

VIEW FROM THE GREEN ROOM

The Kinsale Playhouse

Rob Hopkins describes
a project where art and
permaculture met with
dramatic results.

Kinsale Further Education College in south west Ireland hosts a number of courses, including Europe's first two year full time permaculture design course, as well as a Drama and Theatre Performance Course, and sculpture, film, art and photography courses. Over the last couple of years, the idea of building a purpose built performance space for the college's drama students began to arise. This was to be a collaborative project between the permaculture, drama, sculpture, painting and film courses at the college.

During the students' permaculture design projects (where they do a permaculture design for the college grounds), a site was identified as the ideal spot to put such a structure. It was, at that time, home to a rather unattractive and under used bike shed, in a rather precarious state of disrepair. To get the project rolling we





hosted a design morning, where we brought together drama and permaculture students, put them into mixed groups, gave them each a lump of clay, and asked them to design a naturally built amphitheatre. They also made use of sticks and grasses and things they found around the classroom and outside. Some of the models were amazing. This served as a very useful exercise for getting them to start thinking about how such a space might work, and also brought students from different courses together in a very collaborative spirit.

The concept that emerged was for an amphitheatre, built using almost entirely local materials, and using techniques that were easy for the students to pick up. We decided to use cob and cordwood, as it gave the opportunity to teach two techniques simultaneously and also because it is a technique with a lot of potential for Ireland, but where much more research is needed.

I have always viewed the work we do in the college as being a great opportunity to build structures in ways you might not do for a client. We are able to take more risks and be more experimental here, which has great implications for the wider community. The building was also to bring people into the college from the wider community, to see a play, but at the same time allow us to expose them to many ideas from permaculture and natural building, but in a very experiential way. The permaculture, as it were, would be coming in 'under the radar'. People would come for a night at the theatre and go home marvelling at the possibilities of natural building and permaculture design. We wanted to build something that would really become a landmark structure in the town, and that would raise the profile of the college.

DESIGNING THE BUILD

Next, in collaboration with the drama teacher and the Principal, John Thuillier, I drew up some rough drawings for how this building might work. Once we had reached a consensus as to how big it was to be and its general design, we began to work on it. The first thing to be done was to remove the existing bike shed. This was launched into with great gusto by the students, and most of the materials came off in a way that could be reused. We then cleared the site. Liam, the caretaker, using a JCB, levelled the site and made the banking for the seating in the amphitheatre.

Once this was done, we began to make the foundations. Dave Griffiths, a very skilled local drystone waller, came in to teach the students drystone walling. The foundation wall was built by the students over a few days, using local stone from a quarry just outside Kinsale. They picked



up the skills involved very quickly, and the wall contains some beautiful stonework. Plinths mortared together with lime were also built, to support the main structural timberwork.

The main framework for the stage was then put into place, using local larch from a nearby sawmill. The 'backbone' was of 228 x 76mm (9 x 3in), with 152 x 50mm (6 x 2in) over that, and then with 152 x 25mm (6 x 1in) boards forming the decking. Once this was in place, we began to mix cob, which secured the boards in place.

The cob was made using subsoil from a building site at the top of the hill, which the builder sent down to us in dumper loads whenever we needed more. It had good clay content and was easy to screen. The soil was put through a large screen, and then mixed by foot on tarpaulins to produce a very nice cob. We needed to add a small amount of sand as the clay content was slightly on the high side. The cob was built around the timbers, which firmed up the whole thing and gave us an even base all the way round for the cordwood to begin.

The wood for the cordwood came from local forestry. Sitka spruce poles can be easily sourced if you want to buy a truck load. In terms of using this building for research, we felt that if sitka spruce would work and form a durable cordwood wall, then this would be fantastic for us in Ireland. We have many many thousands of acres of sitka spruce in Ireland with no obvious end use. We didn't, unfortunately, have the luxury of seasoning the poles for a year beforehand, as is the ideal state of affairs for cordwood. Students stripped the poles by hand using drawknives, and these were then cut into logs of roughly the same lengths with a chainsaw.

