

# Arboricultural Appraisal Report

## Subsidence Damage Investigation at:

Helios House  
 Clarkes Lane  
 Barsham  
 NR34 8HN



CLIENT: 360Globalnet  
 CLIENT REF: LIV-SN-22-006091  
 MWA REF: SUB230530-13217  
 MWA CONSULTANT: Andy Clark  
 REPORT DATE: 03/07/2023

## SUMMARY

Statutory Controls		Mitigation (Current claim tree works)	
TPO current claim	Yes – W1	Policy Holder	Yes
TPO future risk	N/A	Domestic 3 <sup>rd</sup> Party	Yes
Cons. Area	No	Local Authority	No
Trusts schemes	No	Other	No
Local Authority: -	East Suffolk Council		

## Introduction

Acting on instructions from 360Globalnet, the insured property was visited on 22/06/2023 to assess the potential role of vegetation in respect of subsidence damage.

We are instructed to provide opinion on whether moisture abstraction by vegetation is a causal factor in the damage to the property and give recommendations on what vegetation management, if any, may be carried out with a view to restoring stability to the property. The scope of our assessment includes opinion relating to mitigation of future risk. Vegetation not recorded is considered not to be significant to the current damage or pose a significant risk in the foreseeable future.

This is an initial appraisal report and recommendations are made with reference to the technical reports and information currently available and may be subject to review upon receipt of additional site investigation data, monitoring, engineering opinion or other information.

This report does not include a detailed assessment of tree condition or safety. Where indications of poor condition or health in accessible trees are observed, this will be indicated within the report. Assessment of the condition and safety of third-party trees is excluded and third-party owners are advised to seek their own advice on tree health and stability of trees under their control.

## Property Description

The property comprises a 2 storey detached house of traditional construction, built C.1970's. The property benefits from a front porch and detached garage, which appear to be contemporary with the original construction age of the main building.

External areas comprise gardens to the front and rear.

The site is generally level with no adverse topographical features.

## Damage Description & History

Widespread damage is noted throughout the property, with extensive internal and external cracking evident. Cracking is reported to have first been observed during August 2022.

At the time of the engineer's inspection (16/01/2023) the structural significance of the damage was found to fall within Category 3 (Moderate) of Table 1 of BRE Digest 251. For a more detailed synopsis of the damage please refer to the surveyor's technical report.

We have not been made aware of any previous claims.

## Site Investigations

Site investigations were carried out by Drainage Repair Company on 03/04/2023, when two trial pits were hand excavated to reveal the foundations, with a borehole sunk through the base of the trial pit to determine subsoil conditions. A remote borehole was also excavated to install a deep datum for monitoring purposes and a drains survey was undertaken. Please refer to the Site Investigation report for further details.

## Discussion

Opinion and recommendations in this report are made on the understanding that 360Globalnet have identified clay shrinkage subsidence as a cause of building movement and damage.

Site investigations and soil test results have confirmed a plastic clay subsoil susceptible to undergoing volumetric change in relation to changes in soil moisture.

Roots were observed to a depth of 1.5m bgl in TP/BH1 and recovered samples have been positively identified (using anatomical analysis) as very decayed Rosoideae gp. [shrubs such as Roses, Brambles, Raspberries, Kerria and Potentilla]; the origins of which will mostly likely be the bramble growth of TG1 group.

Irrespective of the identification of recovered root samples, our survey has identified vegetation within influencing distance of the building with a current potential to influence soil volumes below foundation level; the most significant of which in relation to the current damage are the large nearby trees within the W1 mixed spp. woodland. The smaller vegetation of TG1 group and HG1 mixed spp. hedgerow will also likely have a contributory influence, albeit to a much lesser degree than the mature trees in W1.

Based on the technical reports currently available, engineering opinion and our own site assessment we conclude the damage is consistent with shrinkage of the clay subsoil related to moisture abstraction by vegetation.

In order to provide an arboricultural solution to mitigate the influence of the surrounding trees/vegetation, tree works recommendations are set out at Table 1 below.

Recommendations at this stage comprise removal of the larger nearby trees within the W1 mixed spp. woodland, along with removal of the proximal scrub growth of TG1 and management of the HG1 mixed spp. hedgerow. The small nearby shrubs of SG1 group should also be removed in order to negate any localised influence.

Consideration has been given to pruning alone as a means of mitigating the vegetative influence, however in this case, this is not considered to offer a viable long-term solution due to the proximity of the responsible vegetation. Recommended tree works may however be subject to change upon receipt of additional information.

## Conclusions

- Conditions necessary for clay shrinkage subsidence to occur related to moisture abstraction by vegetation have been confirmed by site investigations and the testing of soil and root samples.
- Engineering opinion is that the damage is related to clay shrinkage subsidence.
- There is significant vegetation present with the potential to influence soil moisture and volumes below foundation level.
- Roots have been observed underside of foundations and identified samples correspond to vegetation identified on site.

