Arboricultural Appraisal Report

Subsidence Damage Investigation at:

The Vicarage, 4 Webbs Meadow
Great Gransden
Sandy
SG19 3BL



CLIENT:	Auger
CLIENT REF:	181230.3.ARB - CJ
MWA REF:	SUB250328-16171
MWA CONSULTANT:	Andy Clark
REPORT DATE:	14/04/2025

SUMMARY

Statutory Controls			Mitigation (Current claim tree works)	
TPO current claim	No		Policy Holder	Yes
TPO future risk	No		Domestic 3rd Party	Yes
Cons. Area	Yes		Local Authority	Yes
Trusts schemes	No		Other	No
Local Authority: -	Huntingdonshire District Council			

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Introduction

Acting on instructions from Auger, the insured property was visited on 10/04/2025 to assess the potential role of vegetation in relation to subsidence damage.

We are instructed to provide opinion on whether 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 observations/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 two storey detached house of traditional construction, built C.1990.

External areas comprise gardens to the front and rear.

The property occupies a site that slopes gently downhill from front to rear.

Damage Description & History

Damage relates to the left-hand (north) side of the building with cracking indicative of downward movement towards the rear-left. Damage is reported to have first been observed during 2020.

At the time of the initial assessment the structural significance of the damage was found to fall within Category 2 (Slight) of Table 1 of BRE Digest 251. Further details of the damage can be obtained from Auger.

We have not been made aware of any previous claims.

Site Investigations

Site investigations were carried out by Auger on 12/02/2025, when three 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 drains survey was also undertaken.

Foundations:

Ref	Foundation type	Depth at Underside (mm)
TP/BH1	Concrete	1300
TP/BH2	Concrete	1450
TP/BH3	Concrete	1450

Soils:

Ref	Description	Plasticity Index (%)	Volume change potential (NHBC)
TP/BH1	Dry very stiff brown fine to medium gravelly silty CLAY	27	Medium
TP/BH2	Dry very stiff brown fine to medium gravelly silty CLAY	33	Medium
TP/BH3	Moist very stiff brown fine to medium gravelly silty CLAY	30 – 31	Medium

Roots:

Ref	Roots Observed to depth of (mm)	Identification	Starch content
TP/BH1	1300	Fagus spp. and Fraxinus spp.	Present
TP/BH2	1450	Pomoideae gp. and Fraxinus spp.	Present
TP/BH3	1450	A SHRUB species similar to Caprifoliaceae spp.	Present

Fagus spp. are Beech
Fraxinus spp. are Ash
Pomoideae gp. includes Apple, Pear, Hawthorn, Rowan, Whitebeam, Service tree and Medlar, and some shrubs including Pyracantha, Chaenomeles, Quince, Amelanchier and Cotoneaster
Caprifoliaceae spp. includes Laurestinus and Guelder-rose, Weigela, Snowberry and Honeysuckle

Drains: The drains have been surveyed and no significant defects identified.

Monitoring: No information available at the time of writing.

Discussion

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

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

Roots were observed below foundation depth in TP/BH1 at the rear left and identified as being Fagus spp. These will be from T1 Beech.

Roots were observed below foundation depth in TP/BH2 and TP/BH3 and recovered samples have been positively identified (using anatomical analysis) as Pomoideae gp., Fraxinus spp. and a SHRUB species similar to Caprifoliaceae spp.

The Fraxinus spp. roots retrieved from TP/BH2 will be from the Ash T4, with the Pomoideae gp. roots emanating from the smaller Hawthorn stems which make up TG2 group. The shrub species roots retrieved from TP/BH3 at the front right corner of the building are remote from the damage and not considered relevant.

Irrespective of the identification of recovered root samples, our survey has identified vegetation with the potential to influence soils below foundation level of the building/area of movement, the most significant of which is the T5 Oak. This large high moisture demand tree will have a significant presence of roots below the majority of the property footprint., as will T1 Beech, T2 Field Maple, and T4 Ash. The more distant T3 Ash may also have a degree of involvement, however this cannot be determined while the more proximal vegetation remains.

