

Arboricultural Consultancy for Royal & Sun Alliance

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 James Grattan	Address	4 Hermitage Gardens, Waterlooville, Hampshire, PO7 7PR		
Client	Infront Innovation	Contact	Philip Hayward	Claim No.	IFS-RSA-SUB-10-0020083
MT Ref	LS/2708101051/KH	Contact	Keiron Hart	Contact No.	08702 416 180

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. The property occupies a level site with no adverse topographical features.

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

3. Technical Reports

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

Soil Analysis
Borehole Log



Foundation Detail
Engineers Report



Root Analysis



4. Action Plan

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

Tree Works	
Local Authority	Havant Borough Council
TPO / Conservation Area / Planning Protection Searches	Insured: None Third Party: TPO
Additional Comments	
Awaiting Further Instructions.	
A potential recovery action has been identified.	
Engineers should consider focusing investigations to strengthen factual evidence for disclosure to third party tree owners.	

5. Technical Synopsis

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

Based on our site investigations, and taking account of vegetation location, relative to the focal area of movement / damage, it is our opinion that TG1 (Oak) will be exerting the principal vegetative influence. This influence is determined by the moisture content of soil in the locality of the area(s) of damage and recovery of *Quercus* roots.

Laboratory analysis of the roots has confirmed the species. Testing has revealed that the roots have a low 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 nutrients) from this area.

The insured advised that the trees are subject to a TPO and as such 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

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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 5. Proposals and estimated costs of options to repair the damage (TPO's a guide to the law and good practice Section 6.40C)

DNA testing would not be valuable as the trees are such a size and proximity that a number of them will be involved. Unless excavations were extensive roots would be missed and not all the trees involved would be identified.

The insured advised that TG1 is located within the garden of a very elderly resident. The insured advised that neighbouring properties have also been previously affected.

The close grown nature of the Oaks means removal of TG1 may ultimately not be possible without an impact on the remaining trees which would become exposed and potentially prone to a greater risk of branch / stem failure.

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

Replacement planting is deemed to be appropriate on the basis that species selection is appropriate for the available planting distances.

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?	See above
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
TG1	Oak	3	18	12	A - Third Party 21 Cavendish Drive Waterlooville Hants	Remove	Remove. Remove any regrowth annually.(x 3 trees)
Age Cat: 1 = Younger than property; 2 = Similar age to the property; 3 = Significantly older than property and may represent a heave risk							

