



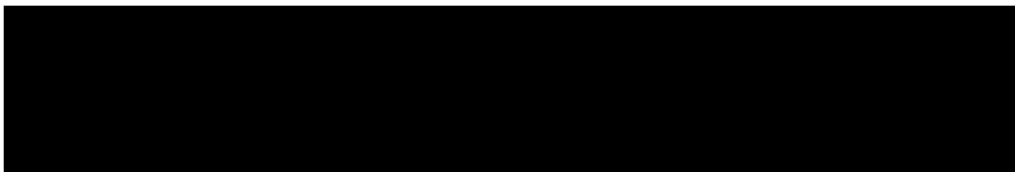
TREE PRESERVATION ORDER	C1245 2020
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TREE(S) - as referenced in the MWA Arboricultural Report	WORKS
T1 Oak	Remove (fell) to near ground level and treat stump to inhibit regrowth.

Reason: The above tree is considered to be responsible for root induced clay shrinkage subsidence damage to 73 Aberdare Gardens, NW6 3AN.

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 to high volume change potential (NHBC Guidelines) susceptible to undergoing volumetric change in relation to changes in soil moisture.
4. A comparison between moisture content and the plastic and liquid limits suggests moisture depletion in both TP/BH1 and TP/BH2 (June 2020).
5. Roots were observed to a depth of 3.0m bgl in TP/BH1 and recovered samples have been positively identified (using anatomical analysis) as *Quercus* spp the origins of which will be T1 Oak confirming the influence of this tree on the soils below the foundations
6. Level monitoring for the period 26/10/2021 to 25/07/2023 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 tree.
7. The drains have been surveyed and though some defects were found these were repaired in February 2021.
8. T2 False Acacia of the MWA Arboricultural Report was removed in December 2020 following No Objection having been raised by the Local Authority to S211 Notification reference 2021/0087/T.
9. No recent structural alterations or building works have been carried out. The property has not been underpinned.
10. A root barrier has been considered as an alternative to tree removal. This is unlikely to be a viable option due to the proximity of the trees to the building and the potential for destabilising the trees and building.





11. The evidence confirms that on the balance of probabilities the subject tree is a material cause of the subsidence damage.
12. Superstructure repairs and decorations are currently estimated to be [REDACTED] should the tree works be undertaken. Costs for underpinning in the event the tree works do not proceed are currently estimated to be [REDACTED]
13. 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.

