STONEWARE STUDIOS

Pillmore ♦ Youghal ♦ Co. Cork
Tel 024 90117 Fax 024 90114
mail@stonewarestudios.com
www.stonewarestudios.com

POINTING TO HISTORIC BUILDINGS

1. Analysis of Original Mortar

Before carrying out re-pointing work on Historic buildings or structures, determine the type of mortars used in the original building phase. Make sure when removing samples for analysis that they are from an original phase of work, and are not from later remedial works.

The samples should be representative of the bulk of the remaining material. Analysis is needed to determine correct binder, aggregate size, colour and type. Analysis can be organised by Stoneware Studios.

2. Survey

Carefully survey the wall to determine the pointing style and condition of the mortar. Notes should be made of open joints, decayed mortar, vegetation and general extent of re-pointing required.

3. Protection

Before cutting out of defective mortars, windows, doors, drains, vegetation etc., should be covered and protected. Special care should be given to friable cut masonry and other special features such as antique glass etc.

- Cutting out of Defective Mortar

Considerable care must be taken when removing decayed mortar from historic masonry. When the mortar being removed is decayed or crumbly its removal can be carried out using hand tools. Plugging chisels, masonry chisels and old hacksaw blades used in conjunction with a club hammer will easily remove the mortar.

Never use chisels that are wider than the mortar joint as this may result in damage to the adjacent masonry. The removal of cement pointing will

require greater care if damage to the adjacent masonry is to be avoided. If wide joints exist, a series of holes may be drilled through the centre of the joint, which will allow the joint to break inward when tapped with a chisel. On finer joints a tap with a sharp masonry chisel on the top and bottom of the joint will help to break the bond to the masonry at the edge of the joint.

The use of power tools or air chisels should only be carried out under strict supervision and by experienced personnel. Remember that the percussion action of these tools may loosen masonry.

Where lime mortar requires a chisel to remove it, it should be questioned whether its removal is necessary.

4. Depth of Joint

As a general rule joints are cut out to a depth of twice the height of the joint, quite clearly this rule applies to brickwork, but in the case of rubble masonry this could result in overly deep joints, which may de-stabilise sections of masonry. Therefore a minimum depth of 25mm will allow a good body of re-pointing mortar. Deep joints must be built up in consecutive layers with a minimum of 4 days between coats.

Notes should be taken if pinning's are removed in the cutting out process and these should be retained for re-use.

5. Cleaning the Joint

Once the joints have been cut out, they should be thoroughly cleaned. Brushing out with a small brush will remove loose mortar and dust, once this has been carried out, the joints should be flushed out with water. This must always proceed from the top, working down the building, ensuring all traces of debris are cleaned down. Where there are deep joints or voids, care must be taken not to flood the core of the wall.

6. Applying the New Mortar

Before applying the re-pointing mortar, ensure that the joint is well damped down. The new mortar should be stiff and not sloppy, as this will result in shrinkage and leave a smudged and dirty finish. The new mortar should be placed into the joint using a pointing iron or a plasterer's small tool and well packed into the joint. Pointing trowels should be avoided, as this will not allow pressure to be applied across the whole of the joint.

Where there is evidence of stone pinnings or wide joints, the pinnings (small stone chips) should be packed into the new mortar. These will help to avoid

overly large joints, which may result in shrinkage. Pinnings will also support weak areas of masonry.

7. Finish Style

The style of finish will depend on evidence left of the original work, but take care not to replicate styles from later remedial work. On brickwork, struck, weather struck, penny point, flush finish and tuck, are all common. On rubble masonry, it is unlikely to have been a distinct style, as the remains of the mortar are likely to be nothing more the struck off bedding mortar. Therefore, a joint, which is flush or slightly recessed, will blend with the masonry.

The finished joint should be finished by beating the wall with a stiff churn brush once the mortar is fairly stiff. This process also compacts the mortar and leaves an open texture, which will aid evaporation of moisture.

8. Aftercare

New pointing work should be protected from frost, rapid drying and direct rain for a minimum period of 7 days.

(See separate Aftercare Method Statement)