Tŷ-Mawr
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Straw Bale Mix

Description

Mature fat lime pre-mix, combining lime putty, sharp sand and various fibres including British hemp. Lime plasters require exposure to carbon dioxide in the presence of moisture to harden. Preparation and protection are just as important as correct application.

Please note: Lime plasters should be applied correctly. It is highly recommended to use a plasterer experienced in the use of lime plasters or at the very least you should get some practical experience e.g. on a course, as it is not possible to cover every point in detail here.

Preparing the mix

■ the plaster needs to be 'knocked-up' - a process of chopping, beating and turning which will release some water. Only the minimum amount of water should be added if required to make a workable mix, it should be used as stiff as possible.

■ a mortar mill or forced action mixer is the ideal way to 'knock-up' the lime plaster but this is not always possible. If a bell mixer is used, then it should be left turning for long enough to achieve a suitable consistency without adding water (20-30 minutes).

■ if water is required, it should be added CAUTIOUSLY

Preparing the surface

■ all loose straw should be trimmed back to a consolidated surface using a hedge trimmer or a strimmer.

■ dub-out the walls with Straw Bale Plaster where necessary before applying the first coat of base coat plaster to create an even surface (each coat of lime plaster can then be applied at the same even thickness). This should be left to harden before applying the first base coat.

Dubbing out 'hollows' in the wall

Application

■ it is usual to apply three coats of plaster or render, although this will be dependant upon the desired weather protection and also the desired aesthetic for the building. The render can be spray applied using the correct equipment (please inform us which you are thinking of using and we can advise on suitability) and it is often quicker and more effective to do so as the render gets forced into all of the voids in the surface of the straw.

■ a thin 'scat' or harled coat can be thrown on using a harling trowel or coal shovel. The straw bale mix is mixed with water to the required consistency for throwing on the wall and provide suction for the first trowel applied coat.

■ dampen down the scat coat. Then apply scratch coat with a steel trowel to a depth of 9-12mm. When it has firmed up, scratch the plaster (to about 3-4mm depth) diagonally using a wire or lath scratcher. This coat takes up any shrinkage and may crack. You need only worry if the plaster becomes detached from the background.

■ apply the next (floating) coat - as above but instead of scratching, you need to float the plaster whilst it is still soft enough to take the indent of your thumb. This will compact the plaster to avoid shrinkage cracks as well as flattening the wall. It should be carried out using either a straight grained (for uneven surfaces) or cross grained (for flat walls and ceilings) wooden float, not a plastic float. Floating is hard physical work, sometimes a little water sprayed onto the surface can help the process.

■ after the floating coat has been floated and the plaster has firmed up, use a devil float to form the key for the finish coat, this is done by rubbing the surface of the float coat in small, circular motions to achieve a depth of not less than 3-4mm.

■ the surface of the floating coat should be scraped down with the side of the trowel and then brushed to remove loose material whilst still green (holding moisture).

■ a final finish cost of 6-9mm to be applied with a steel trowel. Once it has firmed up this can be floated using either a sponge of a wooden float depending on the desired aesthetic.

Spray application

Scratching with a comb

Devil float being used to key up the surface

Protection of the work

■ allow each coat to ‘go off’ before applying the next one. As a guide, it takes one-two weeks for the first coat, one week for the second, and a few days for the finish coat. This will vary considerably depending on weather conditions and substrate. Each coat should be hard enough to resist indentation from a knuckle, but be soft enough to scratch with a fingernail.

■ protect new work as conditions dictate e.g. for hot, dry or windy weather, damp hessian and plastic sheeting may be required to prevent rapid drying. Gentle spraying may be necessary if areas of plaster or render are drying too quickly. Note often the top needs to be treated differently to the bottom of the plaster/render as moisture moves down and different elevations may need different levels of protection.

■ do not use dehumidifiers and heaters to speed up the set. Good, even ventilation is key, accelerated drying will prevent carbonation and may cause the plaster/ render to fail. Gentle heat may be used cautiously in cold, damp buildings.

■ protect new lime plaster or render from frost - external work, wherever possible should not be carried out when temperatures are likely to fall below 5°C. before carbonation has taken place. If work must continue externally, although not advisable, the scaffold should be fully enclosed and well-circulated heating supplied.

■ protect from rain - heavy rain can wash the lime out, or at least, draw it to the surface before the render has carbonated. A new render should be protected until surface carbonation has taken place.

Storage

■ store airtight and frost-free.

■ plaster with natural hair must be used within four weeks otherwise more hair will need to be added.

■ premixed plasters/renders will become hard over time, although still usable, they will take considerable effort to ‘knock up’. For easier results use as soon as possible.

After care

Your finished lime plaster will care for your building for years to come as well as helping to control the humidity of the internal environment. It gives a beautiful finish that no modern plaster can replicate. We highly recommend that you finish it with a ‘breathable’ and preferably a natural paint, your choice will depend on the level of durability, required vapour control and desired aesthetic. Call 01874 611350 for advice or visit www.lime.org.uk.

Additional Information

Courses are run regularly for contractors, home owners and specifiers which can save much time on-site as well as ensuring a successful project. Please see www.lime.org.uk for further information and for links to our video ‘how to’ application guides.

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