



AF JONES
STONE HERITAGE

6270 - ROYAL BERKSHIRE HOSPITAL METHOD OF REPAIRS AND PROPOSED MATERIALS

The Royal Berkshire Hospital east wing was built mid 1800's . So therefore, in our opinion this needs to be approached as a sensitive preservation/conservation project which would maintain as much of the original fabric of the structure as possible.

RAKING OUT AND REPOINTING

The raking out of the joints for repointing will either be carried out using either a "drag" or stone hand saw, or using a fine plugging chisel, to a depth of at least 15mm it will be swept out using a "M" class vacuum system, the joints will be sprayed with a fine mist spray to dampen the stone and the joint will be filled using fine stuff lime mortar and pushed into the joint with a pointing iron, the joint may need spraying again as the mason moves along this is to avoid hydraulic shock where the mortar pulls off to quickly and doesn't bind with either surface, the joint will be allowed to pull off for a while (dependant on ambient temperature) before washing off. All waste material will be bagged and removed from scaffold as required to avoid build-up of waste.

REPLACEMENT OF DAMAGED STONES

For cutting out the damaged stones , they will carefully have the corners cut out to check for corbel brackets in the stones above, putting in new stainless steel supports if required, once the stone above is supported the rest of the stone can be removed safely the new stones will be bedded in using the same fine stuff mortar and blind fixing pins into the second skin brickwork, and any additional pointing work to these new stones will be carried out as above. It is important not to use any materials on the structure that would create a non-permeable barrier, such as resins of any type, which could trap moisture causing a risk of frost damage.

CLEANING

DOFF cleaning, is a modular, superheated-water cleaning system, which is an accepted stone-friendly cleaning and conservation method. It can achieve temperatures of 150C at the nozzle end. The operator is able to vary the temperature and pressure to remove many types of paint or biological matter. The steam/superheated water will remove moss, algae, fungi, and other environmental markings and will also kill off spores. This means there is then no need to use a chemical biocide during the removal process or as a protection against further biological activity. However engrained 'carbon' type staining may not be removed with this method.

6270 - ROYAL BERKSHIRE HOSPITAL METHOD OF REPAIRS AND PROPOSED MATERIALS

PROPOSED MATERIALS

- a) **Fine Stuff** is a traditional 2:1 ratio (aggregate to lime) mortar mix using non-hydraulic (fat or pure) lime putty and silver sand. Fine Stuff is delivered as a wet mix and is suitable for repairs to historic buildings as a topcoat/finishing plaster or for the laying or repointing of fine joint stonework.
- b) **Hartham Park** is the stone chosen to for the repairs/replacement on this project, the quarry is the Hartham Park Bath Stone Quarry, Park Lane, Corsham SN13 AJ
- c) **NHL 2** for backing up with washed mixed building sand, being washed alleviates the chance of unwashed sand changing the colour of the stone through staining.



AF JONES
STONE HERITAGE

6270 - ROYAL BERKSHIRE HOSPITAL METHOD OF REPAIRS AND PROPOSED MATERIALS



Product Data Sheet

EcoRight "FINE STUFF"

1. Identification

1.1 Introduction

EcoRight Fine Stuff is a traditional 2:1 ratio (aggregate to lime) mortar mix using non-hydraulic (fat or pure) lime and silver sand. Fine Stuff is delivered as a wet mix and is available in 1 tonne or ½ tonne IBC's and 25kg bags or 15 litre tubs.

EcoRight Fine Stuff is suitable for repairs to historic buildings as a topcoat/finishing plaster or for the laying or re-pointing of fine joint or gauged brickwork.

EcoRight Fine Stuff is manufactured using non-hydraulic lime derived from high calcium quicklime (CaO).

1.2 Authority

Materials used conform to the following standards:

Sand	BS EN 13139: 2002
Building Lime	BS 890:1995/EN459

EcoRight Fine Stuff is a traditional 2:1 ratio (aggregate to lime) mix that is gauged by volume. The aggregates used are a blend of silver and soft sands that produce finely textured mortar that is ideal as a finishing/top coat plaster.

