Arboricultural Appraisal Report

Subsidence Damage Investigation at:

51 Penistone Road
Fenay Bridge
Huddersfield
HD8 0AW

CLIENT:	Crawford & Company
CLIENT REF:	
MWA REF:	
MWA CONSULTANT:	John Graham B.Sc. Hons PhD
REPORT DATE:	24/10/2025

SUMMARY

Statutory Controls			Mitigation (Current claim tree works)	
TPO current claim	Yes – T1, T2, T3		Policy Holder	Yes
TPO future risk	Yes – T4, T6, TG1, TG2 (lime), TG3 (oak, ash), TG4		Domestic 3rd Party	No
Cons. Area	No		Local Authority	No
Trusts schemes	No		Other	No
Local Authority: -	Kirklees Council			

Introduction

Acting on instructions from Crawford & Company, the insured property was visited on 16/10/2025 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 detached 2 storey house built circa 1850, with a two storey rear/side extension dated circa 1970. External areas include gardens to all sides, two detached garages, and a section of disused railway to the left purchased by the policy holder. The site slopes from the rear and right down to the front and left.

Damage Description & History

The damage is to the rear left bay and was noted in early summer with external cracking only.

Site Investigations

Site investigations were carried out by Auger on 04/09/2025, when a single trial pit was 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	500

Soils:

Ref	Description	Plasticity Index (%)	Volume change potential (NHBC)
TP/BH1	Brown silty CLAY	26 - 36	Medium

Roots:

Ref	Roots Observed to depth of (mm)	Identification	Starch content
TP/BH1	500	*Fraxinus excelsior*	Positive
TP/BH1	1000	*Fraxinus excelsior*	Negative

Fraxinus spp. include common ash

Drains: The drains have been surveyed and defects identified.

Monitoring: No information available at the time of writing.

Discussion

Opinion and recommendations in this report are made on the understanding that Crawford & Company has 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. A comparison between moisture content and the liquid limits indicates moisture depletion/desiccation at the time of sampling at depths beyond normal ambient soil drying processes such as evaporation which is indicative of the soil drying effects of vegetation.

Roots were observed below foundation depth in TP/BH1.

Samples recovered from TP/BH1 have been positively identified (using anatomical analysis) as Ash, the origin of which will be T2 confirming its influence on the soils below the foundations.

Irrespective of the identification of recovered root samples, the roots of T1 and T3 are also likely to be present below foundation level in proximity to the area of movement/damage with the potential to influence soil moisture and volumes.

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. Having considered the information currently available, it is our opinion that T1, T2 and T3 are the principal cause of the current building movement and damage.

