

# Arboricultural Consultancy for Esure

**Note:** This report is intended for use between the client, Environmental Services 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 Mark Christie	Address	Oakfield, Saint Johns Avenue, Thornor, West Yorkshire, LS14 3BZ		
Client	Subsidence Management Services	Contact	Delroy Brown	Claim No.	IFS-ESU-SUB-18-0078349
ES Ref	SA-245362	Consultant	Jim Richardson	Contact No.	0330 380 1036
Report Date	17/12/2019 Revised: 16/11/2022				

**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. This is a revised report based on the results of recent site investigations and level monitoring..

## 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 and a single-storey extension to the left-flank. The property occupies a level site with no adverse topographical features.

Engineers advise that the current damage affects the front left-hand corner of main property and the attached left-flank garage, where cracking indicates downwards movement.

## 3. Technical Reports

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

Drain Report	<input checked="" type="checkbox"/>	Foundation Detail	<input checked="" type="checkbox"/>	Root Analysis	<input checked="" type="checkbox"/>
Borehole Log	<input checked="" type="checkbox"/>	Engineers Report	<input checked="" type="checkbox"/>	Monitoring	<input checked="" type="checkbox"/>

## 4. Action Plan

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

Treeworks	
Local Authority	Leeds City Council
TPO / Conservation Area / Planning Protection Searches	Insured: TPO and Conservation Area Adjacent & Adjoining properties: Conservation Area
Additional Comments	
Awaiting Further Instructions.	

## 5. Technical Synopsis

This report is based on our understanding, at the time of visiting the property, that Subsidence Management Services are satisfied that damage is the result of clay shrinkage subsidence exacerbated by the indirect influence of vegetation.

The conditions necessary for clay shrinkage subsidence to occur have been established by site investigations and roots have also been recovered below the property (BH2 & BH3).

Samples of these roots were recovered from underside of foundations and throughout the borehole, these roots were identified (using anatomical analysis) as having emanated from the genus Fagus spp. & Hedera or Fatsia spp.

The role of vegetation is further supported by the results of level monitoring.

Where vegetation is involved it produces a characteristic 'seasonal' pattern of foundation movement (subsidence through the summer, recovery through the winter); no other cause produces a similar pattern.

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If it is occurring soil drying by vegetation must be involved, unless the foundations are less than 300mm in depth, which in this case they are not.

The results of the available monitoring have confirmed a pattern of movement consistent with the known influence of vegetation, the focus of movement being the front left corner of the garage (LM station 5).

Given the above, vegetation is deemed to retain the capacity to be causal to the current movement / damage.

We have therefore been instructed to advise on the causal vegetation and to deliver management proposals which will provide on-going and long-term stability allowing repairs to be undertaken.

In assessing the potential drying influence of the vegetation on site, we have considered, in addition to the above, species profile, normally accepted influencing distance and the position of vegetation relative to the observed damage.

Our survey of the site identified the Beech (T1) and Beech hedge (H1), given their position relative to the damage it is our opinion that the *fagus* spp. roots identified in BH2 will emanate from this vegetation and accordingly we have identified it as the principal cause of the subsidence damage.

However, given the recovery of *Hedera* or *Fatsia* spp. roots, SG1 cannot be discounted as contributing to the overall level of soil drying proximate to the area of damage and is therefore also considered to retain a contributory influence, albeit in a limited / secondary capacity when compared to the above.

The size and proximity of the above vegetation is consistent with the location of damage; accordingly, we have identified their collective / cohesive influence as the primary cause of the subsidence damage.

Given the above and considering the advised mechanism of movement, in order to mitigate the current damage thereby allowing soils beneath the property to recover to a position such that an effective engineering repair solution can be implemented, we recommend a program of vegetation management as detailed by this report.

Please refer to Section 6 for management prescriptions.

The recommendations contained within this report are prescribed to give the most reliable arboricultural solution likely to restore long-term stability.

Whilst we have given consideration to pruning as a means of mitigating the vegetative influence of the above, this has been discounted; pruning is generally ineffective and in the context of the current claim we consider the above vegetation too large and close for pruning to be viable.

Consequently, complete removal of SG1 and T1, in conjunction with a section of H1 (as detailed) as it will offer the most certain arboricultural solution likely to restore long-term stability.

We recommend the efficacy of the management recommendations be qualified by means of further monitoring to confirm stability.

Please note that the footing of the insured property fall within the anticipated rooting distance of additional vegetation which we believe presents a foreseeable risk of future damage and accordingly we have made recommendations in respect of this.

