

Weather to Protect?

The winter period has served to highlight to those of us involved with lime how important it is to protect, and cover up any new lime work.

With the worst of the winter over (hopefully), it is a good time to reflect briefly on when we should be protecting, why we need to and look at a few practical ways of achieving weather protection.

Whilst most people accept the need to protect work in some way during the winter period, this is not the only time of the year in which new lime work is vulnerable. Indeed, at any time of the year, given the wrong conditions and/or location, curing time and the success of a lime mortar could be compromised. Whilst there is not enough space here to deal with this subject in detail, below is a short guide to assist you in protecting new work carried out in lime.

Weather Conditions	Risk to New Lime Work	Recommended Protection
Rain	Driving rain – washout new work Penetrating rain – will cause masonry unit to become wet reducing carbonation (of fat lime mortar in particular), and increase length of time until weather protection is achieved/ plaster can be decorated.	Polythene sheeting draped just off face of work. Sheeted scaffolding (e.g. monoflex)
Sun	Hot sun – will cause rapid drying of the mortar leading to problems with shrinkage and separation of coats. Pores of mortar can become blocked with fine material transported to surface by evaporation inhibiting carbonation deeper into the new mortar. A dusty friable finish will be seen on the face of the new work.	Damp hessian draped just off face of new work and covered with layer of plastic sheeting. Mist sprayer to keep work damp. Sheeted scaffolding (e.g. monoflex)
Wind	Drying wind – will cause very similar problems to those mentioned in relation to hot sun. Debris – not often considered, but strong winds can cause damage to unprotected new work by way of objects hitting the surface e.g. scaffolding, tools, loose site debris etc.	Polythene sheeting draped just off face of work. Sheeted scaffolding (e.g. netting/ monoflex)
Frost/Cold	Temperature – below 5°C, the carbonation and hydraulic set of lime is slowed resulting in longer cure times and so increased protection times. Frost damage – new mortar still curing is susceptible to damage by frost due to the water content and slower cure. The freeze/ thaw action will damage uncarbonated material leading to friable, weak finishes.	Carpet underlay or bubble wrap draped just off face of work. Polystyrene sheets attached to scaffolding. Sheeted scaffolding (e.g. monoflex) Internally, a heater on a low heat to raise temperature above 5°C
<p>When working with lime, protection is recommended below 5°C and above 20°C. Work should always be questioned outside these limits and scheduled for another more suitable time if possible. When specifying or working with lime, the correct approach to protection should always be to create a micro-climate where new work can be allowed to cure in a controlled and stable manner.</p>		