

Arboricultural Consultancy for Churchill Building Insurance

Note⁽¹⁾: This report is intended for use between the client, Marishal Thompson Group and any parties detailed within the report. It is based on the understanding at the time of visiting the property that Engineers are satisfied that damage is attributable to clay shrinkage subsidence exacerbated by vegetation.

1. Case Details

Insured	Mr Philip Wakeford	Address	21 Cavendish Drive, Waterlooville, Hampshire, PO7 7PJ		
Client	Infront Innovation	Contact	Kevin Dean	Claim No.	IFS-RBS-SUB-11-0031275
MT Ref	LS/1302122157/JB	Consultant	Keiron Hart	Contact No.	08702 416 180
Report Date	02/03/2012				

Scope of Report: To survey the property and determine significant vegetation contributing to subsidence damage, make recommendation for remedial action and assess initial mitigation and recovery prospects. The survey does not make an assessment for decay or hazard evaluation.

2. Property and Damage Description

The insured structure is a 2 storey detached house. It has been extended with a conservatory addition to the rear. The property occupies a level site with no adverse topographical features.

Damage relates to the rear left-hand corner of the insured dwelling.

3. Technical Reports

In preparing our revised report we have had the benefit of the following technical investigations:

Soil Analysis	☒	Foundation Detail	☒	Root Analysis	☒
Borehole Log	☒	Engineers Report	☒		

4. Action Plan

Mitigation	
Insured Involved?	Yes
Local Authority involved?	No
Other third party Mitigation involved?	No
Recovery	
Is there a potential recovery action?	No

Tree Works	
Local Authority	Havant Borough Council
TPO / Conservation Area / Planning Protection Searches	Insured: TPO Third Party: None
Additional Comments	
Awaiting Further Instructions.	

5. Technical Synopsis

This report is based upon our understanding at the time of visiting the property that Infront Innovation engineers are satisfied that damage is due to clay shrinkage subsidence exacerbated by vegetation.

The footings of the subject property fall within the anticipated rooting range of a significant number of Oaks, many with the capacity to be influencing soil moisture values below foundation level.

The underside of foundation depth has been recorded at 800mm below ground level. CLAY has been recorded with a very high plasticity. This confirms the potential for vegetation related damage.

Roots have been identified that confirm the influence of *Quercus* at or below foundation level. Sample trial pits are generally small in size and the recovery roots from such a small hole leads us to conclude that these will not be isolated roots. There is significant potential for multiple roots to be active below foundation level.

Laboratory analysis of the roots has confirmed the species. Testing has revealed that the roots have no visible starch content. Starch content does not definitively define whether a root is alive or dead. There is considerable species variation in relation to the storage of starch. Many of the smaller roots recovered from trial pits are not utilised by trees for starch storage. Whilst starch content may be low, or even 'none' this does not mean that the tree is not actively rooting in this area. Many fine roots have only a very limited lifespan in the soil. Recovery of root material will generally indicate the tree is actively removing resources (water and

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nutrients) from this area. The roots were noted to juvenile with no evidence that they were dead.

Based on our site investigations, and taking account of vegetation location, relative to the focal area of movement/ damage, it is our opinion that T1 (Oak) will be exerting the principal vegetative influence. This influence is determined by moisture content of soil in the locality of the area of damage combined with the above site investigations. This tree is also the largest one, closest to the property with the highest leaf area/ canopy size.

The insured advised that all the rear garden Oaks identified for removal (current claim & future risk) are the subject of a TPO and a full set of site investigations will be required before the Local Authority will validate the TPO application. This information must include, as well as this report: 1. Measurement of the extent and distribution of vertical movement using level monitoring. However, where level monitoring is not possible, the applicant should state why and provide crack-monitoring data. The data provided must be sufficient to show a pattern of movement consistent with the presence of the implicated tree(s). 2. A profile of a trial/bore hole dug to identify soil characteristics and foundation type and depth 3. The sub-soil characteristics including soil type (particularly that on which the foundations rest), liquid limit, plastic limit and plasticity index. 4. The location and identification of roots found. Where identification is inconclusive, DNA testing should be carried out, we consider DNA testing will be required in this case and may strengthen the removal argument by implicating some of the future risk trees as current claim 5. Proposals and estimated costs of options to repair the damage (TPO's a guide to the law and good practice Section 6.40C)

TG1 will mitigate any losses by retaining a tree vista.