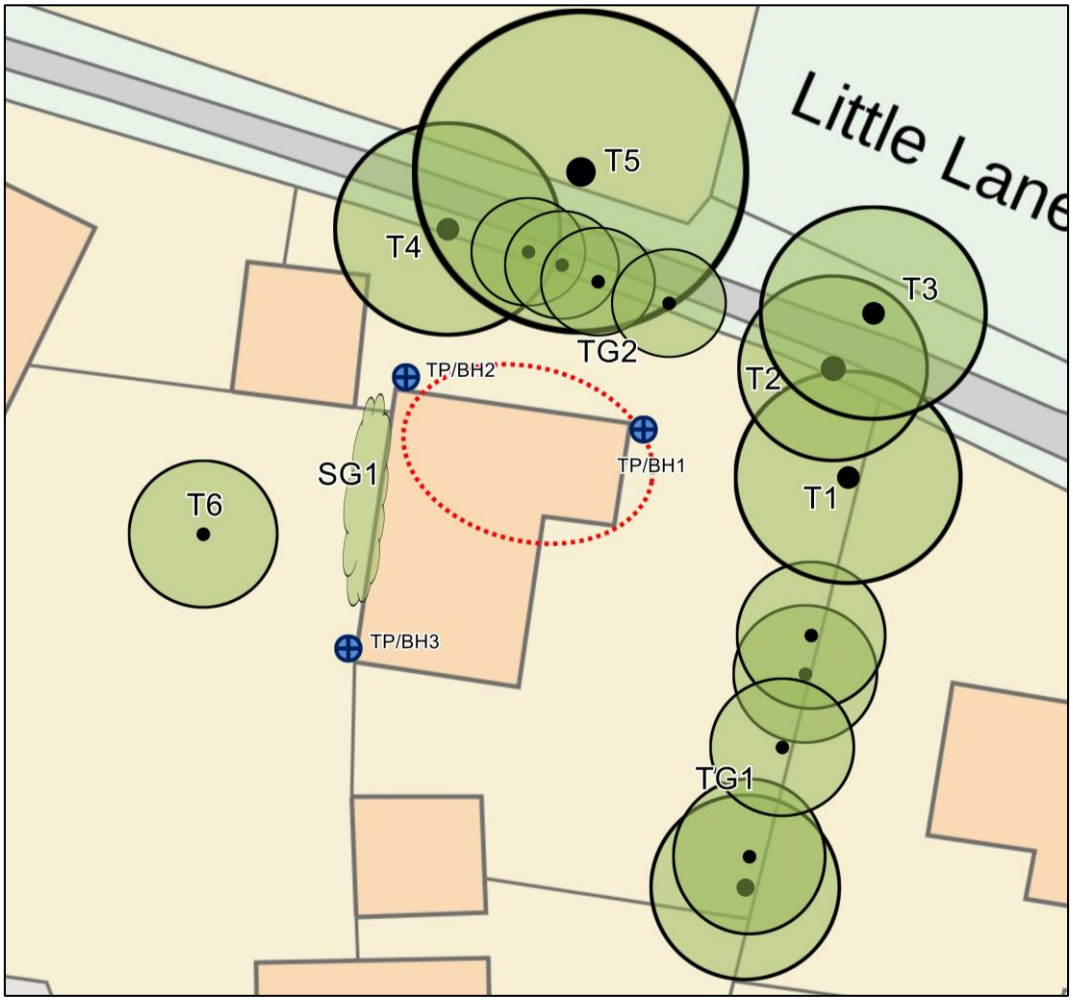
Based on the information currently available, engineering opinion and our own site assessment we conclude there is damage consistent with shrinkage of the clay subsoil exacerbated by the soil drying effects of vegetation.

If an arboricultural solution is to be implemented to mitigate the influence of the trees/vegetation considered to be responsible for the movement/damage, works set out at Table 1 below are recommended.

Where other vegetation recorded presents a potential future risk to building stability, management is recommended (see Table 2). Recommended tree works may however be subject to change upon receipt of additional information.

