

Re-pointing with Lime Mortars

1. General

Re-pointing of masonry is generally required due to planned or necessary repair to a building façade. The re-pointing will revitalise the appearance and life of the masonry if done correctly.

In general, lime mortar requires little or no maintenance. However, there may be times when some re-pointing is necessary due to the ravages of time or should the joints suffer any frost damage or spalling. It should be appreciated that if frost damage does occur, this is not considered serious as it is the lime mortar correctly performing and protecting the stone or brickwork.

For full detail of re-pointing, following the guidance set out in step 3.

2. Site Practice

To achieve optimum results and enable work to be carried out all year round, it is important to give adequate protection to the mortar once it has been laid with the masonry.

When compared to cement, lime mortars build up strength or achieve a set over a longer period of time and are susceptible to adverse weather conditions whilst the setting process is occurring. Attention must be given to the weather forecast before and for at least 24 hours after the work is done.

3. Joint preparation & application

Joints must be raked out to a minimum depth of 2 x joint width, or until stable material is reached. Use appropriate hand tools (joint raker) being sure to brush out any loose materials and dust from the open joint.

The process of "jointing up" is undertaken to influence the overall aesthetics of the building, but can also affect

the performance qualities of the mortar. An open texture is required to maximise performance as a closed surface will inhibit the permeability or breathability of the mortar.

Generally, a flush joint (with the brick face) is more desirable than one that is weather struck, recessed or finished with a rounded tool.

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Damp down the stonework/ brickwork and the mortar joints, but ensure there is no excess water on the surface.

The mortar mix needs to be as stiff as possible but workable in order to be pushed firmly into the joint in layers.

Allow the mortar to firm up (or wait until the surface of the mortar takes on a leathery texture).

Compress the surface of the mortar using a hardwood stick approximately the same width of the joint (10mm) with face cut at a 45° angle. This is also known as “rubbing up” as the stick is being pulled along the face of the joints. This action, as well as compressing/consolidating the mortar is also opening up the texture of the joint.

If any holes appear in the point fill them with mortar and repeat the process. A flat profile must be maintained on the surface of the stick otherwise the joint will become rounded (this step may be omitted if the work is very tidy).

Method A

Using a churn brush or naturally bristled stiff brush, beat the surface of the joint flat on (do not drag as this may lead to staining of the brickwork). This will compress/consolidate the mortar and exposes the coarser aggregate. If holes appear in the mortar, fill them and repeat the process. Loose material, should fall away from the brickwork.

To finish the area off use a soft brush across the face of the whole wall to remove further loose material.

Method B

After compressing the mortar gently run a phosphor bronzer brush along the joint. This removes loose material, exposing the coarser aggregate in the mortar and cleans the arises (phosphor bronze brushes are softer than steel wire brushes and will not leave residues that will rust and lead to staining).

To finish the area off use a soft brush across the face of the whole wall to remove further loose material.

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4. Health and Safety

Refer to Health and Safety guidelines for full details however it should be specifically noted that hydraulic lime is highly alkaline and therefore suitable PPE should be utilised.