For the cordwood building we placed the logs onto a bed of cob, with cob 'sausages' coming a quarter of the way into each log, with the central section being filled with the clayey gravel that didn't pass through the sieve. This made a very solid and sound wall. If we had been building a structure that we would actually live in, a more insulating infill, such as hemp or sawdust would have been used. When you are building like this, your cob goes much further than in a pure cob wall. Also, unlike pure cob building, you don't have to wait for each lift to harden before you can go up again. With cobwood, you can just keep going. Students were encouraged to keep checking that the wall was plumb, and also to make sure that the logs stood about 6mm (1/4in) proud of the cob, and also to pay attention to pointing the wall well with a butter knife. This meant much less shrinkage cracks in the final, much stronger, wall, and also gave it a very attractive finish.



BUILDING WITH THE SWALLOWS

Helped by roundwood pole builder Saul Mosbacher, we carried on building the walls through April and May, and by the time of the summer holidays, the walls were about half way up. One of the problems with running a permaculture course during college term time, is that at the time of year when everything is growing and the weather is dry for building, everyone is on holiday. Traditional cob builders always say that you should only build with cob 'from when the swallows come to when the swallows leave again'. This is because the deeper you get into winter, the slower and slower the cob dries.

When the new intake of students resumed work on the amphitheatre in September, the drying had already begun to slow. We were also aware that winter was fast approaching, and that there was a considerable urgency to get the roof on as soon as possible. We therefore focused on getting the walls up, and over three weeks this was achieved to wall plate level. Unfortunately, one freestanding section of cob wall didn't really like being built so fast, with wet cob on top of wet cob on top of wet cob, and it began to lurch sideways quite precariously. We decided that we would push it over and frame it instead, and make wattle and daub infill panels. It actually ended up looking really good, and the students got to add another technique to their natural building tool kit.

Once we had reached the wall plate level, we began work on the roof. Using hand peeled roundwood poles, Saul made the main hinge frame for the front of the stage. The wood for this came from a family who lived directly over the road from the college, who had had to fell four pine trees. They asked us if we wanted the poles for use in the building. We said we would love them, and with 25 students, we carried them over the road to the site, with two students stopping the traffic!

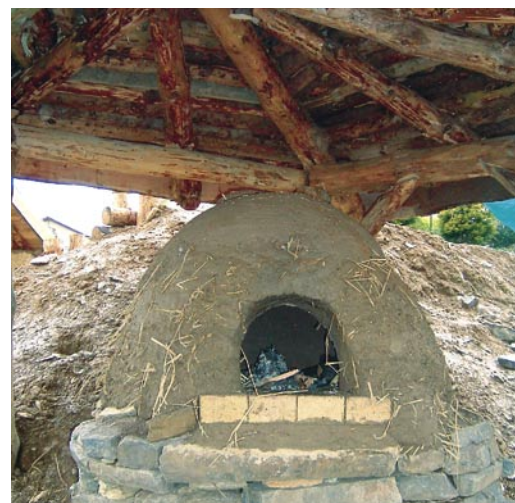
Lifting the hinge into place was quite an undertaking. We tried it once with all the first year permaculture students, around 30 of us, and we couldn't do it. We went and gathered the second year permies as well, and with the combined muscle power of about 45 of us, we heaved the frame up into place. Once that was up, we started to add the other poles, and gradually the roof took shape. Once all the beams were fixed, we began to board over the top, using 152 x 25mm (6 x 1in) boards, many of which were reclaimed from a nearby glass factory, from the crates that the glass was imported in. The factory were delighted that someone would take them away and that they wouldn't have to burn them all (as they had been doing). The students ripped them down into individual boards



and these were nailed up on the roof.

We then fixed larch fascia boards around the edge of the roof, and on top of this we placed old carpets, and strong plastic sheets, and then more carpets (a 'carpet sandwich' as it is known). On top of this we placed turf. We extended the stage at the front to form a 'thrust stage' and did some ornate clay plaster work onto the cob. Time pressure was starting to build as by this stage the drama students were getting geared up for their production of *The Merry Wives of Windsor*. The theatre needed to be completed in time for the show the second week of May.