Consideration has been given to pruning alone as a means of mitigating vegetation influence, however in this case, this is not considered to offer a viable long-term solution due to the species characteristics, size and proximity of the responsible vegetation to the area of damage.

Site Plan



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Plan not to scale – indicative only

Approximate areas of damage

Tree/vegetation locations are based on what could be determined at the time of the survey.
It should be noted that this is not always clear due to lack of access or a restricted view of the trees/vegetation and may be disputed by property owners.
MWA can undertake land registry searches as required.

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

Tree No.	Species	Ht (m)	Dia (mm)	Crown Spread (m)	Dist. to building (m)	Age Classification	Ownership
T1	Beech	14.5	680	12.5	9.8	Older than Property	Policy Holder
Management history		No significant past management noted.					
Recommendation		Remove (fell) to near ground level and treat stump to inhibit regrowth.					
T2	Field Maple	13.5	520 *	9.0	7.4	Older than Property	No Registrations Local Authority Assumed
Management history		No significant past management noted.					
Recommendation		Remove (fell) to near ground level and treat stump to inhibit regrowth.					
T4	Ash	14.5	450 *	10.0	6.3	Older than Property	No Registrations Local Authority Assumed
Management history		No significant past management noted.					
Recommendation		Remove (fell) to near ground level and treat stump to inhibit regrowth.					
T5	Oak	22.0 *	1200 *	21.5	11.9	Older than Property	Third Party 16 Little Lane SG19 3AE
Management history		No significant past management noted.					
Recommendation		Reduce height to ~18.0m and crown spread to ~15.0m leaving balanced crown. Re-prune thereafter on a triennial cycle to maintain at broadly reduced dimensions. Removal may become necessary if movement persists.					

Ms: **multi-stemmed** *** Estimated value**

Table 2 **Future Risk** - Tree Details & Recommendations

Tree No.	Species	Ht (m)	Dia (mm)	Crown Spread (m)	Dist. to building (m)	Age Classification	Ownership
T3	Ash	14.5	550	13.5	11.2	Older than Property	No Registrations Local Authority Assumed
Management history		No significant past management noted.					
Recommendation		No works required at present (subject to review if movement persists).					
T6	Purple-leaved Plum	6.0	150 Ms *	5.5	7.1	Younger than Property	Third Party 3 Webbs Meadow SG19 3BL
Management history		No significant recent management noted.					
Recommendation		Maintain broadly at no larger than current dimensions by periodic pruning.					
TG1	Ash and Hawthorn group	8.0 - 11.5	120 - 280	6.5	9.4	Younger than Property	Policy Holder
Management history		No significant past management noted.					
Recommendation		Remove (fell) Ash to near ground level and treat stump to inhibit regrowth. Maintain remainder broadly at no larger than current dimensions by periodic pruning.					
TG2	Ash and Elder group	5.0	100 Ms *	Up to 4.0	4.6	Similar Age to Property	No Registrations Local Authority Assumed
Management history		No significant recent management noted.					
Recommendation		No works required at present (subject to review if movement persists).					
SG1	Mixed spp. shrub group of mostly Cotoneaster, Rose, Euonymus, Weigela, Jasmine and Passionflower	1.5 - 2.5	Up to 20	Up to 5.0	0.2	Younger than Property	Policy Holder
Management history		No significant recent management noted.					
Recommendation		Maintain broadly at no larger than current dimensions by periodic pruning.					

