

Chips off the old block

Kate Philbin knocks the boys to one side and gets stuck into stonemasonry.

Photography by Mark Williamson

To the uninitiated, asking for sandstone in bed might be considered peculiar, bordering on the intriguing. Whatever next? To a stonemason, however, it is a perfectly reasonable request. "In bed" refers to the way sedimentary rock is formed, with layer upon layer of material being laid down over thousands of years. If the rock

is used "edge bedded" it means that the layers are running vertically rather than horizontally and, so, are more vulnerable to erosion. A skilled mason will always use sedimentary rock (limestones, sandstones and so on) "in bed".

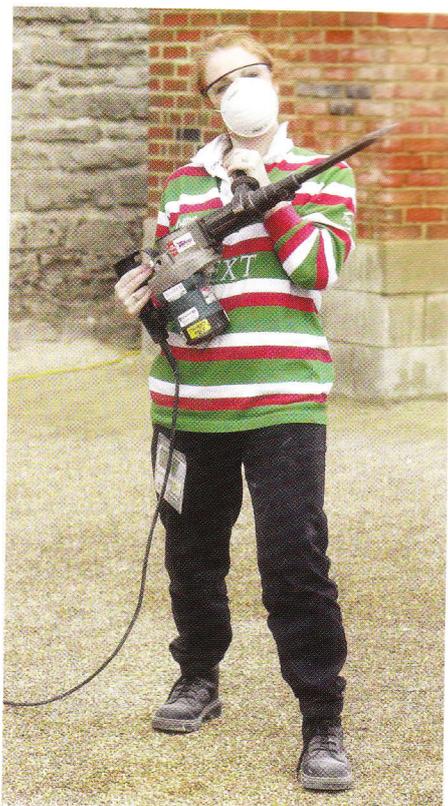
Facts like this, as well as being a conversation-stopper at dinner parties, are invaluable to the period homeowner

who may be using natural stone. When paying contractors to use it, the news is, you don't have to complete a year stonemasonry apprenticeship to learn them. Along with a handful of specialist organisations in the UK, the Heritage Skills Training Centre in Hatton, near Warwick, runs stonemasonry taster courses for architects, builders and period homeowners. As the owner of an old thatched stone cottage, I was keen to find out how much I could learn to try my hand at a few basic skills.

More accustomed to a computer keyboard than a chisel, I was wary of hefty blocks of stone, an array of different chisels and a serious mallet, filled me with apprehension. Course tutor, Andy Lawson, who has a William Morris Fellowship and was in 1987 to study the conservation of stonework and has worked for English Heritage and the National Trust, explaining to the group of five of us were taking the course how to work on a stone surface. This technique is used when the front face of a piece of stone is damaged as it allows you to work back and turn it around. Throughout the course, Andy repeated the mantra: it is better to reuse existing masonry than replace them and this was our first

Faced with a block of unworked stone, my first task was to scribe a straight line around the edge using a scriber and a roofing square. Tricky when you are used to using them, but the chisel was small enough to ask for one-to-one assistance whenever things went wrong to plan. Next, we used a pitchfork held at 45°, to remove chunks of stone down as far as the level of the surface. Trying to ignore what Andy had said that, according to a stonemason, "you're not a true mason until you've knocked off enough skin to make an apron" I concentrated on hitting the edge of the chisel rather than my hand. A claw chisel has a serrated edge and the technique of levelling off the stone and the way, according to Andy, is to hit the stone rhythmically, rather than hard. It always work from the corners in





TOP In my Leicester Tigers rugby shirt (I like the colours). I get stuck in to some damaged stone.
ABOVE Angle grinder massacre.
OPPOSITE PAGE Not bad – some of it's straight-ish.

don't inadvertently knock them off. Finally, the drafting chisel creates a flat surface that is checked using a straight edge rule.

Fingernails down a blackboard might put your teeth on edge but, let me tell you, it's positively pleasant compared to the noise created by the next stage of the process – finishing using a French Drag (again not a bedroom term, incase you were wondering!). The serrated metal teeth, resembling the edge of a saw, are dragged down the front of the stone to produce a smooth, even finish. Luckily, the English invented an alternative – the English Drag – which is considerably less painful on the ears and just as effective. This was the method we used to finish the stone and, although mine wouldn't have passed for the work of a master craftsman, it was good enough to use as a coping stone on a garden wall. Encouraged, I was ready to tackle the intriguingly-named "mousing" technique.

