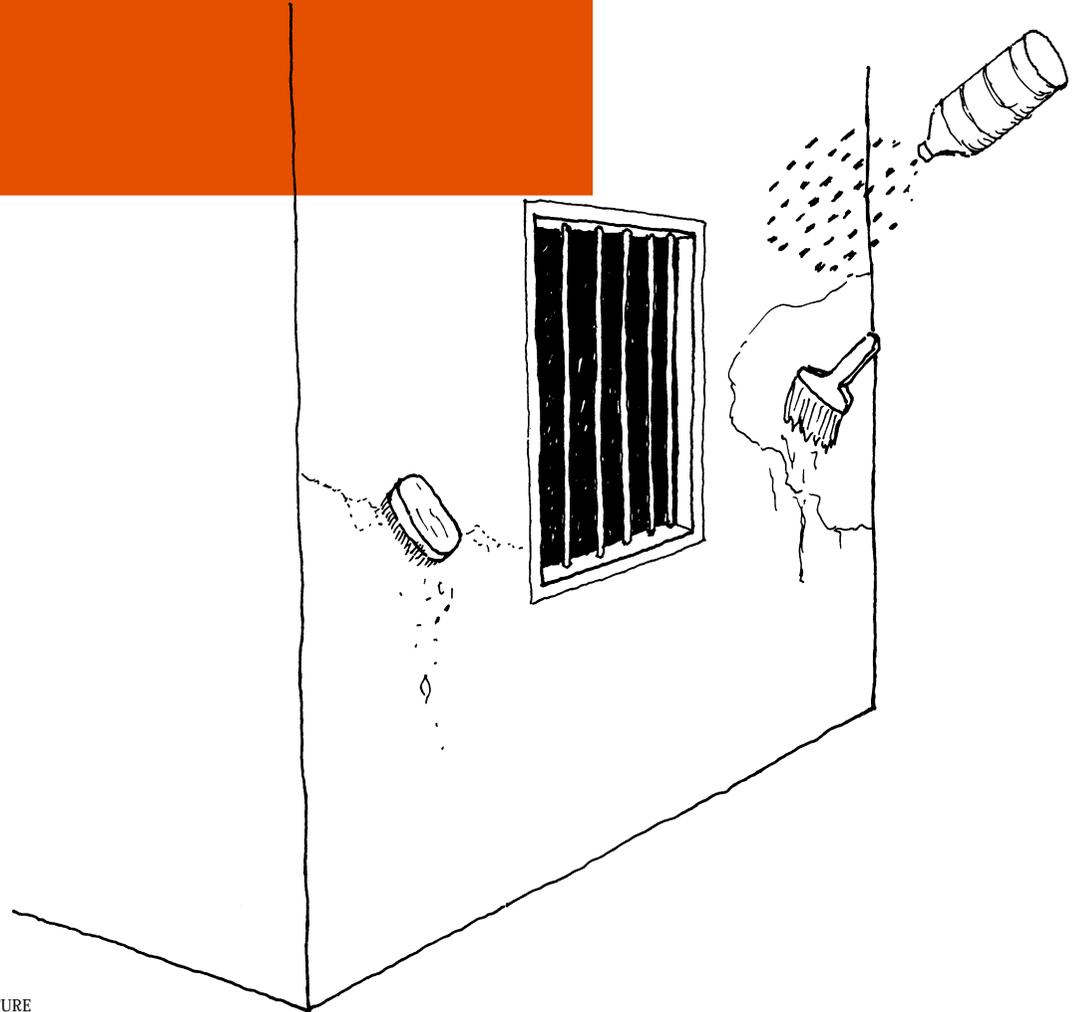


7.

# LIMEWASH



THE AGA KHAN TRUST FOR CULTURE

## INTRODUCTION

Limewash is the material traditionally applied to walls as a decorative and protective coating. Originally all the buildings in the Stone Town were limewashed regularly as part of their maintenance programme. This section provides guidelines for preparation and application of limewash.

## PREPARATION

- Mixing
- Pigments
- Preventing mould growth

## APPLICATION

- Preparation of wall surfaces
- Painting

**Note:** The procedures described in this section are guidelines only. Before undertaking substantial structural repairs or tackling serious structural problems, consult a building professional.

## PREPARATION

## MIXING



**Eucheuma Denticulatum**  
commonly grows along the coast  
of Zanzibar



At its simplest, limewash is very finely sieved lime putty in an excess of water. The basic wash, however, is not durable and will dust off easily. To prevent this, it is possible to add a variety of materials or binders. Unfortunately, most of them are proteins and very quickly encourage mould growth in the wash, especially on exterior walls. In colder climates, it is possible to add animal and milk fats to the mix, both of which work very well and also help in waterproofing. In tropical climates like Zanzibar, it is not easy to recommend an additive that will prevent dusting and not encourage mould growth.

