



CONTEST

Concrete Technology Services

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EMAIL TRANSMISSION

TO : Rodney Harber
COMPANY : Rodney Harber & Associates
REF No. : 066/15
FROM : Jim Horton
DATE : 31.03.2015
No of pages : 1 (Including this one)

SUBJECT : **Luthuli Museum**

Your mail of even date refers;

1. Only 1 core was extracted due to the problem of anchoring the machine in the weak substrate. Nathi says he phoned to explain the problem.
2. Apparently D was the external face and the internal face (A) had a 2-3mm skim coat applied to the render underneath.
3. I am not sure that C is classified as mortar or masonry!
4. In terms of the remedial mix for the external render I would recommend;
 - Using a mix of 8:1 by volume
 - Use a CEM II/A cement at 5 sks / m³ and add builders lime at 50l / m³ to improve plasticity and flexibility. (The original cement would not have had the higher strength properties of today's cements and the lime will assist to closer match the original cement.)
 - The sand should have a grading similar to that we analysed in sample D. This may be difficult to source as a single sand, as original sand sources generally do not exist now. It **may** necessitate blending a commercial plaster with a fine screened river sand.

I am not sure how true to the original you wish to be but to enhance the bond of patches, I would advise the use of a bonding liquid in the bonding slurry to improve adhesion of the external render.

Trust this is of assistance.

Kind Regards

A J M Horton Pr Tech Eng

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