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Ms J Bartlett
623 Burnage Lane
Manchester

Dear Ms Bartlett

Re 623 Burnage Lane Manchester-Structural Assessment of Cracking

I visited your property Thursday 16.9.21. The purpose of the visit was to inspect the cracking to the front of your property.

The property is a right-hand side semidetached residence over two levels.

Construction is load bearing masonry cavity walls. Timber suspended first floor. Slated roof supported on a timber hipped frame.

To the front elevation there is a bay window to the front room with a low-level roof over. There is a cantilever canopy above the front door.

To the front of the property is a garden area. There is a mature maple tree in the front of the neighbouring property's garden (No 621) 20m high and 10m away from the bay window. To the opposite side (No 625) there is silver birch tree 7m high and 5-7 m away from the bay window.

External inspection to the front of the property shows that in general the masonry dips at the gable corner.

From ground level to cill level the front of the bay window has been re-built. There is a near vertical crack on the lower right-hand side of the bay. The crack is 2- 3mm wide and travels from ground level to the underside of the cill. The joint in the concrete cill above the crack has opened to 10mm wide.

The brick above the front door is cracked. Diagonal cracks, 2-3mm wide have formed above the door and the bricks above the door opening have dropped.

Internal inspection of the front room shows cracking approximately 2-3mm wide in the bay window wall below cill level. There is also cracking at higher level at the junction between the hall wall and the front wall. Some hairline cracking as observed in the ceiling above the bay window.

Inspection of the ground floor hallway revealed hairline cracking in the plasterwork around the internal door casements. Cracking to the wall around the front door was also observed.

The front entrance door to the property was difficult to open and close, an indication that the door frame is distorted.

Upstairs the bathroom faces onto the front of the property. Cracking has formed around the window to the front elevation. Lower down the wall the joints in the tiling have opened.

A trial pit was excavated to expose the base of the bay window and to examine a rainwater pipe and gulley close to the bay window.

The underground connections of the pipe to the gulley were found to be tight with no signs of leakage.

The material removed from the pit was dry and slightly sandy.

At a depth of approximately 300mm below ground level a tree root was uncovered. The root was measured at 75mm in diameter and was found to travel in a direction towards the bay window wall and then running along the wall behind the gulley.

The dip in the masonry bed joints at the front corner of the property is old and not considered to have been caused by any recent movement of the structure. It is possible that the wall was originally built this way.

The cracking of the masonry above the front door and internally to the front of the hallway and in the upstairs bathroom is caused by the failure of the lintel above the front door. It is recommended that the lintel is replaced with a new proprietary lintel sized accordingly. The masonry could be repaired using crack stitching techniques however a better solution would be to re-build the masonry locally.

The hairline cracking to the internal doors in the hallway should be repaired with filler and re-decorated but observed to check for further movement.

The damage to the bay window has been caused by root damage from the tree in the neighbouring front garden. The root exposed in the trial pit has applied pressure on the base of the wall causing cracking and movement.

It is recommended that a trial trench is excavated 1m away from the front of the property to check for any more roots. An Arboriculturist should be consulted to advise on whether the roots can be severed without killing the tree and on an appropriate root barrier that could be installed to prevent further damage.

Once the root barrier has been installed it is advised that the masonry at the bottom of the bay window is rebuilt with a brick to match the brick used on the front elevation.

Yours Sincerely



A D Marsland
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Photograph 1

Front Elevation



Photograph 2

Bottom of Bay Window



Photograph 3

Masonry above Front Door



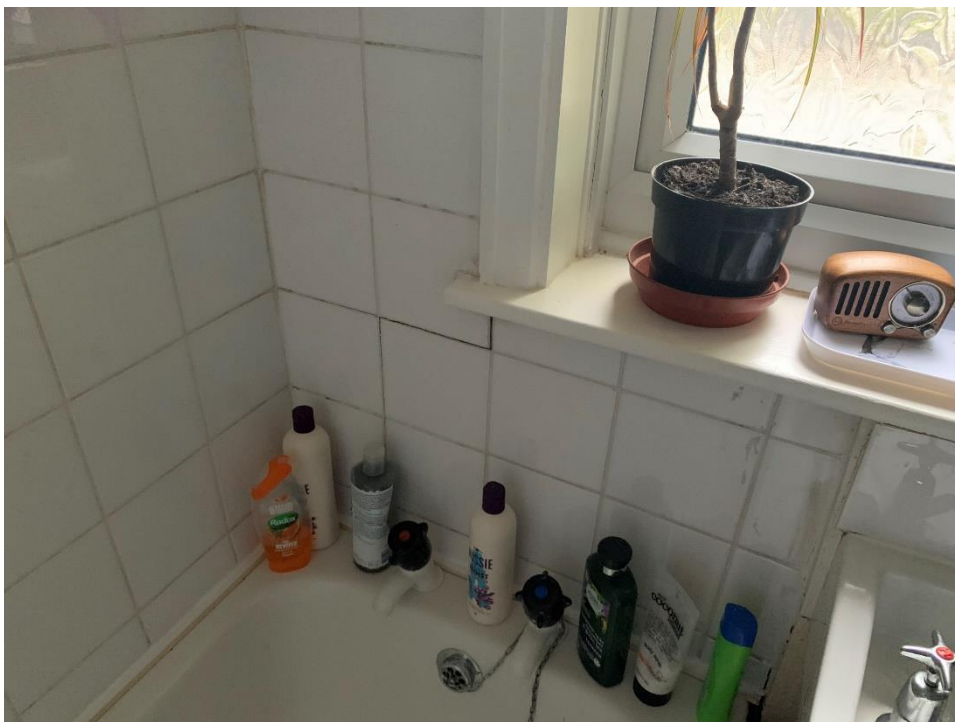
Photograph 4

Crack to Inside of Bay Window



Photograph 5

Crack at hall wall,



Photograph 6

Cracking to Tiling in Bathroom



Photograph 4

Trial Pit Showing Root



Photograph 4

Trial Pit with Root and Crack Shown