**Binders**

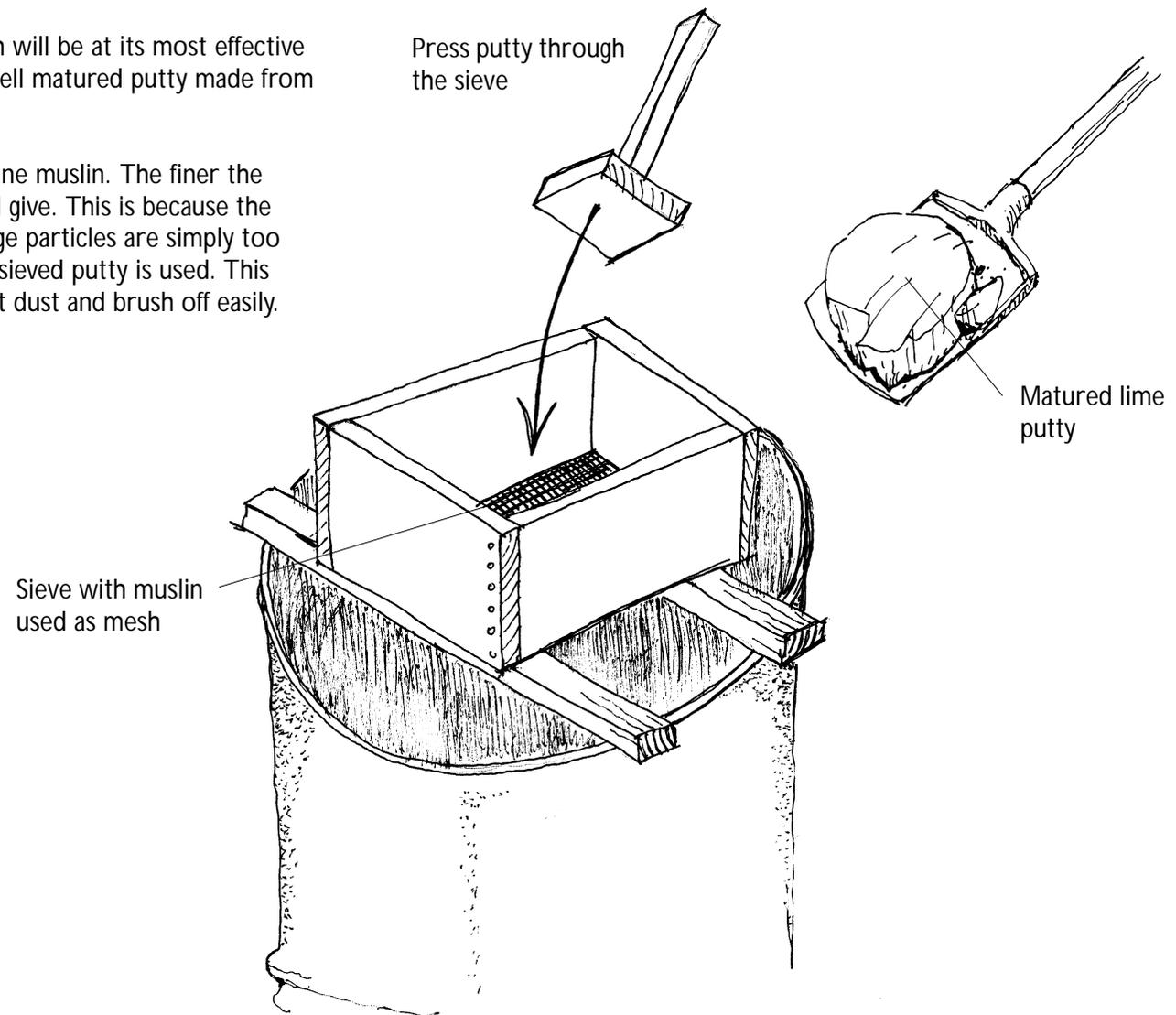
A very effective binder for use indoors is water in which **seaweed** has been boiled. The liquid is allowed to cool and form a sticky gelatinous mass. Before use, it is thinned with boiling water and put through a fine sieve. Approximately half a litre of liquid is added to 20 litres of wash.

For use outside, common **salt** is perhaps the best choice although this must not be used if the render is of significant historic value. Approximately half a kilo of salt is added to four gallons of wash.

### Lime must mature

Like other aspects of lime technology, limewash will be at its most effective if it is carefully prepared. The lime should be well matured putty made from good quality quicklime.

Before use, the putty is sieved through a very fine muslin. The finer the particulate size the better the protection it will give. This is because the binding power within limewash is weak and large particles are simply too heavy to be held in place. Very often coarse unsieved putty is used. This makes a rough surface which will quickly attract dust and brush off easily.