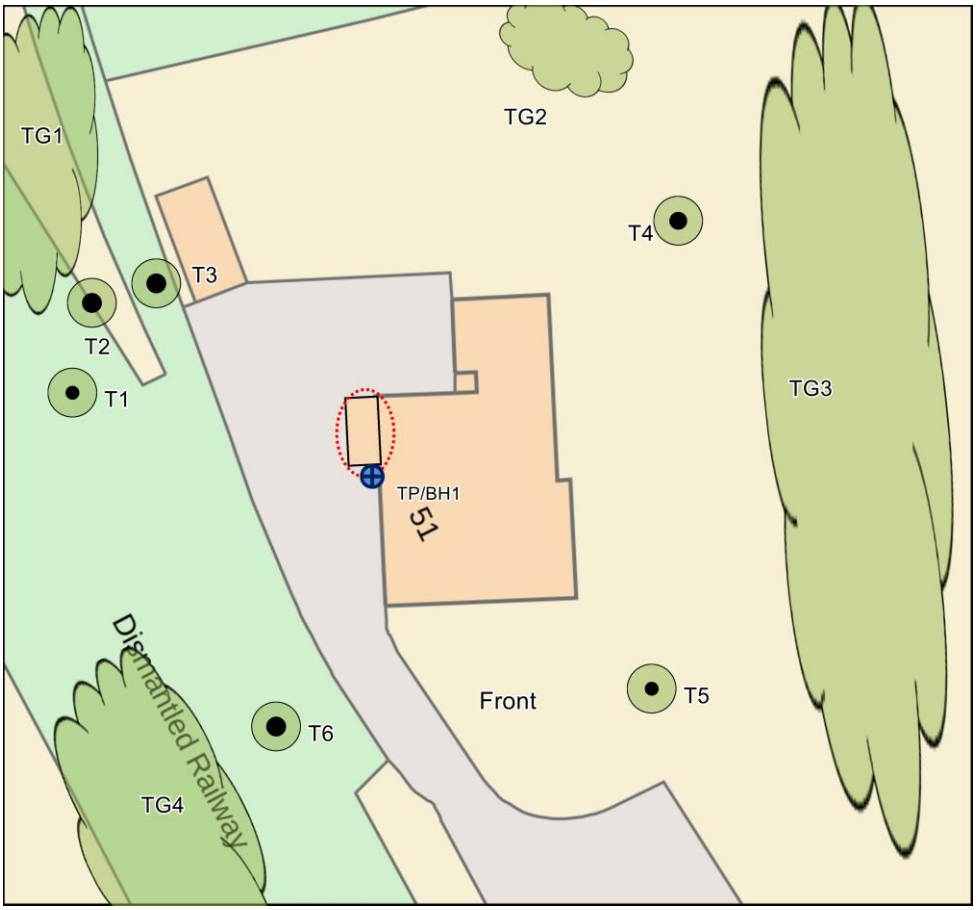
If an arboricultural solution is to be implemented to mitigate the influence of the trees/vegetation considered to be responsible for the movement/damage, works set out at Table 1 below are recommended.

Where other vegetation recorded presents a potential future risk to building stability, management is recommended (see Table 2).

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.

Recommended tree works may be subject to change upon receipt of additional information.

Site Plan



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	Height (m)	Dia (mm)	Crown Spread (m)	Dist. to building (m)	Age Classification	Ownership
T1	Oak	18	580	11	12.5	Older than extension(s)	Policy Holder
Management history		No significant recent management noted.					
Recommendation		Remove (fell) to near ground level. Owner to physically remove any regrowth (no chemical treatment due to translocation risk).					
T2	Ash	19	600 Ms *	12	13.5	Older than extension(s)	Policy Holder
Management history		No significant recent management noted.					
Recommendation		Remove (fell) to near ground level. Owner to physically remove any regrowth (no chemical treatment due to translocation risk).					
T3	Sycamore	18	550 Ms *	12	12	Older than extension(s)	Policy Holder
Management history		No significant recent management noted.					
Recommendation		Remove (fell) to near ground level. Owner to physically remove any regrowth (no chemical treatment due to translocation risk).					

Ms: multi-stemmed * Estimated value

T - Tree; TG - Tree group; G – Group; H - Hedge; S - Shrub; SG - Shrub group; C - Climber; W – Woodland; ST - Stump

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

Tree No.	Species	Height (m)	Dia (mm)	Crown Spread (m)	Dist. to building (m)	Age Classification	Ownership
T4	Sycamore	18	550 Ms *	12	12.5	Older than extension(s)	Policy Holder
Management history		No significant recent management noted.					
Recommendation		No works required at present (subject to review if movement persists).					
T5	Pear	7	530	8	10	Older than extension(s)	Policy Holder
Management history		Subject to past management/pruning.					
Recommendation		No works required at present (subject to review if movement persists).					
T6	Birch	16	350 Ms *	5	11	Older than extension(s)	Policy Holder
Management history		No significant recent management noted.					
Recommendation		No works required at present (subject to review if movement persists).					
TG1	Mixed species including; oak, sycamore, ash, hazel and lime	18	550 *	12	20	Older than extension(s)	Policy Holder
Management history		No significant recent management noted.					
Recommendation		No works required at present (subject to review if movement persists).					
TG2	Lime	18	550 *	11	13 *	Older than extension(s)	Policy Holder
Management history		No significant recent management noted.					
Recommendation		No works required at present (subject to review if movement persists).					