For seating we terraced the bank and built wooden benches on the tiered slope. We gravelled the ground around the theatre and limewashed the walls, using a yellow ochre pigment. We also asked the sculpture students to make some clay gargoyles, which could be fixed onto the walls at various places, gurning down at passers-by. The gargoyles they produced added a lovely touch to the building. The final touch was to build a pizza oven at the entrance to the theatre, covered by a reciprocal frame roof, so that when the audience arrives in the evening they are welcomed by a fire, and then during the interval they can eat pizza made in the stove. Again, more permaculture coming in under the radar.

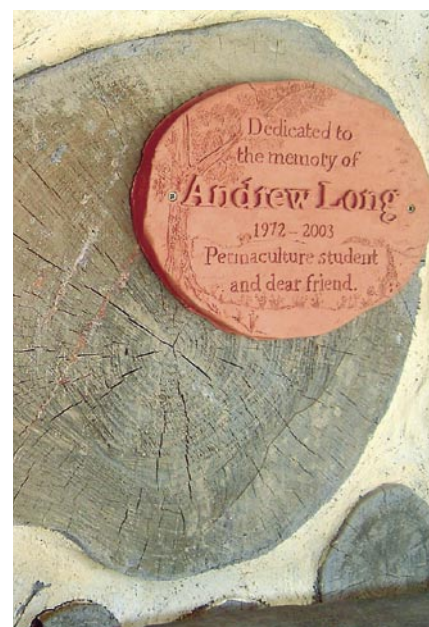


FIRST NIGHT

By the beginning of May we had finally finished. The theatre is an amazing achievement. *The Merry Wives of Windsor* ran for four nights, the last night being the formal opening of the theatre, and it turned out to be an event that was so magical that it will stay with me for years.

The drama students were expecting around 100 people, in the end over 200 turned up. The seating we had built and struggled to visualise with people in was absolutely packed. Extra seating was made using chairs from the college, the seating area was crammed full of people, with many standing around the back as well. There had been concerns that it might rain, but it didn't rain on any of the nights. It was quite cold, but people were prepared and came with sleeping bags, blankets, woolly hats, and thermoses of hot tea. They were determined to experience the whole thing! Also, being squished in together helped to keep them warm too. The lit stage looked amazing and it had all been dressed with foliage and looked gorgeous.

The evening began with John Thuillier welcoming everyone and saying how delighted he was to have the theatre built at the college. I then said a few words about the experience of building it, and talked about Andrew Long, a student of the course who had died two years previously, for whom



we had made a memorial plaque in the theatre. Andrew's father came onstage and cut the ribbon to formally open the theatre which was dedicated to Andrew. It was a very touching moment. Belinda Wild, the drama teacher then introduced the play and we were off.

MAGIC

The play was marvellous. One of Shakespeare's lesser known comedies, *The Merry Wives* is a farce with lots of rude jokes and misunderstandings, all of which the actors carried off with great skill. It so suited the stage, and the drama students' concerns that they would be upstaged by the theatre were unfounded. We made pizza for the interval (for 200 people!) which helped to warm everyone up. When the play ended, the applause was amazing. There was a standing ovation which went on for ages. It was such a magical event; people were really touched by it. So many people said how much they had enjoyed it and what an unique and wonderful theatrical experience it was.

The project was been a great success. We have succeeded in building something that has generated a lot of interest around the town, and which can be used for a wide range of purposes. The students have learnt a wide range of skills, have seen a natural building project through from start to finish, and have created something very beautiful. This is part of the power of natural building – we can create spaces that cannot be created with more conventional materials – this structure would not have the same feeling and magical quality had it been built of concrete blocks.

Magic is the key word for me. The building has a quality that melts most people's hearts, and seeing it used for performance and the effect it had on the audience was very touching. I feel that in developing permaculture solutions, be they gardens, buildings or woodlands, what really sells these things to people is the sense of magic they create. People need to be able to feel that sense of magic, as most already feel instinctively its absence from so much of modern industrial life. This is so much more important than arguments about by how many degrees global warming is increasing or whether we even call it permaculture or not. This stuff should touch people, as, once touched, there is no way back.

Rob Hopkins is a permaculture teacher, and has been course co-ordinator of the Practical Sustainability course at Kinsale Further Education Centre in Co. Cork, Ireland for the last four years. Rob has since passed the Practical Sustainability course on to another teacher, and is now off to do a PhD in Energy Descent Planning at Plymouth University.