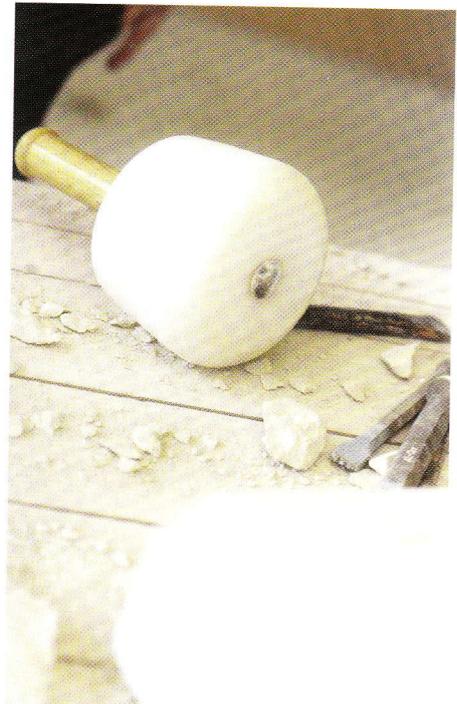
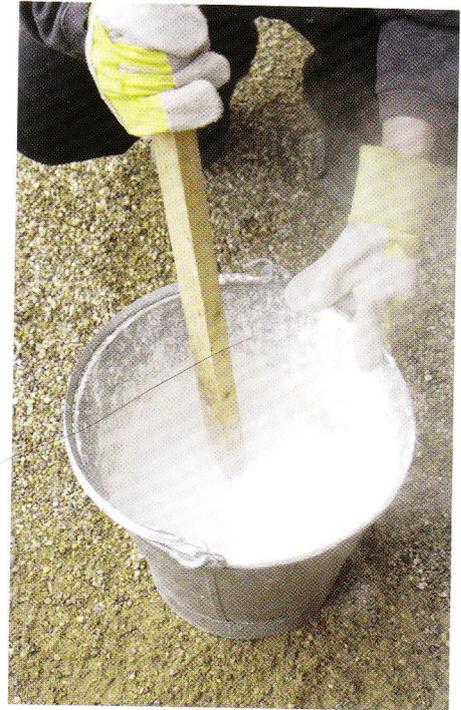
This involves joining two pieces of stone, or a single piece of stone that has cracked, using a steel pin and P38 Anchor Fast Resin. After drilling the two pieces of stone to be joined and filling the holes with resin, the really ingenious bit is to tie a piece of string around the pin and insert it into one of the holes. The pieces

of stone are then laid flat so that the holes can be married up and the string is pulled gently, feeding the pin into the other hole. Once the resin is set, the two pieces of stone are firmly anchored together by the pin and can be reused in a wall or garden setting. It is an ideal way to repair a corner that has been knocked off a coping stone or to re-join a piece of stone split by frost damage.

Andy also demonstrated a technique known as cramping – joining two pieces of stone using a U-shaped stainless steel pin – and explained the drop dowelling method.

One of the best things about these courses is that they give you direct access to an expert with extensive experience of conservation. If you have a particular problem, the tutors will advise on the best method to tackle it and you can even bring along photographs. I found myself taking a mental tour of my cottage and garden to make sure I had asked about all of the niggling problems with our Horton stone.

By day two of the course, my arms felt as if I had two heavy dumbbells suspended from them in place of hands. It was comforting to note that I was not the only one who appeared to be having a problem holding a cup over morning coffee and even some of the heavy set men



on the course were moving rather gingerly. But the aches and pains were quickly forgotten when we got out onto the outdoor test walls and Andy explained that we would be chopping out a damaged block of stone and replacing it with one of the pieces we had shaped the day before. We began by using an angle grinder with a 5" diamond blade to cut around the mortar joint. Masks are essential, not only because of the dust but because sandstone contains a high silica content that is harmful to health.

Next, Andy showed us how to rib the stone – cutting horizontal and diagonal channels across its face using the angle

grinder – and we set about chopping it out using a breaker. I must confess this was one of the most enjoyable parts of the course for me and every last vestige of pent up aggression was quickly dispelled, Rambo style. In a cloud of stone dust and chippings. If you don't want to hire a breaker, a hammer and chisel is just as effective but slower and not half so much fun. Once the stone has been chopped out, the new stone can be mortared in place, if the surrounding stones are sound, or pinned using the mousing technique if any of them are missing.

The two-day course also briefly touched on lime mortaring (there is an

ABOVE LEFT Andy Lawson makes it look easy breaking the ribbed face of the stone.

TOP RIGHT Mixing lime mortar.

ABOVE Tools of the trade, muscles extra.

entire course dedicated to the subject for those who want a more in-depth understanding), and the correct way to point a stone wall. Becoming a period homeowner can be a shock to the system as you realise you are suddenly responsible for maintaining, repairing and restoring a piece of domestic history. A course like this, while it wouldn't turn you into a skilled craftsman overnight, gives you a basic understanding of



stonemasonry techniques. Depending on your level of skill, you might feel confident to tackle some repairs yourself but you would certainly feel more confident in questioning a contractor on how he intended to tackle them. I've certainly looked at my cottage with fresh eyes since completing the course. Whereas before I would have noticed the grass that needs cutting or a peeling windowsill, now my eyes are drawn to that irritating edge bedded piece of stone by the door or the inappropriate cement mortar that needs replacing with lime. Stone has never seemed so exciting.

USEFUL CONTACTS

The Heritage Skills Training Centre, Canal Lane, Hatton, Warwickshire, CV35 7JL.

Tel: 01926 626100. The stonemasonry course dates for 2003 are: Thursday 13th March, Wednesday 18th June and Wednesday 1st October. The course costs £100.

The Woodchester Mansion Trust, in Gloucestershire runs a range of 1 and 2 day courses in stonemasonry, stone repair and lime plasters. The 1 day courses cost £45 plus VAT, 2 day courses cost £80 plus VAT.

Tel: 01453 750455.

The Orton Trust, in Northamptonshire runs 3 day course in all aspects of stonemasonry,

including carving, lettering, conservation stonework, tool sharpening and drawing courses are £100. Tel: 01536 761303.

Or visit

www.buildingsconservation.com/course for a full list of short courses suitable for period home owner.

ABOVE LEFT Using the pitcher chisel to remove chunks of stone down to the surface.
TOP RIGHT Here's one I prepared for the course.
ABOVE RIGHT At last we're getting

Next month Kate writes about the stone cleaning course.