

9.0 Lath & Plaster Repair Methodology

SMALL REPAIRS

- Clean out dust and loose plaster from the damaged area, if laths are not exposed, cut back the plaster to form a deeper hole with which to work.
- Plaster should be undercut around the sides of the hole so as to give new plaster something to adhere to.
- Avoid the creation of tapered edges where new plaster will have to taper down to almost no thickness on top of original plaster.
- Original plaster should be dampened at the sides and back of the hole using a wet brush or water spray, taking care not to over soak the plaster prior to the application of new mixed plaster.
- A filling knife should be used to fill the hole with plaster filler, taking care to push the new plaster into the edges of the hole and any cracks that have formed.
- Enough filler should be added so that it is built up above the level of the surrounding plaster.
- A wet wide bladed filling knife should be used to level off new filler to the same depth of the surrounding plaster work. If the filler knife is not wide enough to bridge the repair, use the knife around the edges and then work into the middle.
- The plaster filled used in the repair may shrink as it hardens, and the surface may pull back from the original plaster level. There is a greater risk of this occurring depending on the depth of the repair.
- To overcome shrinkage, a number of layers of filler may need to be applied to build up the surface to a level and even finish. Each layer must be allowed to harden and set before any additional layers are applied to the surface.
- Between each layer, the surface of the repair and the surrounding area should be lightly rubbed down using fine sand paper to create a key for additional layers. The surface of the repair filler should also be dampened again before covering with any other layers. Care must be taken when doing this as the original lime plaster is extremely soft and can be easily rubbed away.

LARGE REPAIRS

- Larger areas of lath and plaster that require repairs require additional works and proper plastering techniques in order to achieve a more satisfactory finish. This includes the application of three coatings, the render layer, the floating layer and the setting layers.
- The first and second layers should be comprised of a mixture of one part gypsum/cement, to 1 part lime putty, to 3 parts sharp sand (1:1:3). The final layer should consist of equal parts lime putty and gypsum (1:1).
- When the laths are exposed and intact, dust and loose plaster should be removed and the spaces between the laths should be cleared of old plaster keys.
- The laths and surrounding plaster should be dampened using a wet brush or water spray to prepare the surface for the first layer.
- A primary coat of render should be applied onto the laths ensuring that the render goes between the spaces in the laths to form plaster keys, adhering the render layer to the lath framework. The render level should be kept well below that of the surface level of the surrounding plaster to allow space the floating and setting layers.
- Once the render layer has hardened, the surface should be dampened again and the floating layer should be applied to a depth of about 3mm (1/8 inch) below the surrounding plaster level.
- After the floating layer has hardened, the surface should be dampened once again and the final setting layer of plaster should be applied to bring the finished surface up to the level of the surrounding plaster.
- If laths are exposed but are broken or damaged, the method of repair will depend upon the extent of the damage to the laths.
- Where the damage to the laths covers a small area, expanded metal can be used to bridge gaps.
- Expanded metal should be placed over the hole and marked to ensure that it covers the damaged laths and at least two sound laths above and below.
- If the hole is not large enough to show enough laths, the expanded metal should be marked to cover the exposed laths and then cut to size.
- Where large areas of damage has occurred to the lath, it may be more suitable to remove a complete section of the lath and plaster (i.e. between frames) where new lath timbers would replace that of the damaged ones.

It is unclear to what extent any of the existing lath timber work has been damaged on the upper side of the ceiling from previous water ingress, however it is evident that extensive damage to the ceiling plaster has developed as a result of water ingress and is most noticeable in the effected areas where water ingress has occurred numerous times. It is also unclear whether the current lath and plaster is the original fabric of the building due to the previous installation of insulation between the rafters.

Following a thorough inspection, the state of the existing lath and plaster will be judged to ensure that it is in an acceptable condition and any damaged areas will be repaired with like-for-like material using traditional techniques.