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STRUCTURAL ENGINEERS REPORT

26 DALEHAM GARDENS
LONDON NW3 5DA



Client: 26 Daleham Gardens Housing Association



10 October 2017



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STRUCTURAL ENGINEERS REPORT

1.00 Introduction

This report follows the visual inspection of the property known as 26 Daleham Gardens, London NW3, carried out on the 7 October 2017, by Mr I. R. Gill, on the instructions of the owners.

The purpose of the visit was to inspect the Lime tree closest to the rear elevation which is reportedly causing subsidence to the adjacent property to the right hand side No.24 Daleham Gardens.

2.00 General

The property is a detached house converted to four flats. In 1992 this firm designed some underpinning to stabilise the property, which was suffering from subsidence caused by clay shrinkage due to the root activity of nearby trees within the grounds of No. 26. A plan of the underpinning with depths is attached to this report.

3.00 Subsidence claim at No. 24

No. 24 has suffered some previous subsidence and was repaired in 2014. We have been advised that the bay on the rear elevation has suffered further damage in 2016. We have been provided with an Arboricultural report by Simon Pryce dated 5 June 2017 (attached). This indicates that the closest Lime tree is implicated as a contributory cause of this recent damage, along with a Wisteria planted adjacent to the bay. The site plan in the report identifies the closest Lime as T3, it is significantly larger than two further Lime trees T4 and T5 which are more remote from the property. It will have a more significant influence on No. 24 than the other trees. All three trees are pollarded on a regular basis (every three years) and were last attended to prior to this year's growing season.

The soil investigations show desiccation at depth of 2.0-2.5m which is consistent with Lime trees and live roots from the species *Tilia* (Lime) were observed in the trial pit adjacent to the bay down to a depth of 2m.

Mr. Pryce believes that it is not practical to reduce this tree to the same height as the two smaller trees without damaging the tree (5.3 & 6.2 in the report). He recommends removal of the tree and replacement with a less vigorous, lower water demand tree. Possible alternatives being Holly, Birch, Magnolia or Laburnam.

4.00 Risk of Heave to No. 26

The underpinning carried out in 1992 has been successful in stabilising the property. In the rear corner closest to the Lime T3 the depth of underpinning is 2.8m rising to 1.875m at the junction with the flank wall of the rear addition. The new foundations are deeper than the anticipated zone of influence for Lime trees. If T3 were to be felled some moisture recovery in the surrounding upper layers of soil would occur but at the depth of the foundation there would be no effect. Concrete paving adjacent to the property would likely be affected, cracking and distortion to levels would be expected to occur but the main walls of the house should not be affected. Heave is not anticipated.

5.00 Conclusions

If the closest Lime tree T3 were removed we do not anticipate any structural damage would occur to the main walls of the property due to the depth of the existing underpinning.

A small ornamental, low water demand tree could be provided in place of the Lime.

6.00 Limitations

We have not inspected woodwork, damp proof courses, services, foundations except where exposed, or any other part of the structure which was covered, unexposed or inaccessible, and we are therefore unable to report any such part free from defect.

This report has been prepared for the sole use and benefit of 26 Daleham Gardens Housing Association and the liability of R. F. Gill and Associates shall not be extended to any third party.



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For Richard F. Gill and Associates LLP

10 October 2017

