

Lime part 2 – lime mortar

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Of all the different types of [lime](#) I have worked with, lime mortar has been the easiest to work with and most satisfying. Lime mortar should be used to point all stone walls. Whether it is or not is moot point, certainly in the UK its use was forgotten about until comparatively recently. Large parts of my stone house have re-pointed using a cement based mortar. Why should lime mortar be used instead of cement based mortars? As laid out in [part 1](#) its the breathability of lime. Water can find its way into stone when it rains but needs to find its way out for two reasons, firstly freeze thaw and second all rain is acidic. Both degrade the stone. The outcome of using cement can be seen in the first picture. The stone wears away leaving the cement based mortar behind. Lime will allow this water out.



When we bought our house we paid for an excellent survey as

part of the lawyers fees. Everything this survey said was defective has been proved accurate. One thing the survey mentioned was that boundary walls needed re-pointing. In 2004 we paid a building firm do the sideways portion of the wall. I had become aware of the need to use lime mortar and the firm was "lime aware" and did a great job. It cost a fortune though and was only a small proportion of the wall. I did some research and decided I could do it myself. I bought the lime mortar and had a go at a short stretch of wall myself. It looked great so I carried on in the gap between my job ending and doctorate starting in 2005. It took me about 6 weeks to do 40m of a wall roughly 1.3m high that summer. I had one day off when it rained. In practical terms there's not much to it.

- The first thing to do is the preparation. The joints need to be cleared out. This can be hard work especially if there is cement in them. I bought a slate hammer which looks a bit like a geological hammer. The old mortar needs to be removed to a depth of about twice the width of the joint. Wear eye protection.
- The lime mortar is mixed with sand. Its the colour of the sand that gives the final lime mortar its final colour. I didn't worry too much about consistency on this count (I bought lots of batches of sand and lime) so my wall varies in colour, but I think it adds to the charm. The ratio is up to you. I used a 1:2 lime/sand ratio but it could be 1:3 or lower. Mix the components dry in a bucket and then add water until the mix has a consistency of dough. Wear eye protection.
- Do in dry weather when the temperature is not going to drop below 6 degrees C at night.
- Then you have to get the lime mortar into the cracks. First spray water over the area you are working on. I tried and failed to point using the proper tools. Lime mortar is alkaline and abrasive so I wore washing up gloves and used my hands. Wipe any excess of the stone with a damp cloth. Keep spraying the area gently for some hours so the set is slow and cover at night with plastic sheeting. The lime mortar mix will keep damp for several days, cover bucket and work up with a little more water the next day. Unlike concrete or cement you are not racing against the set.
- One possible problem is the joints are wide or lots more mortar comes out than you want- which is easy with friable old lime. Lime supposedly will not set if the depth is more than about 5 cm. There are two ways round this. The first is to build up the joint in layers. The second is in fill with stone. I did the latter getting bits of stone from

stonemason's skips around me.



Here is one bit of the end result. I still have some bits to do.

As

wrote in our [book](#); "Another area where we can make a difference with personal action is to gain and develop useful, practical skills. As we discussed in Chapter 9, although we may have gained expertise in other areas, many people in our generation are de-skilled in the practical talents which will become more important in the future. Being able to make or repair things, or to build something using local or recycled materials, or to grow and process your own food may all be more important skills in the future than some of the talents we value highly today. Gaining these kinds of practical skills boosts our personal resilience, and if a range of these skills are available within our neighbourhood, working together builds up the whole community's resilience. If you have a particular skill, can you share it with others? We can learn some skills from books or the internet but generally speaking we learn best by being shown how and having a go." Neil
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