

ARBORICULTURAL ASSESSMENT REPORT

| | | |
|--------------|----------------------|---|
| For: | Client: | <input type="text"/> |
| | Insurer: | <input type="text"/> |
| Site: | Policyholder: | <input type="text"/> |
| | Risk Address: | 10 Hook Lane, Northaw, Potters Bar, Hertfordshire, EN6 4DA |
| Refs: | PRI Ref: | 144074 |
| | Client Ref: | <input type="text"/> |
| | Insurer Ref: | <input type="text"/> |

| | | | |
|-----------------------|-------------------|--------------|-----------------------------|
| Arborist Name: | Will Hinde | Date: | 16 th March 2020 |
| QC: | Margaret MacQueen | Date: | 20 th March 2020 |



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1.0 INTRODUCTION & BRIEF

- 1.1** Property Risk Inspection has been instructed behalf of the building insurers of the insured property. We have been advised that the insured property has suffered differential movement and damage that is considered to have been caused by trees growing adjacent to the property influencing soils beneath its foundations.
- 1.2** We have been instructed to undertake a survey of the vegetation growing adjacent to the insured property in order to provide our opinion as to whether, based on the available information, any of this vegetation is likely to be influencing soil moisture levels beneath the foundations of the property, and if so, to provide recommendations as to what tree management could be implemented to effectively prevent damage continuing.
- 1.3** The vegetation growing adjacent to the risk address has been surveyed from the ground. All distances are measured to the nearest point of the risk address unless otherwise stated.

2.0 LIMITATIONS

- 2.1** Recommendations with respect to tree management are associated with the risk address as stated on the front cover of this report and following consultation with investigating engineers. The survey of trees and any other vegetation is associated with impacts on the risk address subject of this report. Matters of tree health, structural condition, and/or the safety of vegetation under third party control are specifically excluded. Third party land owners are strongly advised to seek their own professional advice as it relates to the health and stability of trees under their control.
- 2.2** Recommendations do not take account of any necessary permission (statutory or otherwise) that must be obtained before proceeding with any tree works.
- 2.3** Recommendations do not take account of any requirements for survey or mitigation relating to European or other protected species, e.g. bird nesting or bats. Land owners must obtain their own professional advice in respect of any protected species.

3.0 DISCUSSION AND ANALYSIS

3.1 Soils, soil water and vegetation

All vegetation requires water to live, and this water is substantially accessed from the soil within which the plants' roots grow.

If the soil is classified as a clay soil, then it will hold very much more water than sands, gravels and loam soils. As plants abstract water from the clay soil, the soil volume will "shrink" and "swell" during the summer as water is first removed and then added by summer rainfall. In years in which rainfall during the summer is less than the total amount of water taken from the soil by plants, shrinkage will occur. This shrinkage may remove support from building foundations, leading to cracking in the fabric of the building.

3.2 Vegetation management

The control of trees, shrubs, and climbers, by removal or pruning as appropriate, are proven techniques that can control total soil water loss thereby minimising soil shrinkage and allowing repairs to proceed.

If vegetation management works are carried out promptly, then repairs can usually proceed very quickly and the duration and distress associated with the disruption that tree related subsidence brings can be minimised.

3.3 Third party liaison and statutory controls

Tree roots do not respect physical or property boundaries and can travel for many metres beyond the above ground "dripline" of the canopy of the vegetation.

The purpose of this report is to ascertain which vegetation is the most likely substantial and/or effective contributory cause of the damage witnessed to allow for liaison with third parties or with local administrative Councils as necessary.

3.4 Evidential framework

The engineer has determined on a preliminary basis the damage to the property, its location and the likely mechanism of movement, and has concluded that the building failure is related to differential subsidence damage caused as a result of the action of vegetation.

Where a factual geotechnical report has been completed, this will describe the below ground foundation design, soil and geotechnical conditions, as well as any root identification where available.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 Recommendations

On the basis of our findings, we have considered a practical vegetation management specification.