## PIGMENTS



## PREVENTING MOULD GROWTH

Limewash can carry a small amount of pigmentation, but the more that is added the weaker and more prone to dusting the wash will become. Vivid colours cannot be achieved with a limewash and only delicate shades are possible. The best pigments are called **earth pigments** and they are metal oxides, prepared from natural earths by firing. Copper sulphate can also be added to make a delicate blue.

Many artificial pigments are damaged by lime and the combination of lime, sunlight, and oxygen can cause them to lose their colour. These pigments are not lime fast.

Yellow ochre, golden ochre, burnt ochre, raw sienna, raw umber, and burnt umber are all lime fast earth pigments.

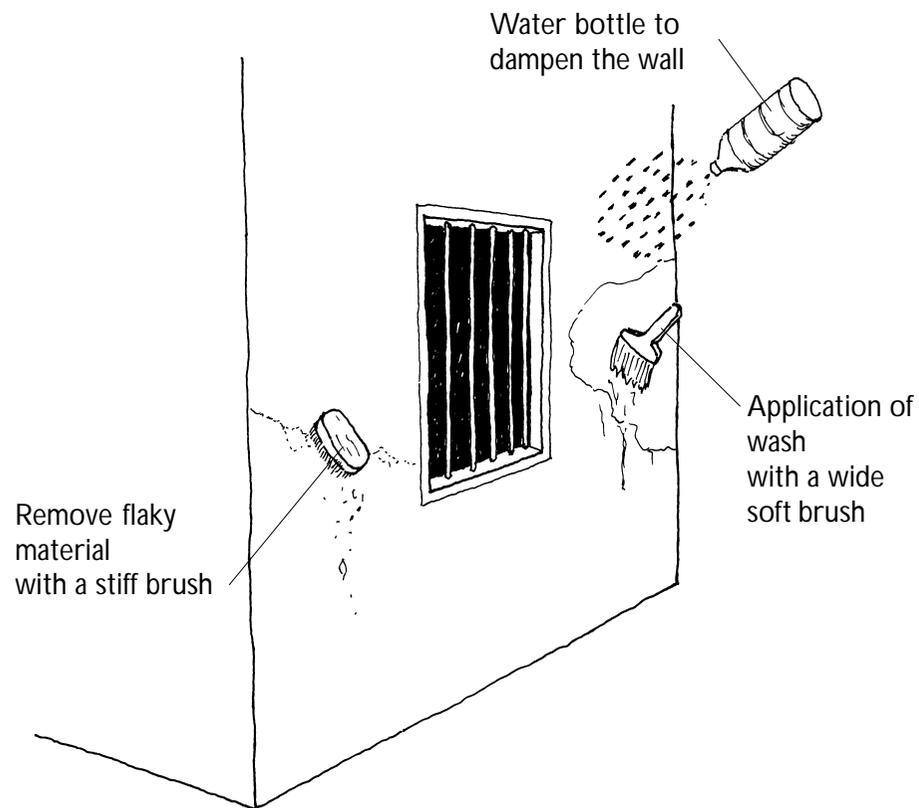
To put the colour into the wash it is first necessary to mix the pigment into a thin paste with a little water. The paste is then stirred into the wash.

It is very difficult to prevent the development of unsightly black algal slimes. The best solution is to scrub or sand-paper off the slime and re-apply limewash. Commercially manufactured mould inhibitors are available (e.g., Robbialac/Berger Fungicide Wash, available in Dar es Salaam), and these should be liberally applied after the old mould has been removed and just before the application of the new coat of limewash. Mould inhibitors will not last for more than about a year and must be re-applied.

The cheapest and most convenient method is to rinse walls with Carbolic acid. The effect of this will not last more than one year and re-application should be made after the monsoon rains.

## APPLICATION

## PREPARATION OF WALL SURFACES



It is important that wall surfaces are well prepared before application.

1. Remove loose flaky material with a stiff brush and dampen the wall.
2. Dampening is best achieved by puncturing a hole through the top of a mineral water bottle. This can then be used to thoroughly wet the wall and direct water accurately into cracks and crevices. Before application the surface is saturated but not 'running wet'.

### 3. Painting

- **For exterior** work, wash is applied with a soft wide brush. Work quickly and apply very thin coats. Each should be no thicker than milk.

If plain wash is being applied the first coat should be invisible until it is dry. As subsequent coats are applied the previous layers may also become transparent. This tendency will lessen as more coats are added. Each coat is allowed to dry before the next is applied.

**Do not** apply limewash to exterior walls whilst it is raining.

- **For interior** work application should be carried out with a soft wide brush, but a much better quality finish will result if the wash is sprayed on. A ten litre hand pumped spray is adequate for this work. Several very thin coats are applied in the same way as described above.