildings there.

Marlene:

But most importantly…

Anne:

I've dated the hammer beam roof in the Great Hall at Edinburgh Castle, so that was felled in 1509-1510, so it was a construction by King James the 4th.

Marlene:

You might not have the time to visit yourself, but you can imagine the roof like this…

Anne:

Well, if they… if they were going into the Great Hall, all they need to do is look upwards and they would see the hammerbeam roof. It's very high up and it just looks like a forest of timbers with the struts at the side which have… are supported by stone lintel. And then the rafters and the cross beams are all very visible.

When I was sampling it there was a very high scaffolding in place which enabled me to do the sampling, and it's quite scary because it's very high up.

The timbers had all been, sort of, were mainly squared half oaks, so squared, but with the corners, with the sort of bark, surviving on the corners. And this is really, really important for the dendrochronology, because the bark edge gives us the exact felling date of the timber. So, when you're in a roof like that, you spend a lot of time searching for these places where the bark edge has survived. And in Edinburgh Castle there was a lot surviving, and so we were able to identify numerous felling dates. So I think I have felling dates from something like 1506,1507,1508, 1509 and finally 1510. And what this tells us is that they were stockpiling the timber, and it was probably not being stockpiled in the timber yards down at the shore, but probably by the Royal Builders building up and, you know, reserves until they had enough to build, you know, this massive structure.

Marlene:

And Anne found out even more than that.

Anne:

It's all oak, and it all came from Norway. In fact, almost all of the buildings that have been dated along the Royal Mile have been built using oak or pine timbers, which have come from Norway. So, most of the buildings that we've looked at along the Royal Mile are almost all 16th century, some sort of going into the early 17th century. And this is probably a reflection of the expansion of Edinburgh at that time. You know there's sort of new wealth coming in. The merchants were wealthy enough to build houses up and down the Royal Mile, and we get this big cluster of dates.

We think that we probably have more Norwegian oak than the Norwegians now have. So, all of it is coming from Southern Norway, which was the only area of Norway where oak grows naturally. I think during this period it was a cash crop and so they exported a lot of their oak and I think that dendrochronologists in Norway have been struggling to build oak chronologies because there's not so much left in their buildings there. It's all in Scotland. So, the pine is also coming from the same area. It's coming from the tip of Norway.

Marlene:

If you want to see all this Norwegian oak and the castle, you can visit daily from 9:30 AM and ticket costs around £20. You could also get an Explorer Pass with Historic Environment Scotland that gives you access to many important historic sites, including Edinburgh Castle and Stirling Castle, with its famous painted ceiling. But you don't have to travel that far to get to see this important bit of Scottish tradition.

Anne:

Many of the buildings along the Royal Mile have these painted board and beamed ceilings, for which Scotland's quite famous at the time. Most of them are 16th century in date and they've got a really beautiful decoration in some places.

These board and beam ceilings, the boards, again, are all Norwegian pine and they were sawn in Norway, so they were importing vast quantities of these boards, deals, I think, is the was the, sort of, historic name for it. But from the sort of early 16th century, vast quantities of these were being imported into Scotland and the earliest date for which we have one is in Stirling Castle and that's 1535. But we think that the fashion for these board and beam ceilings came about because. All of a sudden, merchants had these, you know, relatively cheap boards, and they provided a very good medium for painted decoration. And so we think this is why, well, we speculated, that this is why this fashion developed in Scotland. Because it didn't develop elsewhere in the British Isles and it doesn't develop until much later on the continent as well. So it's quite special to Scotland.

So, there's quite a few along the High Street, the ones that you can go and see are in Gladstones Land, which we haven't dated, but there are painted ceilings in Riddles Court which you can see. And also the Lawnmarket, which is now a house on the corner of the High Street and the bridges. So if you were able to book a bedroom in this particular hotel in this particular room, you could have a painted ceiling above you.

Marlene:

If you can't quite afford a night at the G&V hotel, you could also see a painted ceiling in Merchiston Tower at Edinburgh Napier University. There are also a few buildings marked on your map where you could pay a visit.

You will now follow the route up to Royal Mile to hear one possible explanation for why Scotland had to import so much timber instead of growing its own. The marked route to the Castle terrace involves quite a few steps. If you'd rather avoid them, you can use the step-free alternative.