



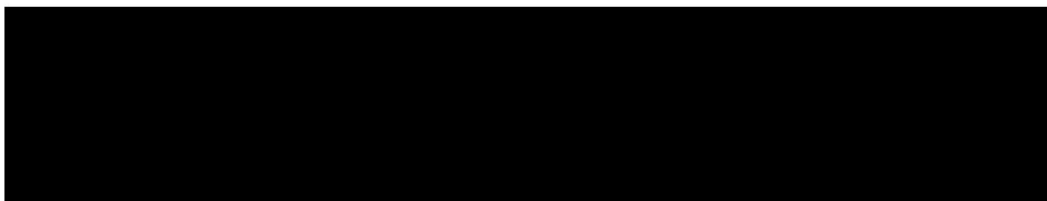
TREE PRESERVATION ORDER	TPO Lime - 10 Compayne Gardens
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TREE(S) - as referenced in the MWA Arboricultural Report	WORKS
T4 Lime	Remove (fell) to near ground level and treat stump to inhibit regrowth.

Reason: The above tree is considered to be responsible for root induced clay shrinkage subsidence damage to Flats 1 - 9, 8 Compayne Gardens, London, NW6 3DH.

Investigations in to the damage have been conducted and the following information/evidence obtained:

1. Engineering opinion is that damage is due to clay shrinkage subsidence. Details of the damage are included in the technical report submitted.
2. Foundations are bearing on to clay.
3. The clay subsoil has a medium - high volume change potential (NHBC Guidelines) susceptible to undergoing volumetric change in relation to changes in soil moisture.
4. Roots were observed to a depth of 2.1m bgl in TP/BH1 and 2.17m in TP/BH2 and recovered samples have been positively identified (using anatomical analysis) as Tilia spp. the origins of which will be T4 Lime confirming the influence of this tree on the soils below the foundations.
5. Level monitoring for the period 27.05.21 to 31.08.22 has recorded a pattern of movement indicative of the effects of seasonal soil drying by the subject tree below foundation level. The uplift phase of the building can only be attributable to an expanding clay soil from a desiccated (shrunken) state due to the soil drying effects of the implicated Lime.
6. The drains have been surveyed and through signs of defects were found, these are not considered to be the cause of the current damage. Drains can be discounted as a causal factor by reference to the level monitoring data.
7. SG2 shrub group and T3 Bay of MWA Arboricultural Report were removed on the 13th July 2022.
8. No recent structural alterations or building works have been carried out. The property has not been underpinned.
9. A root barrier has been considered as an alternative to tree removal and may be viable however this requires further appraisal to evaluate the constraints of the site. The barrier would need to extend Across neighbouring properties requiring the consent of the owners. The cost of a deep barrier is currently estimated [REDACTED]





10. Superstructure repairs and decorations are currently estimated [REDACTED] should the tree works be undertaken. Costs for underpinning in the event the tree works do not proceed are currently estimated [REDACTED]
11. The evidence confirms that on the balance of probabilities the subject tree is a material cause of the subsidence damage.
12. Replacement planting of standard size tree with agreement of Local Authority.

SUBSIDENCE CHECK LIST

- A description of the property, including a description of the damage and the crack pattern, the date that the damage first occurred/was noted, details of any previous underpinning or building work, the geological strata for the site identified from the geological map.
Technical Report and Site Investigation Report provided.
- Details of vegetation in the vicinity and its management since discovery of the damage. Include a plan showing the vegetation and affected building.
MWA Arboricultural Report provided.
- Measurement of the extent and distribution of vertical movement using level monitoring. Where level monitoring is not possible, state why and provide crack monitoring data. Data provided must be sufficient to show a pattern of movement consistent with the presence of the implicated tree(s).
Level Monitoring provided.
- A profile of a trial/bore hole dug to identify foundation type and depth and soil characteristics.
Site Investigation Report provided.
- The sub-soil characteristics including soil type (particularly that on which the foundations rest), liquid limit, plastic limit and plasticity index.
Site Investigation Report provided.
- The location and identification of roots found. Where identification is inconclusive, DNA testing should be carried out.
Site Investigation Report provided.
- Proposals and estimated costs of options to repair the damage.
Addendum Technical Report provided.

