

Hidden repairs secure separating bay window



City Structural Limited



Case Study

CSL: Private Home Hampstead London



Two storey semi-detached property in Hampstead north London various masonry cracks had developed around the ground floor bay window. External vertical cracking was 2mm wide at ground level widened to 7mm at the window sill on the left hand side of the bay window with further vertical cracking at the internal ground floor return of bay. On the right hand side of the bay there was 2mm cracking from the ground to the sill.

The problem had been caused by differential movement occurring between the bay window and the underpinning of the basement, carried out two years earlier to the left of front door and to the neighbouring property. It required an economical non-disruptive means of securing the bay window and restoring structural integrity.



Pairs of stainless steel HeliBars were installed at two levels around both the ground and first floor bays. Having channelled-out the mortar beds, the HeliBars were bonded into the slots with HeliBond grout. The ends of the HeliBars were bonded at a 45° angle into holes pre-drilled into the main structure.



LRT ties to stabilise masonry walls by utilising the diaphragm action of internal floors. BowTie utilises a self-tapping action to establish connection to two or three joists whilst the tie is bonded into the masonry wall'.



The internal cracks were also stitched using HeliBars. Mortar beds were channelled-out across the front and sides of the bay at alternating heights. At the internal corners the barends were bent and bonded into the adjoining wall.

It is understood that the significant differential movement has ceased and the HeliBars will reinstate structural integrity, ensuring that there is no further cracking while providing a rapid, economical and fully concealed solution to the problem of the separating bay. After a short period of weathering to the new pointing the property will show no signs of the works that have been undertaken.

CSL is restoring structural integrity to bay windows across the whole of London.



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