

17th July 2023

John & Rachel Haynes
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Our Ref: NDS/6898/001

Dear John & Rachel

105 Havant Road, Emsworth, PO10 7LF

I confirm visiting the above property on Thursday 6th July 2023 to carry out a preliminary structural inspection to report on the damage caused to the property by the Lime tree situated within the rear garden of the property.

- 1.0 The property is a detached two story house with painted brick elevations. The building is understood to have been built circa 1890. A conservatory with brick rear and side walls was present at the north of the property. It is not known when the conservatory was built, but it has been present for many years.
- 2.0 An external inspection was undertaken and the following was noted:
 - 2.1 Stepped diagonal cracking below the bottom right hand corner of the west window to the north wing of the building was noted. This cracking extended through approximately eight courses of brickwork.
 - 2.2 The brickwork bed joints fell approximately 15mm in 1000mm both to the north and to the west in the north wing of the building, indicating the building had dropped at the north west corner.
 - 2.3 Evidence of major brickwork repairs undertaken in the past was noted to the west wall of the north wing of the building.
 - 2.4 A tapered gap approximately 20mm wide caused by the rotation of the garden wall was noted between the garden wall and the west wall of the conservatory.

- 2.5 A Victorian brick garden wall 215mm wide was present on the west elevation. The garden wall was leaning to the west by approximately 80mm to 90mm in some locations and was in a potentially unstable condition. Two large vertical cracks were present in the west garden wall.
- 2.6 The patio was uneven and appeared to have dropped approximately 40mm adjacent to the north wing.
- 2.7 The Lime tree in the rear garden was situated approximately 3.8 metres from the corner of the north wing and approximately 3.3 metres from the conservatory. The Lime tree was approximately 20 metres high and had a 1.3 metre diameter trunk. Information supplied by Kim Gifford, arboricultural consultant, indicated the Lime tree was dated at 1910. This is approximately 20 years after the property was constructed. It is understood the Lime tree has not reached its full mature height which is expected to be approximately 25 metres.
- 2.8 The Lime tree was approximately 4 metres away from the rear section of the property to the west, 107 Havant Road, Emsworth.
- 3.0 The owners of 107 Havant Road have stated the roots of the Lime tree have breached the foul water sewer laid between 107 and 105 Havant Road causing drainage problems. Temporary buttressing to the west garden wall has been undertaken on the side of 107 Havant Road. The owners of 107 Havant Road have stated that cracking to masonry and brickwork is present to the rear walls of their property closest to the Lime tree.
- 4.0 The British Geological Survey indicates the soil at the property is likely to be River terrace deposits which comprise sand, silt and clay and typically have a medium volume change potential to NHBC guidelines. The Lime tree is classified as a broad leafed tree with a moderate water demand. Using the guidance given by the NHBC, the foundations to the property should be 1.8 metres deep at the north west corner to prevent foundation movement due to the Lime tree in its current position. The foundations to Victorian properties of this type in my experience are typically only around 0.5 metres deep or less.

The property is understood to be twenty years older than the Lime tree. Therefore if the tree is removed in my view the possible heave from removing the tree is unlikely to return the building to a higher point than the original building level. There could possibly be some heave damage to the conservatory and cracks to the main building due to the previous cracks being filled in.

5.0 Conclusions

- 5.1 The corner of the property nearest the Lime tree has dropped and cracking to the brickwork to the north wing indicative of recent movement was noted. Severe cracking to the Victorian garden wall was noted. In my view the Lime tree has been planted too close to the property and will continue to cause structural problems to main building, the garden wall and the adjacent areas if it not removed. Pollarding the Lime tree in my view is not going to lead to a long term solution. BRE IP 7/06 indicates that at least 70% to 90% crown reduction is generally required to provide consistent moisture reduction. The Lime tree is an aggressive grower and it will be very difficult to manage the growth to prevent further subsidence risk. In my view the Lime tree in the rear garden is not in a suitable location and needs to be removed to protect the property and adjacent structures.

I trust this report is satisfactory for your purposes, however should you have any queries please do not hesitate to contact me.

Yours sincerely

A black rectangular box redacting the signature of Nigel de Silva.

Nigel de Silva
BSc (Hons) C.Eng. M.I.Struct.E.