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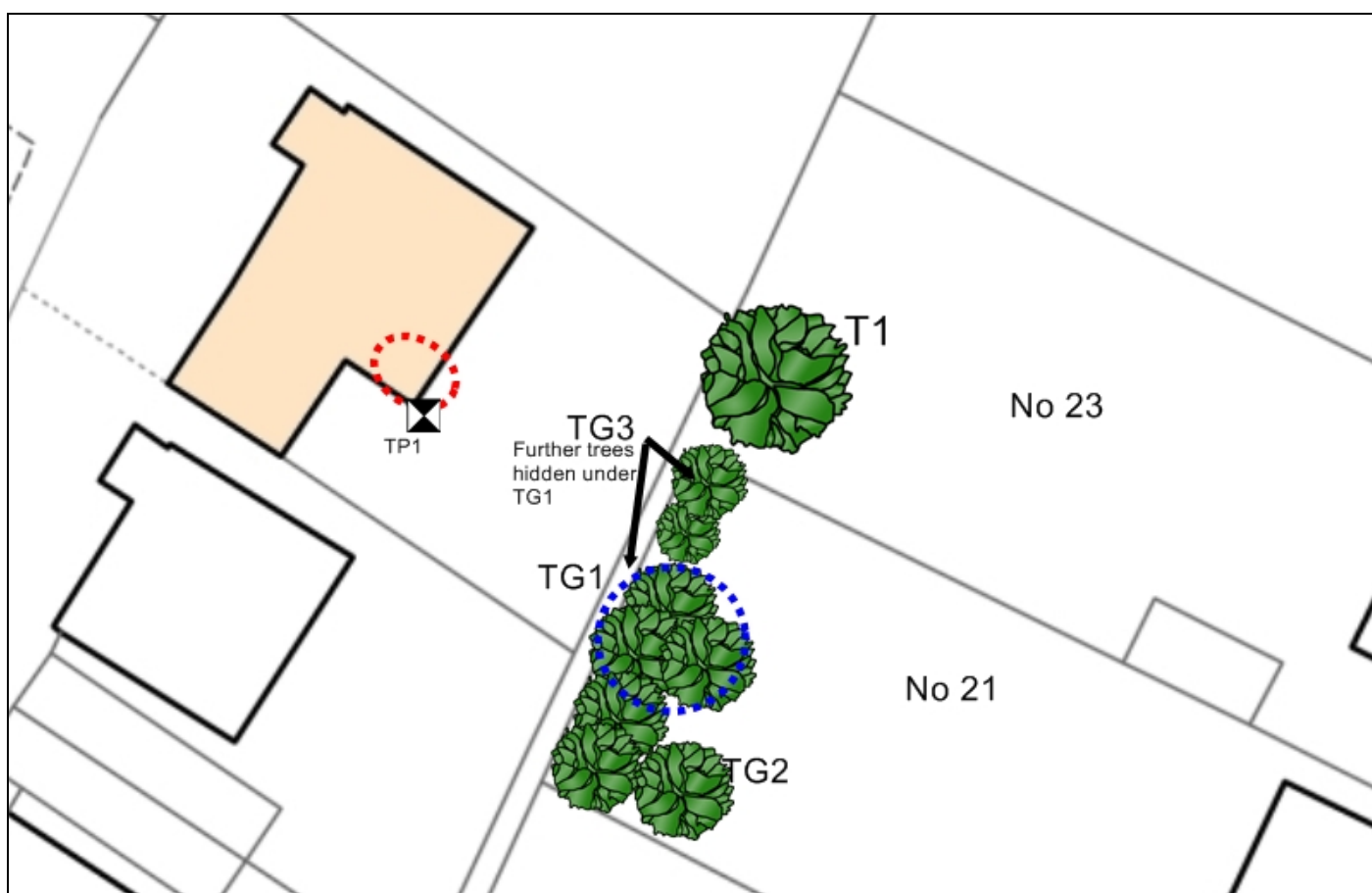
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6.2 Table 2 - Future Risk Recommendations

Tree No.	Species	Age Cat	Approx. Height (m)	Distance to Building (m)	Ownership	Action	Requirement
T1	Oak	3	13	12	A - Third Party 23 Cavendish Drive Waterlooville Hants	Action to avoid future risk	Reduce to points of previous reduction and maintain at reduced dimensions.
TG3	Mixed Species Group (H) Scrub understorey containing Hawthorn, Acer, Yew, Holly & Cypress	2	3.8	11	A - Third Party 21 Cavendish Drive Waterlooville Hants	No Action	No works.
TG2	Oak	3	18	14	A - Third Party 21 Cavendish Drive Waterlooville Hants	Action to avoid future risk	Do not allow to exceed current dimensions.

Age Cat: 1 = Younger than property; 2 = Similar age to the property; 3 = Significantly older than property and may represent a heave risk

7. Site Plan



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

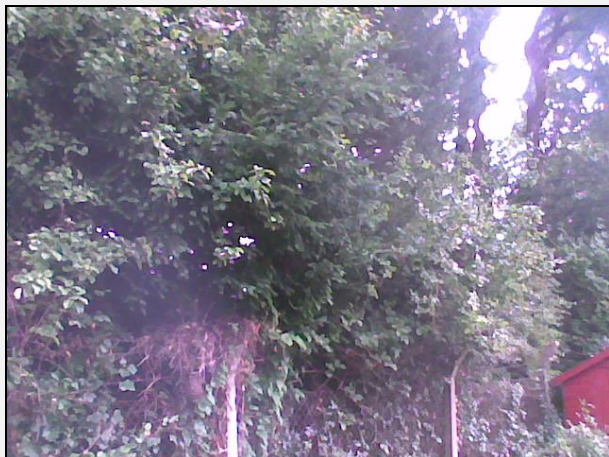
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8. Photographs



TG3 - Mixed Species Group (H)



T1 - Oak



TG1 - Oak



General Site

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Insured Garden - Front



General Site

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