Ms: multi-stemmed * Estimated or approximate value

Table 2 **Future Risk** - Tree Details & Recommendations Cont'd

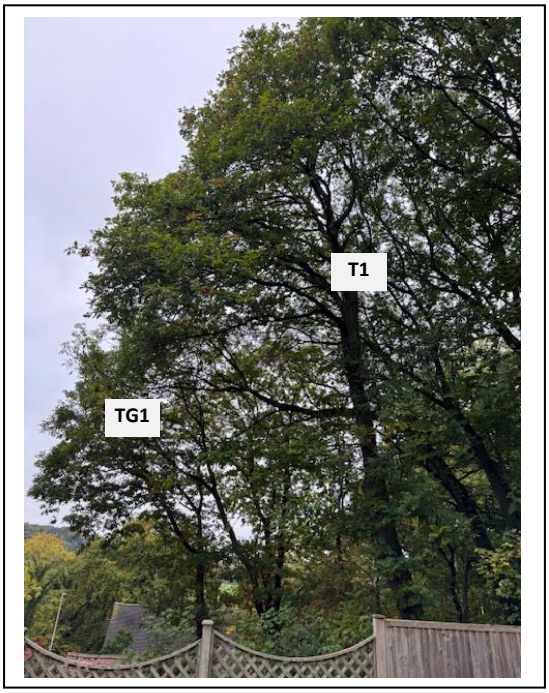
Tree No.	Species	Height (m)	Dia (mm)	Crown Spread (m)	Dist. to building (m)	Age Classification	Ownership
TG3	Mixed species including; oak, ash, birch, lime and hazel	18	550 *	12	14 *	Older than extension(s)	Policy Holder
Management history		No significant recent management noted.					
Recommendation		No works required at present (subject to review if movement persists).					
TG4	Mixed species including; oak, sycamore, ash, hazel and lime	18	550 *	12	16	Older than extension(s)	Policy Holder
Management history		No significant recent management noted.					
Recommendation		No works required at present (subject to review if movement persists).					

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

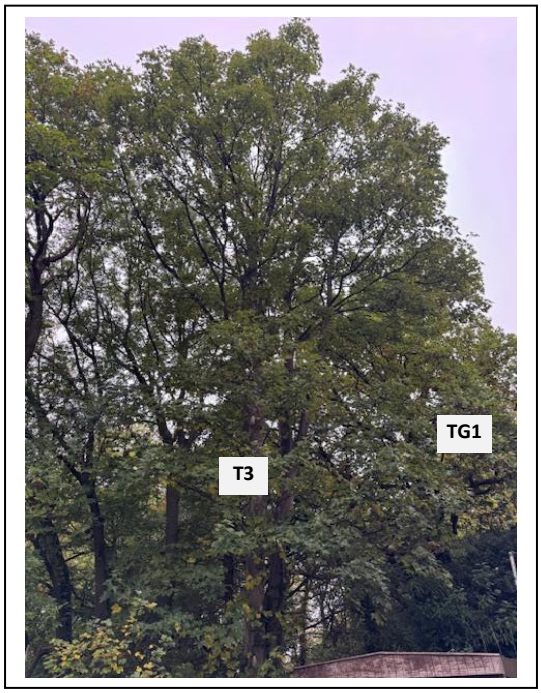
Distance to building measurements are to the nearest point of the building unless otherwise stated.
Tree dimensions may be estimated or approximate based on accessibility.
Crown spread values are normally an estimate of the maximum spread but note tree crowns may be asymmetrical.

Photographs



View of trees to the left of garage

View of trees to the left



View of trees to the rear left.

View of trees to the rear right.

View of rear right trees.

View of T5.

View of T6.

View of front left.

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.