**Table 1 Current Claim - Tree Details & Recommendations**

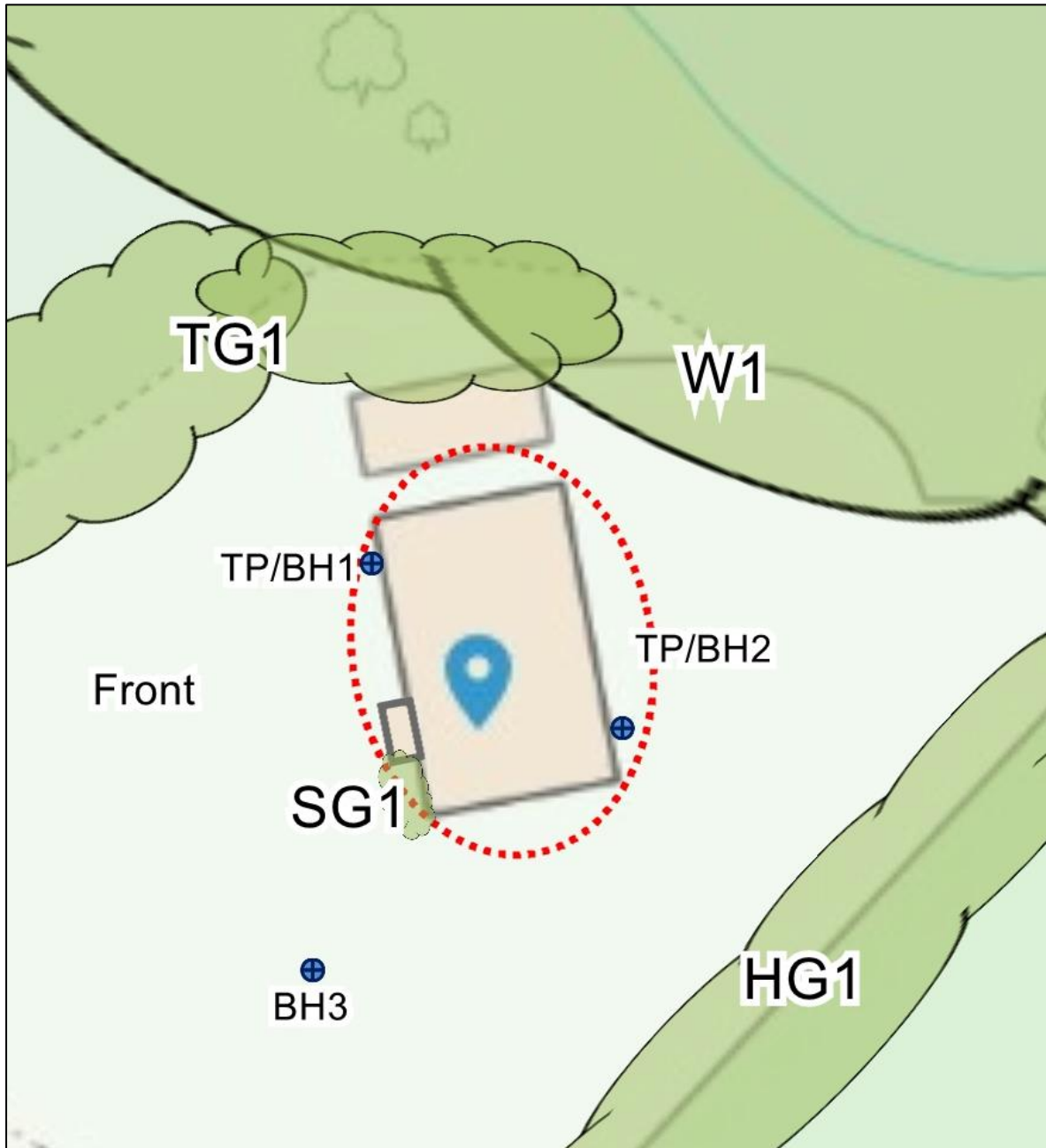
Tree No.	Species	Ht (m)	Dia (mm)	Crown Spread (m)	Dist. to building (m)	Age Classification	Ownership
W1	Mixed spp. woodland of mostly Oak, Ash and Field Maple with bramble / scrub understorey	19.5	600 Ms *	12.0	5.8 [to house]	Younger than Property	N A Smith Mardelle Clarkes Lane NR34 8HN
Management history		No significant past management noted. 0.3m to garage.					
Recommendation		Remove (fell) Oak, Ash and Field Maples stems within 20.0m of the building to near ground level and remove any regrowth as it emerges [Herbicide translocation risk with watercourse (pond)]. Remove (fell) understorey scrub within 10.0m of the garage to near ground level and treat stumps to inhibit regrowth.					
TG1	Mixed spp. group of mostly Bramble, Hawthorn and Blackthorn scrub	5.5	80 Ms *	5.0	7.9 [to house]	Younger than Property	Policy Holder
Management history		No significant recent management noted. 0.1m to garage.					
Recommendation		Remove (fell) all within 10.0m of the garage to near ground level and treat stumps to inhibit regrowth.					
SG1	Mixed spp. shrub group of mostly Rose, Cotoneaster, Choisya and Peony	2.0	10.0	2.0	0.2	Younger than Property	Policy Holder
Management history		Subject to past management/pruning - appears regularly pruned.					
Recommendation		Remove (fell) all woody shrubs to near ground level and treat stumps to inhibit regrowth. Retain only herbaceous plants in border.					
HG1	Mixed spp. hedgerow of mostly Hawthorn and Plum with lapsed understorey shrubs including Pyracantha, Smokebush, Lilac and Ceanothus	6.0	180 Ms *	5.5	6.5	Younger than Property	Policy Holder
Management history		Subject to past management/pruning – north-east end of hedge appears regularly trimmed and topped to approx. 1.5 / 2.0m. No significant recent management noted to remainder.					
Recommendation		Reduce height of unmanaged hedge section to approx. 1.5/2.0m and cut back sides to restore to suitable hedge no wider than 1.0 to 1.5m. Trim thereafter on an annual cycle to maintain as hedge at reduced dimensions. Hard prune lapsed understorey shrubs back to individual form no larger than 1.0m high by 0.5m spread and re-prune thereafter on an annual cycle to maintain at broadly reduced dimensions.					