This specification will assist in reducing the impact of the adjacent vegetation on soil moisture levels, thereby potentially stabilising foundations of the affected area of the building.

Where felling has been proposed, this will be on the basis that the vegetation in question would not respond well to a severe reduction in leaf area that would inevitably lead to decay, the development of potential hazards, and an annual or other on-going management commitment and cost.

If pruning is recommended, the specification will be designed to allow continual ease of re-pruning with a reasonable prospect of a reduction in soil water use.

4.2 Recommended vegetation management to address the current subsidence:

| Tree No: | Species | Works Required |
|----------|--------------------|----------------------|
| T4 | Oak (English) 2020 | Fell and treat stump |
| T5 | Oak (English) 2020 | Fell and treat stump |
| S1 | Photinia | Fell and treat stump |
| T10 | Apple | Fell and treat stump |

5.0 STATUTORY CONTROLS

Welwyn Hatfield DC has confirmed that the implicated Oak trees T4 and T5 are subject to a Tree Preservation Order but there are no Conservation controls.

6.0 APPENDIX 1: TREE TABLES

| Tree No | Common Name | Age Class | Condition | Height (m) | Crown Spread (m) | Stem diam. (mm) | Dist to bldg. (m) | Roots Implicated | Pruning history | Recommendation | Tree work constraints | Notes | Owner address | Owner |
|---------|-----------------------|-----------|-----------|------------|------------------|-----------------|-------------------|------------------|---------------------------------|-------------------|--|--|----------------------------------|-------|
| T1 | Oak (English) 2020 | Mature | Fair | 19 | 14 | 910 | 16.9 | N | No significant past tree works. | No work required. | Adjacent to highway - traffic management required. | | Welwyn Hatfield District Council | LA |
| T2 | Oak (English) 2020 | Mature | Fair | 21 | 14 | 800* | 22.0 | N | No significant past tree works. | No work required. | | Ivy clad stem and crown. Situated on edge of ditch, near side to PH property but 6.5m beyond PH fence. | Welwyn Hatfield District Council | LA |
| T3 | Oak (English) 2020 | Mature | Fair | 20 | 14 | 580 | 24 | N | No significant past tree works. | No work required. | | Situated on edge of ditch, near side to PH property but 7m beyond PH fence. | Welwyn Hatfield District Council | LA |

| Tree No | Common Name | Age Class | Condition | Height (m) | Crown Spread (m) | Stem diam. (mm) | Dist to bldg. (m) | Roots Implicated | Pruning history | Recommendation | Tree work constraints | Notes | Owner address | Owner |
|---------|-----------------------|-----------|-----------|------------|------------------|-----------------|-------------------|------------------|---------------------------------|----------------------|-----------------------|---|--|-------|
| T4 | Oak (English) 2020 | Mature | Good | 28 | 20 | 1000* | 18.0 | Y | No significant past tree works. | Fell and treat stump | | Situated on edge of ditch, near side to PH property but est. 6m beyond PH fence. Twin stem from 3m. | Welwyn Hatfield District Council | LA |
| T5 | Oak (English) 2020 | Mature | Good | 25.5 | 20 | 1100* | 20 | Y | No significant past tree works. | Fell and treat stump | | Situated on edge of ditch, near side to PH property but 1.7m beyond PH fence. | Welwyn Hatfield District Council | LA |
| T6 | Oak (English) 2020 | Mature | Fair | 21 | 14 | 590 | 22.0 | N | No significant past tree works. | No work required. | | Ivy clad stem. Situated on far edge of ditch. | Welwyn Hatfield District Council | LA |
| T7 | Oak (English) 2020 | Mature | Fair | 17 | 18* | 700* | 17 | N | Recently reduced | No work required. | | | Unknown – Land Registry Required | UKN |
| T8 | Hornbeam | Mature | Fair | 14.2 | 6 | 250* | 15 | N | Subject to past management. | No work required. | | | Welwyn Hatfield District Council | LA |
| T9 | Hazel (Common) | Mature | Good | 9.5 | 6 | 150 | 13 | N | Subject to past management. | No work required. | | | 10 Hook Lane, Potters Bar, EN6 4DA | PH |

