

#### **Consulting Engineers**

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# 114 Albert Street, Camden Town, NW1 7NE

## Short Report on the Failure of a Balcony Stone

114 Albert Street is part of a terrace of 15 houses, running from Nos. 90 to 118, built in about 1845. The terrace is listed Grade II.

### Failure of a balcony slab

One of the balcony stones of this house has dropped noticeably in relation to its neighbours, and a piece of stone fell from a joint. I arranged for a temporary timber prop to be installed to stop any further falls. See photo below



General view of the North side of Albert Street. No.114 has a prop to the balcony slab

Pictures of the failure at the junction of the slabs, and cracks in the bitumen waterproofing on top of the balcony are shown on the next page.



The right hand stone has dropped relative to its neighbour and a piece of stone and possibly some plaster has spalled off the bottom of the stones. Photograph taken before the prop was put in



Looking down onto the balcony from the French window. There is a crack in the bituminous waterproofing of the balcony slab at the face of the wall. This may indicate that the slab has broken at the face of the wall.

There are also cracks in the stucco over the Ground Floor window indicating that there has been some movement, and it is possible that the lintel or arch over the window has failed. See photo below:-



Cracks in the stucco over the Ground Floor window

### Description of the cause of the failure

It is likely that this particular slab has dropped because there is insufficient masonry above it to hold it in place. About three quarters of the slab is opposite the French window, where there is no load to hold down the cantilever, and the slab probably depended on its neighbours for support. The joints do not appear to be joggled to provide a key, and the slight movement that has occurred in the front of the house may have been enough to open the joints between the balcony slabs and release any connection between them.

This problem is common to several other houses in this terrace and steel or cast iron supports have been put in to hold the balconies in place. See photo below of Nos. 106 to 102:-



Nos.106 to 102, with rather conspicuous iron brackets, clearly not original



No. 110, with small tees inserted under the balcony

No.110 has small steel tees, painted the same colour as the balcony. I feel that this is the best detail, which doesn't make a fuss of the brackets, and doesn't try to pretend that they are an original detail.

#### Proposed Repair

It will not be known whether the dropped slab has broken at the wall, or simply rotated, until the bitumen has been removed, but it is very unlikely that it will be sufficient to simply rake the bed joints, push the slab up to level, and repack the joints. There will still be the fundamental inadequacy of weight on the slab.

It is therefore proposed to provide temporary propping to the balcony; remove the bitumen to check the condition of the stone at the face of the wall; rake out the joints between the slabs; push the dropped slab back to level; and insert two or maybe three small steel tees built into the wall. The appearance will be similar to the arrangement at No.110, shown above, but the ends of the Tees would be kept back about 75 mm from the edge of the stones. We will also try to form some connection between the adjacent slabs, but this may be difficult as they are only 75 mm thick.

It will also be necessary to remove some of the render over the Ground Floor window and carry out whatever repair is needed to the lintel, and re-render and paint to match existing.

### Planning Permission and Listed Building Consent

It is hoped that this small repair does not require Listed Building Consent, as it is essentially a repair with a very small additional detail consistent with others in the same terrace.

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