

the earth stone and lime company

building conservation consultancy and practice

Comparative costs of hot mixed air lime mortars and NHL mortars

Some points: *1 tonne of CL90 powdered quicklime in 25kg bags from Tarmac should cost £360 including delivery. A similar quantity of NHL around £600, plus delivery. A tonne bag of powdered quicklime from either Tarmac or Singleton Birch should cost no more than £200 plus delivery, and maybe less.

*To mix a quicklime mortar takes no more time than to mix an NHL mortar. Indeed, a quicklime mortar may be let out of the mixer immediately slaking is complete (no more than 5 minutes), whereas NHL suppliers' recommendations are that NHL mortar should be mixed for at least 20 minutes.

*After initial wetting of the substrate, a hot mixed lime mortar pointing requires no further water, spraying etc in its aftercare - it should be hung down with hessian, or similar, and left alone. It is usual to 'knock back' a hot mix the following day. It should again not be sprayed at this time.

*Good practice with NHLs is very different - the substrate should be very well wetted; the mortars require immediate protection from drying too quickly and require ongoing hydration before and after knocking back - regular misting with water for at least 14 days, and for as long as practicable - if this is not done, the NHL will be weaker than it would otherwise be; enjoy lesser tenacity/integrity as a mortar and be more likely to fail and less likely to perform properly. Indeed, regular hydration is technically required for so long as the silica set is developing, this being between 2 and 3 years. Inadequate

ongoing hydration during this period will potentially lead to mortar shrinking away from the stone, allowing ready ingress of water to the wall.

* Because of the high bond strength and adhesiveness of a hot mix, there is significantly less waste of the mortar during use. Pointing and bedding is much easier.

*Because a hot mixed air lime mortar sets by carbonation, any surplus material can be used the following day or days, simply covered or put into tubs to keep it 'fresh', or knocked up again. NHL should not be knocked up once the initial set begins (within a few hours), so that there is inevitably more waste.

It is very difficult, therefore, to see how it can be considered more expensive in either labour or materials to prefer hot mix (at 1:3, quicklime: aggregate) to NHL - in truth, it is less expensive and much more cost effective.

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