| Tree No | Common Name | Age Class | Condition | Height (m) | Crown Spread (m) | Stem diam. (mm) | Dist to bldg. (m) | Roots Implicated | Pruning history | Recommendation | Tree work constraints | Notes | Owner address | Owner |
|---------|----------------------|--------------|-----------|------------|------------------|-----------------|-------------------|------------------|-------------------------------|-----------------------|--------------------------------|--|------------------------------------|-------|
| S1 | Photinia | Early Mature | Good | 2.3 | 1.50 | 30 | 2.4 | N | Subject to past management. | Fell and treat stump. | Access through side/rear gate. | Multistem. Implicated due to size and location. | 10 Hook Lane, Potters Bar, EN6 4DA | PH |
| T10 | Apple | Mature | Good | 2.4 | 2.50 | 170 | 4.8 | Y | Subject to recent management. | Fell and treat stump. | Access through side/rear gate. | | 10 Hook Lane, Potters Bar, EN6 4DA | PH |
| SG1 | Mixed species shrubs | Semi-Mature | Good | 1.5 | 1.0 | 10 | 4.2 | N | Subject to past management. | No work required. | | Euonymous, phillyrea, forsythia. | 10 Hook Lane, Potters Bar, EN6 4DA | PH |
| T11 | Apple | Young | Good | 1.7 | 1.2 | 40 | 9 | Y | Subject to past management. | No work required. | | | 10 Hook Lane, Potters Bar, EN6 4DA | PH |
| S2 | Laurel (Cherry) | Mature | Good | 6 | 5.0 | 100 | 13 | N | Subject to past management. | No work required. | | | 10 Hook Lane, Potters Bar, EN6 4DA | PH |
| TG2 | Holly | Mature | Good | 9 | 4 | 150* | 13.6 | N | Subject to past management. | No work required. | | | Unknown – Land Registry Required | UKN |
| SG2 | Mixed species group | Early Mature | Good | 2.1 | 1.50 | 20 | 7.5 | N | Subject to past management. | No work required. | | Cypress, vhoisya, fatsia, phillyrea, palm grass. | 10 Hook Lane, Potters Bar, EN6 4DA | PH |

| Tree No | Common Name | Age Class | Condition | Height (m) | Crown Spread (m) | Stem diam. (mm) | Dist to bldg. (m) | Roots Implicated | Pruning history | Recommendation | Tree work constraints | Notes | Owner address | Owner |
|---------|---------------------|-------------|-----------|------------|------------------|-----------------|-------------------|------------------|-----------------------------------|-------------------|-----------------------|------------------------------|------------------------------------|-------|
| SG3 | Mixed species group | Semi-Mature | Good | 1.7 | 1.0 | 10 | 1.9 | N | Subject to past management. | No work required. | | Buddliea, ceanothus and Ivy. | 10 Hook Lane, Potters Bar, EN6 4DA | PH |
| T12 | Apple | Young | Good | 0.6 | 0.4 | 10 | 4.6 | N | No significant recent management. | No work required. | | | 10 Hook Lane, Potters Bar, EN6 4DA | PH |
| T13 | Apple | Young | Good | 1.2 | 0.50 | 10 | 6.5 | N | Subject to past management. | No work required. | | | 10 Hook Lane, Potters Bar, EN6 4DA | PH |

