Arboricultural Consultancy for Lloyds Bank

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 Terence Redhead and Mrs Rachel Redhead	Address	89 West End March, Cambridgeshire, PE15 8DJ		
Client	Subsidence Management Services	Contact	Alexandra Weller	Claim No.	IFS-LBG-SUB-19-0084888
ES Ref	SA-245549	Consultant	Keith Burgess	Contact No.	0330 380 1036
Report Date	12/02/2020				

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 semi-detached house. It has been extended with a two-storey extension to the rear and a conservatory addition to the right-flank which was subject to a previous claim in 2018. The property occupies a site that slopes gently downhill from left to right.

Damage relates to the front right-hand corner of the insured dwelling and the side conservatory where cracking indicates downward movement. We are aware that the party wall and rear extension has been underpinned c1991. Please refer to the engineers report for a full description of the claim history and damage.

3. Technical Reports

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

Soil Analysis	☑	Drain Report	☑	Foundation Detail	☑
Root Analysis	☑	Borehole Log	☑	Engineers Report	☑
Monitoring	☑				

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

Treeworks	
Local Authority	Fenland District Council
TPO / Conservation Area / Planning Protection Searches	Insured: TPO Adjacent & Adjoining properties: 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 engineers are satisfied that damage is due to clay shrinkage subsidence exacerbated by vegetation.

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.

A survey of the drainage system at the property has been undertaken and defects noted.

Atterberg testing has not established moisture depletion below foundation depth; soil moisture contents are noted to be closer to liquid-limit than plastic limit and therefore the soil may have been compromised by excessive water content (due to leaking drains).

Soils are also described as being Soft dark brown slightly gravelly / very clayey ORGANIC MATERIAL.

The above noted soil conditions are atypical of that expected where vegetation is deemed to be causal.

However, the footings of the subject property are within the normally accepted influencing distance of vegetation on site, whilst site Investigations revealed the presence of roots in Trial Pit / Borehole 1 & 2.

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 Fraxinus spp. (Ash).

We note monitoring is in place however readings are not yet available; in the event this shows a cyclical pattern of movement this will confirm the role of vegetation in the claim.

Given the above, where engineers confirm that they do not consider damaged or leaking drains to be a material cause of the current subsidence then vegetation is deemed to retain the capacity to be causal to the current movement / damage.

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

Based on our observations on site and with due regards to species profile, the Ash trees (T1 & T2) are considered the dominant features proximate to the area of movement, the source of the roots recovered and accordingly where vegetation is determined to be causal we have identified their collective / cohesive influence as the primary cause of any clay shrinkage subsidence damage.

Considering engineers conclusions and 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 arboricultural report are prescribed to give the most reliable arboricultural solution likely to restore long-term stability.

Consequently, complete removal of T1 & T2 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 footings 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.

The extent / impact of vegetation management required to restore and maintain long-term stability at this property is acknowledged.

However, 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.

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
T1	Ash	3	21	12.7	D - Unknown	Remove	Remove close to ground level and treat stump to inhibit regrowth. Distance relates to man house, tree 16.0m to conservatory, age relates to conservatory.
T2	Ash	3	21	14.7	D - Unknown	Remove	Remove close to ground level and treat stump to inhibit regrowth. Distance relates to main house, tree 17.2m to conservatory, age relates to conservatory.
Age Cat: 1 = Younger than property; 2 = Similar age to the property; 3 = Significantly older than property							