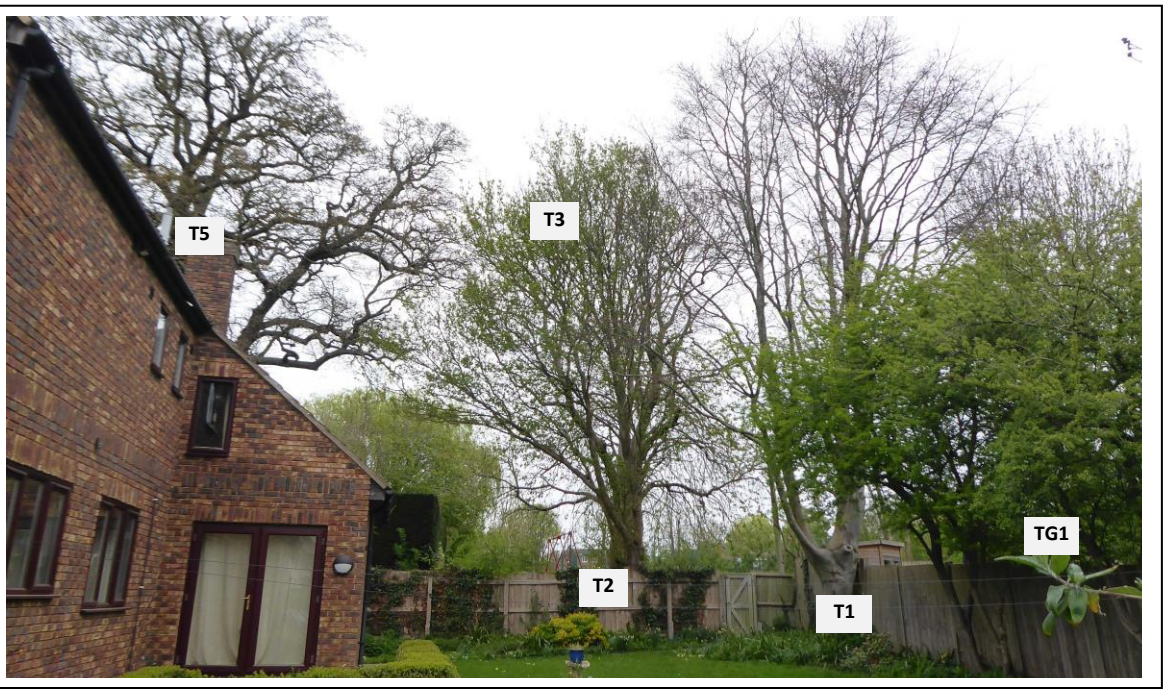
Ms: multi-stemmed *** Estimated or approximate value**

T - Tree; TG - Tree group; G – Group; H - Hedge; S - Shrub; SG - Shrub group; C - Climber; W – Woodland; ST - stump
Distance to building measurements are to the nearest point of the building unless otherwise stated.
Tree dimensions may be estimated or approximate based on accessibility.
Crown spread values are normally an estimate of the maximum spread but note tree crowns may be asymmetrical.

Photographs



View of TG1 group



View of T1 Beech, T2 Field Maple, T5 Oak with T3 Ash visible to rear of T2



View of T4 Ash, T5 Oak, T6 Purple-leaved Plum and SG1 shrub group

Management of vegetation to alleviate clay shrinkage subsidence.

All vegetation requires water to survive which is accessed from the soil. Clay soils shrink when water taken up by vegetation exceeds inputs from rainfall, which is at its maximum during the summer months. When deciduous vegetation enters dormancy and loses its leaves, and rainfall increases during the winter months, soil moisture increases and the clay swells. (Evergreen trees and shrubs use minimal/negligible amounts of soil water during the winter).

Buildings founded on clay soils are susceptible to movement as the clay shrinks and swells which when exacerbated by vegetation can result in building movement and cracking to walls.

Where damage does occur, pruning (reducing leaf area) can in some circumstances be effective in restoring stability however, removal of the influencing vegetation (trees, shrubs, climbers) causing the ground movement offers the most reliable and quickest solution in reducing seasonal volumetric changes in the clay, restoring building stability, and for this reason is frequently initially recommended as the most appropriate solution.

Often this is unavoidable due to the size or number of influencing trees, shrubs etc and their proximity to the building. Very heavy pruning of some species to a level required to effectively control its water use can result in the trees decline and ultimately death and is one factor considered when making recommendations for remedial and future management of a tree. Pruning alone, whilst reducing soil moisture uptake is often an unpredictable and unreliable management option in restoring building stability, either in the short or long term.