We consider the impact on the wider public amenity from the proposed tree works is mitigated by the presence of further trees and the scope for replacement planting.

Whilst replacement planting is considered appropriate, due consideration must be given to the ultimate size of the replacement and future management requirements. Species selection should be appropriate for the chosen site and ultimate tree height should not exceed 75% of the available distance to built structures.

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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?	Yes
Would DNA profiling be of assistance in this case?	No

## 6.0 Recommendations

### 6.1 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
H1	Beech	2	2.5	1	C - Insured	Maintain as detailed	Remove section of hedge to achieve a minimum clearance of 3m to front left corner of the property. Maintain retained section at broadly current dimensions by way regular pruning.
SG1	Mixed Species Group: Includes Ivy, Holly, Forsythia and Hebe.	1	2	0	C - Insured	Remove	Remove close to ground level; do not treat stumps due to translocation risk. Where such a risk exists, we advise that any emergent regrowth is removed annually.
T1	Beech	3	12.5	8	C - Insured	Remove	Remove close to ground level.

**Age Cat:** 1 = Younger than property; 2 = Similar age to the property; 3 = Significantly older than property

\* Estimated

### 6.2 Future Risk Recommendations

These recommendations may be subject to review following additional site investigations.

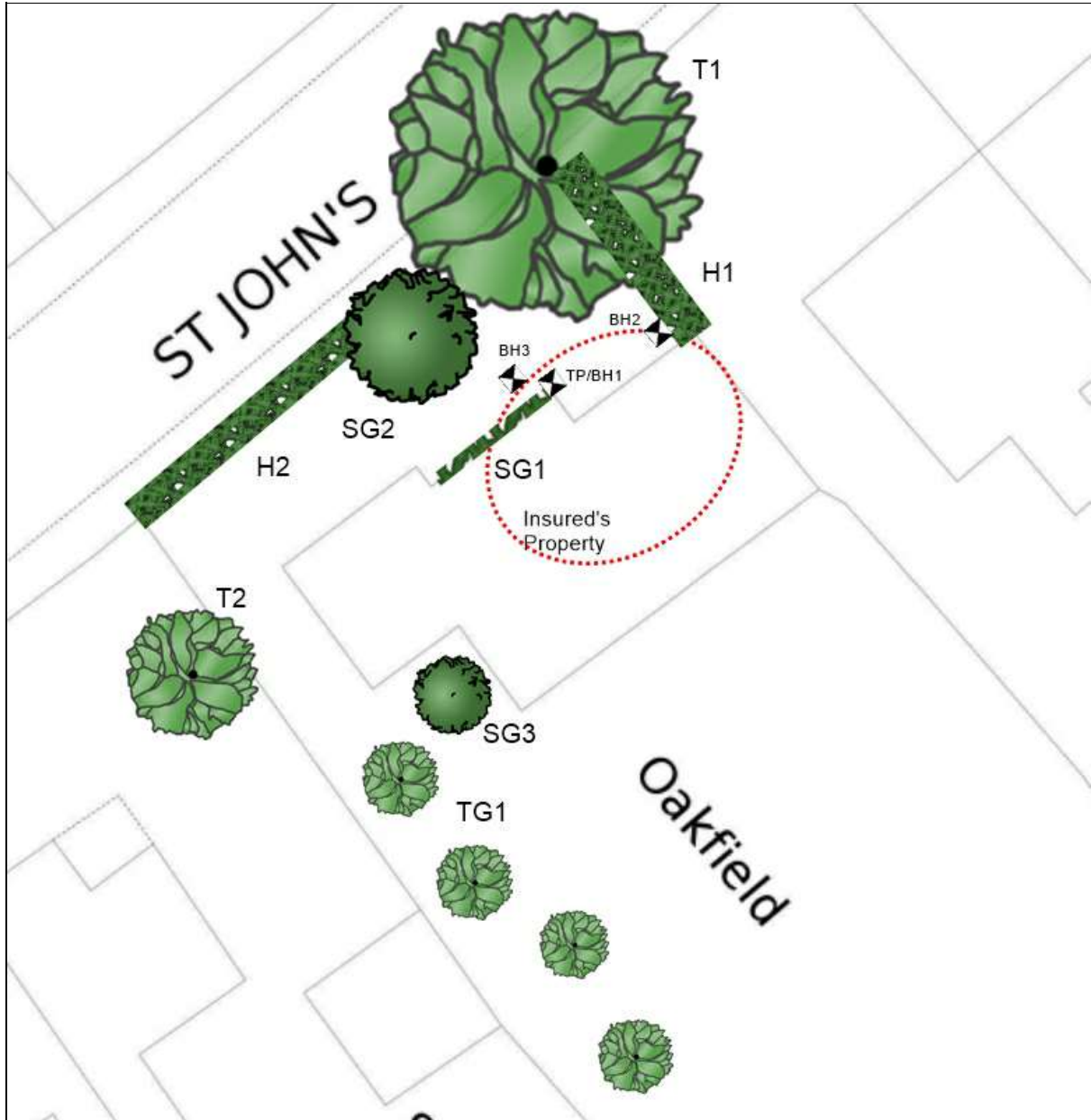
Tree No.	Species	Age Cat	Approx. Height (m)	Distance to Building (m) *	Ownership	Action	Requirement
H2	Privet	1	2	3	C - Insured	Action to avoid future risk	Maintain at current dimensions by way of regular pruning.
SG2	Mixed species shrubs: includes Cypress, Photinia and Holly.	2	2.5	2	C - Insured	Action to avoid future risk	Maintain at current dimensions by way of regular pruning.
SG3	Mixed Species Group: Includes Holly, Juniper and Rhododendron.	1	3.5	2	C - Insured	Action to avoid future risk	Maintain at current dimensions by way of regular pruning.
T2	Spruce (Norway)	2	12	5	A - Third Party	Action to avoid future risk	Do not allow to exceed current dimensions by way of regular pruning.
TG1	Mixed Species Group: Includes Apple and Rowan	2	7	3	C - Insured	Action to avoid future risk	Maintain at current dimensions by way of regular pruning.