Ms: multi-stemmed \* Estimated value

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Site Plan



Plan not to scale – indicative only



Approximate areas of damage



Images

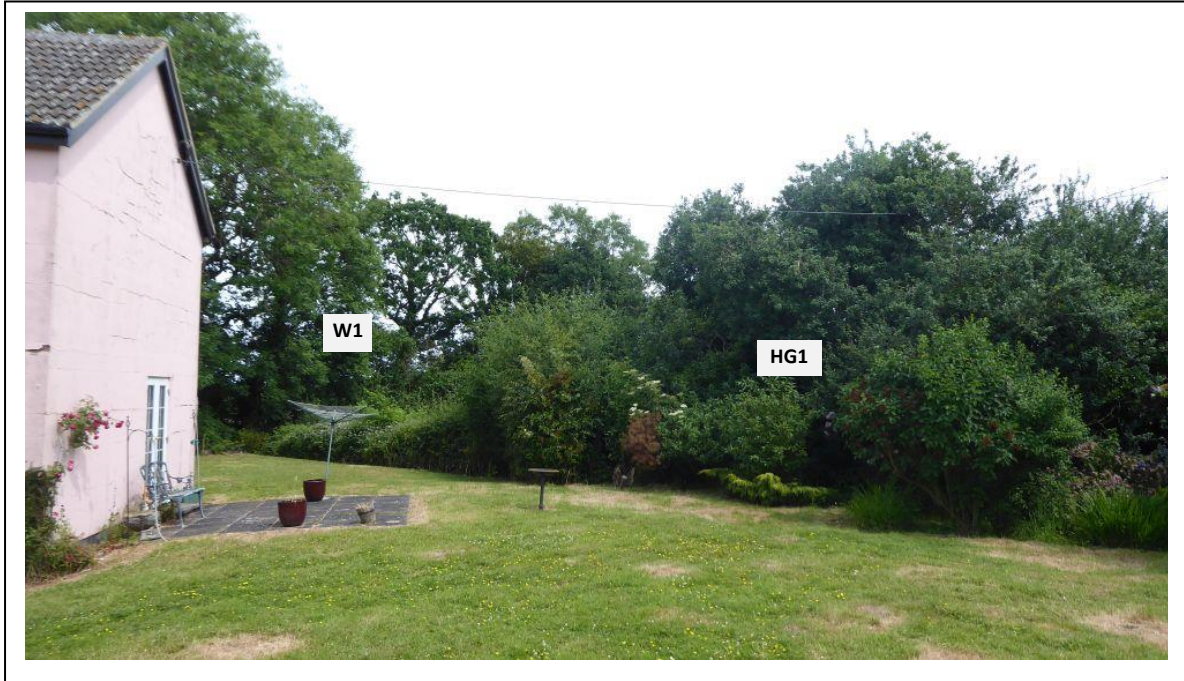


View from rear of adjacent sections of W1 mixed spp. woodland



Overview from frontage of W1 mixed spp. woodland with TG1 to left of garage





View of HG1 hedgerow to right of building with continuation of W1 mixed spp. woodland beyond



View of SG1 mixed spp. shrub group