Aggregate grading

To Sieve	% of sand retained
>4mm	0
<4mm >2mm	0
<2mm >1mm	0
<1mm >500µ	5
<500µ >250µ	72
<250µ >125µ	22
<125µ >63µ	0.40
<63µ	0.60
Total	100%

1.3 General Advantages

EcoRight Fine Stuff offers several mix advantages:

- Consistent mix proportions.
- Consistent quality of mortar.
- Correct choice of sands.
- Ideal for the repair of historic buildings.
- Can be re-worked up to the point of set.
- Will keep indefinitely as long as the container is air tight and evaporation of moisture does not occur.
- Is pre-mixed so there is little or no need to re-mix or add water.
- Is breathable and enables moisture to evaporate.
- Ideal as a finishing/top coat plaster and for fine joint or gauged brickwork.

2. Description

2.1 Manufacture

Raw materials and end products are subject to regular quality control procedures. The materials are batched by volume.

2.2 Mortar applications

EcoRight Fine Stuff is particularly relevant for the repair of historic buildings. This includes as a fine finishing coat for plasterwork and the laying and re-pointing of gauged brickwork. **EcoRight Fine Stuff** is also highly compatible with soft building materials such as earth (cob, shuttered earth, clay block, pisé, and witchert), wood, straw bale, coppiced wood and soft brick.

The above is a guide only. If you wish to discuss a specific application in further depth, please call our sales office or speak to an authorised distributor.

2.3 Performance

EcoRight Fine Stuff is more flexible than Portland cement-based mortars, which means that expansion joints are not always necessary.

EcoRight Fine Stuff is more flexible than gypsum-based plaster and has excellent vapour permeability qualities, which enables the building to "breathe".



AF JONES
STONE HERITAGE

6270 - ROYAL BERKSHIRE HOSPITAL METHOD OF REPAIRS AND PROPOSED MATERIALS

Product Data Sheet

house store
Traditional building materials

3. Site Work

EcoRight Fine Stuff can be delivered to site either in either 1 tonne or ½ tonne IBC's and 25kg bags or 15 litre tubs.

EcoRight Fine Stuff is a pre-mixed wet mortar. Generally, there should be no need for the addition of water to the mix. However, if the mortar is particularly dry then a small amount of water can be added but should be controlled to ensure that the mix does not become saturated.

As the mortar is pre-mixed, only a little additional mixing may be required for it to become fully "workable". A quick check can be carried out by placing an even spread of plaster onto the reverse side of a trowel. When the trowel is turned over (with the reverse face and mortar facing the ground), the mortar should stick to the underside and not fall away. Additional mixing is best undertaken using a spot board with a spade or hand trowel.

Traditional lime (putty) based mortars and plasters are slow setting due to being temperature and moisture sensitive. Practitioners should not be unduly worried if a "full set" takes weeks to achieve.

If used as a finishing/top coat plaster, **EcoRight Fine Stuff** should be applied as a skim not exceeding 3mm. Lime putty-based plasters adhere due to two processes, the first is by mechanical means (e.g., the surface texture of brickwork or preceding plaster coats) and the second is by suction. If suction is not controlled and the plaster surface at the interface with the background is allowed to dry too quickly, adhesion will be lost and the plaster will fall away.

Before application, backgrounds should be dampened down using a mist spray this includes brickwork and preceding plaster coats. The surface should be damp without the formation of beads of water on surfaces. Once the plaster has been applied, control the drying process by damping down with a fine mist spray. Through controlling the suction and drying the longevity of the plaster is greatly increased.

Protection should be given against frost, wind, rain and direct sunlight during the early setting period – hessian and/or plastic sheeting may be required.

The application of artificial background heat to increase setting times is discouraged, unless at low temperatures (between 10-14°C) as quick drying will cause problems as outlined in the previous paragraph.

4. Prices, Conditions of Sales & Supply

EcoRight Fine Stuff is only available through the authorised dealer network.

5. Coverage (approximations only)

Fine Stuff	Finishing/Top Coat Plaster (3mm)
25kg	3.75m ²
½ tonne	75m ²
1 tonne	150m ²

6. Health and Safety

Lime based mortars are classified as an irritant and are alkaline in nature (see Health and Safety Datasheet for more details).