**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 Environmental Services can undertake Land Registry Searches

7. Site Plan



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

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## 8. Photographs



H1 (left) & T1 (centre)



H2 (right), T2 (right background), SG1 & SG2 (centre)



Insured garden - rear



TG1 & SG3

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Date: 16/11/2022

Property: Oakfield, Saint Johns Avenue, Thorney, West Yorkshire, LS14 3BZ

## 9. Tree Works Reserve - Does not include recommendations for future risk.

Insured Property Tree Works	£2250.00
Third Party Tree Works	£0.00
Provisional Sum	£0.00

- The above prices are based on works being performed as separate operations.
- The above is a reserve estimate only.
- Ownerships are assumed to be correct and as per Section 6.
- A fixed charge is made for Tree Preservation Order/Conservation Area searches unless charged by the Local Authority in which case it is cost plus 25%.
- Should tree works be prevented due to statutory protection then we will automatically proceed to seek consent for the works and Appeal to the Secretary of State if appropriate.
- All prices will be subject to V.A.T., which will be charged at the rate applying when the invoice is raised.
- Trees are removed as near as possible to ground level, stump and associated roots are not removed or included in the price.
- Where chemical application is made to stumps it cannot always be guaranteed that this will prevent future regrowth. Should this occur we would be pleased to provide advice to the insured on the best course of action available to them at that time. Where there is a risk to other trees of the same species due to root fusion, chemical control may not be appropriate.

## 10. Limitations

This report is an appraisal of vegetation influence on the property and is made on the understanding that that engineers suspect or have confirmed that vegetation is contributing to clay shrinkage subsidence, which is impacting upon the building. Recommendations for remedial tree works and future management are made to meet the primary objective of assisting in the restoration of stability to the property. In achieving this, it should be appreciated that recommendations may in some cases be contrary to best Arboricultural practice for tree pruning/management and is a necessary compromise between competing objectives.

Following tree surgery we recommended that the building be monitored to establish the effectiveness of the works in restoring stability.

The influence of trees on soils and building is dynamic and vegetation in close proximity to vulnerable structure should be inspected annually.

**The statutory tree protection status as notified by the Local Authority was correct at the time of reporting. It should be noted however that this may be subject to change and we therefore advise that further checks with the Local Authority MUST be carried out prior to implementation of any tree works. Failure to do so can result in fines in excess of £20,000.**

Our flagging of a possible recovery action is based on a broad approach that assume all third parties with vegetation contributing to the current claim have the potential for a recovery action (including domestic third parties). This way opportunities do not "fall through the net"; it is understood that domestic third parties with no prior knowledge may be difficult to recover against but that decision will be fully determined by the client.

**A legal Duty of Care requires that all works specified in this report should be performed by qualified, arboricultural contractors who have been competency tested to determine their suitability for such works in line with Health & Safety Executive Guidelines. Additionally all works should be carried out according to British Standard 3998:2010 "Tree Work. Recommendations".**