* Estimated

6.2 Future Risk Recommendations

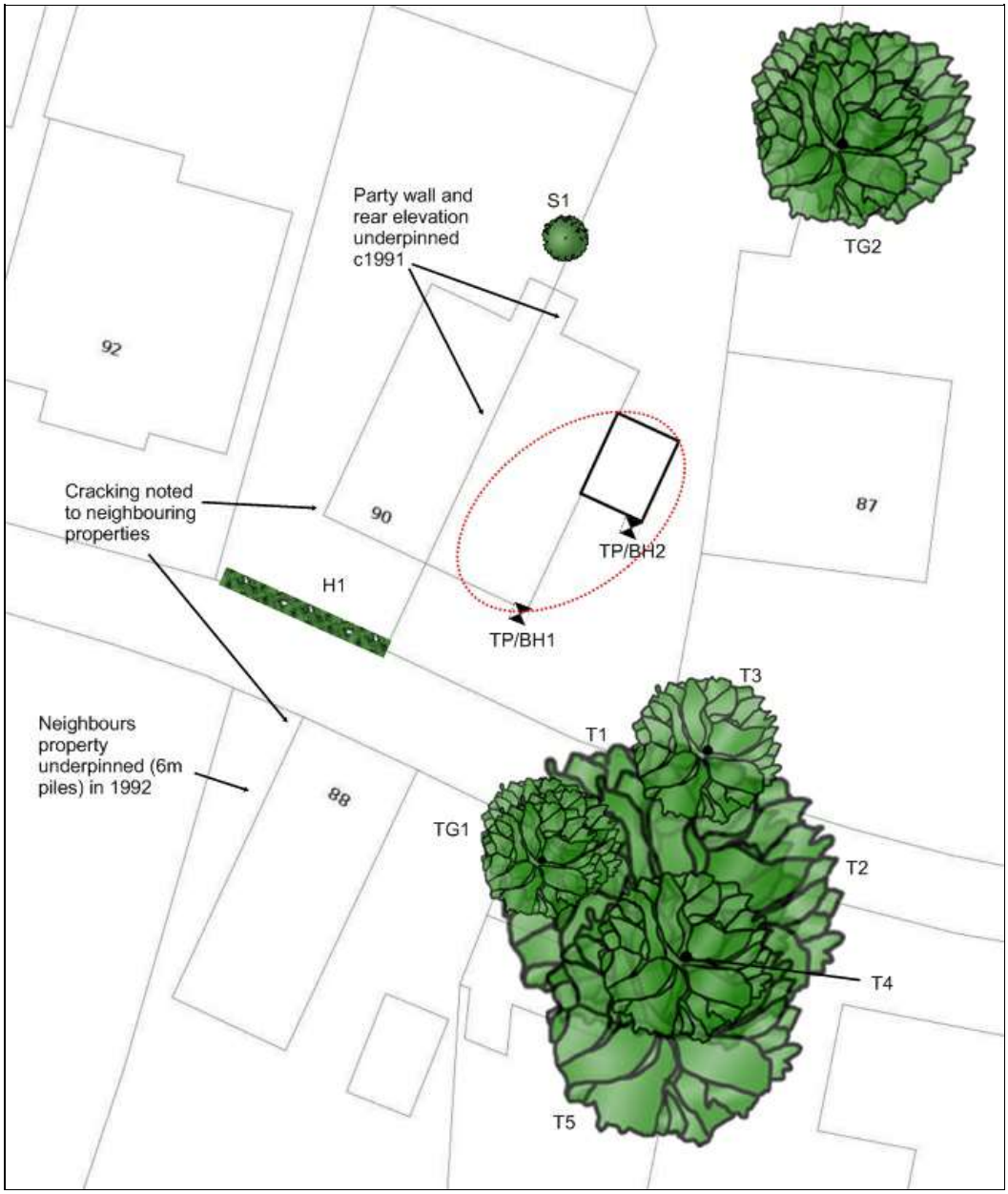
These recommendations may be subject to review following additional site investigations.

Tree No.	Species	Age Cat	Approx. Height (m)	Distance to Building (m) *	Ownership	Action	Requirement
H1	Box	1	1.5	3.9	A - Third Party	Action to avoid future risk	Do not allow to exceed current dimensions by way of regular pruning.
S1	Ceanothus	1	2	2.9	A - Third Party	Action to avoid future risk	Do not allow to exceed current dimensions by way of regular pruning.
T3	Plum	3	8	10.0	A - Third Party	Action to avoid future risk	Do not allow to exceed current dimensions by way of regular pruning. Distance relates to main house, tree 11.3m to conservatory, age relates to conservatory.
T4	Oak	3	12	16.7	D - Unknown	Action to avoid future risk	Do not allow to exceed current dimensions by way of regular pruning. Distance relates to main house, Age relates to conservatory.
T5	Oak	3	18	21	D - Unknown	Action to avoid future risk	Do not allow to exceed current dimensions by way of regular pruning. Age relates to conservatory
TG1	Mixed Species Group: Oak, Holly & Hawthorn.	3	8	9.2	D - Unknown	Action to avoid future risk	Do not allow to exceed current dimensions by way of regular pruning. Distance relates to main house, trees 13.8m to the conservatory, age relates to conservatory.
TG2	Mixed Species Group: includes Cherry & Cypress.	3	14	14.0	A - Third Party	Action to avoid future risk	Do not allow to exceed current dimensions by way of regular pruning. Age relates to conservatory.
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

8. Photographs

T1 - Ash

T2 - Ash

T3 - Plum

TG1 - Mixed species group

T4 - Oak

T5 - Oak

H1 - Box

S1 - Ceanothus

TG2 - Mixed species group

Date: 12/02/2020 Property: 89 West End March, Cambridgeshire, PE15 8DJ

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

Insured Property Tree Works	£0.00
Third Party Tree Works	£1800.00
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”*.