* Value is estimated










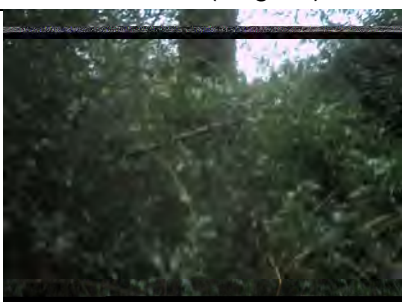
7.0 APPENDIX 2: SITE PLAN



| | |
|--------------|--|
| Location: | 10 Hook Lane, Northaw, Potters Bar, Hertfordshire, EN6 4DA |
| Job Ref: | 144074 |
| Survey Date: | 16/03/2020 - NTS |

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8.0 APPENDIX 3: SITE PHOTOGRAPHS

| | |
|--|--|
|  |  |
| <p>T1 - Oak (English)</p> | <p>Location of trees to LHS PH property, between PH fence and roadside ditch</p> |
|  |  |
| <p>Location of trees to LHS PH property, between PH fence and mainly within boundary of roadside ditch</p> | <p>T2 - Oak (English)</p> |
|  |  |
| <p>T3 - Oak (English)</p> | <p>T4 - Oak (English)</p> |
|  |  |
| <p>T5 - Oak (English)</p> | <p>T3 - Oak (English)</p> |
|  |  |
| <p>T4 - Oak (English)</p> | <p>T5 - Oak (English)</p> |



T3 - Oak (English)



T4 - Oak (English)



T5 - Oak (English)



T6 - Oak (English)



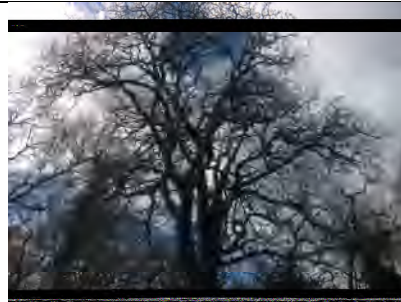
T7 - Oak (English)



T7 - Oak (English) 2020



T5 - Oak (English) 2020











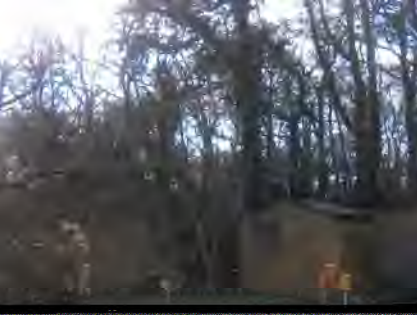

T5 - Oak (English)









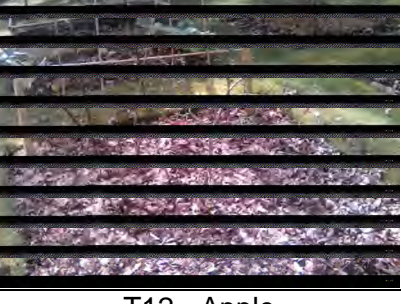



T6 - Oak (English) 2020



T4 - Oak (English) 2020

| | |
|---|--|
|  |  |
| <p>T4 - Oak (English) 2020</p> | <p>T3 - Oak (English) 2020</p> |
|  |  |
| <p>T3 - Oak (English) 2020</p> | <p>T2 - Oak (English) 2020</p> |
|  |  |
| <p>T2 - Oak (English) 2020</p> | <p>T1 - Oak (English) 2020</p> |
|  |  |
| <p>T1 - Oak (English) 2020</p> | <p>T8 - Hornbeam</p> |
|  |  |
| <p>T9 - Hazel (Common)</p> | <p>S1 - Photinia</p> |

| | |
|---|--|
|  |  |
| <p>T10 - Apple</p> | <p>SG1 - Mixed species shrubs</p> |
|  |  |
| <p>T11 - Apple</p> | <p>TG1 - Apple</p> |
|  |  |
| <p>S2 - Laurel (Cherry)</p> | <p>TG2 - Holly</p> |
|  |  |
| <p>SG2 - Mixed species group</p> | <p>SG3 - Mixed species group</p> |
|  |  |
| <p>T12 - Apple</p> | <p>T13 - Apple</p> |



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