A pre-application meeting with the tree officer may be advisable when all SI is available.

We recommend the efficacy of this management is determined by further monitoring.

Is vegetation likely to be a contributory factor in the current damage?	Yes
Is vegetation management likely to contribute to the future stability of the property?	Yes
Is replacement planting considered appropriate?	No
Would DNA profiling be of assistance in this case?	See Above

6.0 Recommendations

6.1 Table 1 - Current Claim Requirements

These recommendations may be subject to review following additional site investigations

Tree No.	Species	Age Cat	Approx. Height (m)	Distance to Building (m)	Ownership	Action	Requirement
T1	Oak	3	24	10	C - Insured	Remove	Remove.
Age Cat: 1 = Younger than property; 2 = Similar age to the property; 3 = Significantly older than property							

6.2 Table 2 - Future Risk Recommendations

Tree No.	Species	Age Cat	Approx. Height (m)	Distance to Building (m)	Ownership	Action	Requirement
C1	Honeysuckle	1	0.4	0.5	C - Insured	Action to avoid future risk	Remove and treat stump to inhibit regrowth.
CG1	Climbing Hydrangea & Jasmine	1	3	0.5	C - Insured	Action to avoid future risk	Remove and treat stumps to inhibit regrowth.
CG2	Forsythia & Cotoneaster	1	2	0.2	C - Insured	Action to avoid future risk	Do not allow to exceed current dimensions.

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S1	Mahonia	1	3.5	0.5	C - Insured	Action to avoid future risk	Remove and treat stump to inhibit regrowth.
S2	Shrub	1	1.8	1.8	C - Insured	Action to avoid future risk	Do not allow to exceed current dimensions.
S3	Cypress	1	1.8	1.7	C - Insured	Action to avoid future risk	Do not allow to exceed current dimensions.
S4	Berberis	1	3	1	C - Insured	Action to avoid future risk	Remove and treat stump to inhibit regrowth.
T2	Oak	3	24	12	C - Insured	Action to avoid future risk	Remove.
T3	Oak	3	24	12.8	C - Insured	Action to avoid future risk	Remove.
T4	Oak	3	24	12.8	C - Insured	Action to avoid future risk	Remove.
T5	Cherry	2	14	14	C - Insured	Action to avoid future risk	Do not allow to exceed current dimensions.
T6	Cypress	1	5.5	9.5	C - Insured	Action to avoid future risk	Do not allow to exceed 7m height.
T7	Spruce	1	8.5	7.9	C - Insured	Action to avoid future risk	Do not allow to exceed current dimensions.
TG1	Oak	3	24	16	C - Insured	Action to avoid future risk	Do not allow to exceed current dimensions. x11
TG2	Cypress	1	4.3	7.8	C - Insured	Action to avoid future risk	Do not allow to exceed 6m height. x2
Age Cat: 1 = Younger than property; 2 = Similar age to the property; 3 = Significantly older than property							

* Estimated

Third party property addresses should be treated as indicative only, should precise detail be required then Marishal Thompson can undertake Land Registry Searches

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7. Site Plan



Please note that this plan is not to scale. OS Licence No. 100043218

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8. Photographs



T1 - Oak



CG2 - Mixed Climbers



TG2 - Cypress



T7 - Spruce

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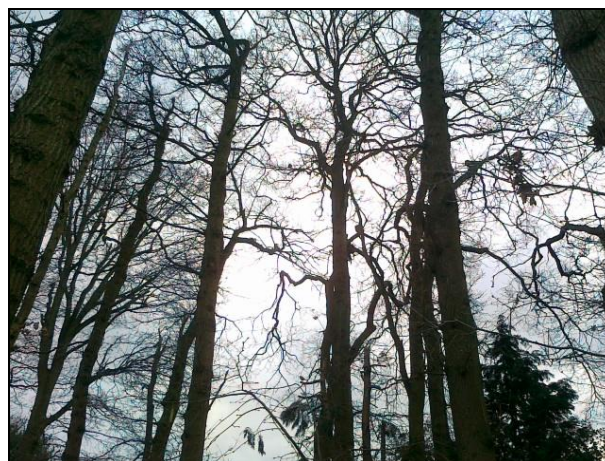
T2 - Oak



T3 - Oak



T4 - Oak



TG1 - Oak

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CG1 - Climbing Hydrangea & Jasmine



S3 - Cypress



T6 - Cypress



S4 - Berberis