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engineering design and analysis

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18A Provost Road

Specification for Repairs to Brick Walls

Introduction

The brick walls (both internal and external) to the above property have been exposed to reveal rotten timber posts. The posts will be removed to allow a proper repair before a waterproofing system is installed.

A typical section of wall with damaged timber posts is shown in the photograph below:



The repairs will be undertaken to one of the following alternative specifications:

1. Reinstatement of Timber Posts:

1. Remove all plaster, loose mortar and broken and loose fragments of brick and remnants of the posts and wall plates from the wall (wall plates may be removed in sections no longer than 500mm long and dry-packed – allow the dry-pack to harden for 24 hours before removing an adjacent section).

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- 2. Dry-pack all voids in the wall arising from item 1, leaving the slots clean and available to receive new timber posts, using 1:3 cement:sharp sand "earth damp" dry-pack.
- 3. Cut slots in the brickwork 150mm long to a depth of 50mm at every sixth course.
- 4. Fix frame ties (e,g. Ancon SDV 150 long) to the sides of the new posts at centres to match the slots cut in the brickwork.
- 5. Install replacement posts (nominally 100 x 100 to be checked prior to installation) in C24 timber and treated with Permaguard Universal Wood Treatment (or similar), in existing slots, fixing them securely to the wall plate at the top, and through a pair of 75 x 75 x 6 angles (galvanised) angles, with M12 non-ferrous holding down bolts resin fixed with 125mm penetration to the existing foundation.
- 6. Dry-pack in front of the ties.

2. Brick up Slots (A DPC will be installed as part of a general specification for repair).

- 1. Carry out preliminary repairs to the brickwork as items 1 and 2 in the above specification.
- 2. Cut out brickwork to the sides of the existing slots (alternate courses) to allow new single bricks to be toothed into the existing brickwork.
- 3. Infill the slots with new brickwork (to match existing but having a compressive strength not less than 12N/mm²), set in Mortar Class iii.