Our Ref: 24108/BC/SN2

Constant Structural Design Unit 1G, The Chandlery 50 Westminster Bridge Road London SE1 7QY

Karolina Banasik Architecture for London 3-5 Bleeding Heart Yard London EC1N 8SJ

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## 116 Regents Park Road - Tree at North Wall

Dear Karolina,

We write following our recent site visit and meeting at the above project to outline our findings in relation to the structural issues to the garden wall to the northern boundary.

The wall to the north of the rear garden is, approximately, 2m high above pavement level and constructed of traditional, solid, 9" brickwork. The wall extends further down within the site due to the lower ground floor and sunken rear garden to the south of the wall.

There is a large robina tree about half way back along the garden that is growing right up against the garden wall. There is also a smaller fig tree close to the wall but this is of less concern at this point.

There is significant movement towards the base of the wall, evident when inside the garden. This movement is greatest midway back along the wall adjacent to the tree trunk. The movement extends out from here but is at its worst next to the tree.

Structurally, the damage and movement in the wall is a result of root attack with the relatively weak lime mortar unable to resist the pressure form the tree invasion as is common in situations like this causing failure along the bed joint and dislodging of bricks.

Notably, above the cracking the wall appears to be generally plumb (considering the age and nature of the wall), further indicating that the movement is a result of root attack rather than flexure or foundation movement that would manifest itself with more of a rotation in the wall.

While this kind of damage and movement should always be addressed, the situation here is exasperated by the fact that the wall in question is also retaining the public pavement outside it. Without the retaining action, damage to the wall could be kept more localised and proportional to the level of attack from the roots but, in this instance, there is a real risk that its retaining action could fail due to the damage and ongoing weakening due to the tree attack. Should that happen, a collapse in the wall would cause a safety risk to users of the pavement and adjacent road.

We would recommend that the tree is removed to eliminate the cause of the problem. Once this is done, the wall can be repaired as needed to ensure its ongoing structural stability.

I trust this is of assistance but please let me know if you have any questions in relation to it.

Yours sincerely

Brian Constant Director