



# Pointing

Learning to point on a Mike Wye course 'using lime in renovation'



Lime putty mortars offer advantages over cement based mortars. They are generally a softer, more porous material allowing moisture to evaporate from the joints in preference to the stone. This will help to lower moisture levels in the wall and reduce the build up of soluble salts in the stone face. As with all lime putty based materials the best outcome requires patience and careful control of drying and suction, the reward being a good looking and long lasting mortar.

#### PREPARATION:

Any existing defective pointing must be raked out to a depth usually equal to twice the width of the joint, but not less than 20mm. The back of the joint should be roughly square in

profile. Plugging chisels ensure that the stone or bricks aren't forced apart.

#### DAMPING:

The joints must be thoroughly dampened, with enough time left for the stone or brick faces to dry to prevent smearing. The mortar should be as dry as it is practicable to point with. This allows maximum compaction in the joint, reduces shrinkage cracking and reduces the tendency to smear on the stone faces.

#### PREMIXING:

All lime mortars benefit from being pre-mixed for a minimum of a couple of weeks and then "knocked up" again prior to use to plasticise them - this reduces shrinkage in the mortar.

#### GAUGING:

We suggest a 3/1 mix of coarse sharp well graded sand to mature lime putty internally and a 3.5/1 mix externally where a pozzolan is to be added. Lime mortars gain strength by carbonation with carbon dioxide from the air. In damp, frost prone or very exposed situations it may be appropriate to add an extra ingredient to a lime mortar to increase its compressive strength and frost resistance. Traditionally volcanic ash or brick dust were added, these are forms of burnt clay called pozzolans after the Italian town of Pozzuoli where volcanic ash was used by the Romans. We use a calcined clay from Cornwall called metastar at a volume gauge of 10 - 25% depending on degree of exposure. Its only added when ➔



**Top left:**  
Pointing a stone rubble wall

**Top right:**  
A correctly pointed wall just completed using lime putty mortar

**Bottom left:**  
Hideous pointing with a hard cement mortar

**Bottom right:**  
Hard cement pointing has caused severe damage to this soft stone

knocking up the mortar just prior to use. It won't give an overnight set but will slowly begin to add a little extra compressive strength to the mortar after a couple of weeks.

**POINTING:**

Start at the top of a wall to allow for cleaning up and spraying to continue. Use a pointing key or metal spatula and force the mortar in from a hawk. Joints deeper than 20mm will need an initial dubbing out as shrinkage can occur otherwise. Finish flush or rebate a little if the joints have widened with age or for personal preference as rebating highlights the stone more.

**BRUSHING:**

When the mortar is "green hard," brush or tamp the joints with a churn brush to enhance the aggregate and give a coarser texture to the pointing.

**PROTECTION:**

External pointing should be mist sprayed to control drying and protected from direct sun and wind. In winter it should be protected from rain and frost. Hessian cloth is recommended.

**QUANTITIES:**

20kg of lime putty mortar will point 2-3 square metres of stonework or

1- 1.5 square metres of brickwork based on a 10mm joint and 20mm depth.

Safety: Limes are caustic. Always wear eye protection and protective gloves and clothing and follow the safety instructions on the labels.

**CONTACT DETAILS**

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