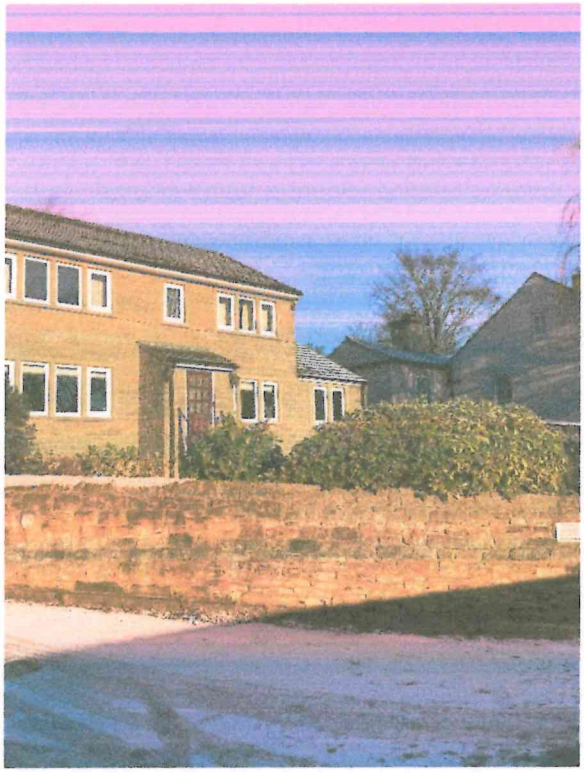
Arboricultural Subsidence Report



SUBSIDENCE INVESTIGATION AT:

56 Lower Lane
Gomersal
Cleckheaton
BD19 4HZ

Client:	Davies Group Limited
Reference No:	0891196
Enviro Trees UK Ref No:	TM2663
Report Date:	02/02/2026

Introduction

Enviro Trees UK was instructed by Davies to visit the insured property to:

- identify trees and shrubs within potential influencing distance of the area of damage at the insured property
- provide an opinion on the trees and shrubs being a causal factor in the damage to the insured property
- make recommendations on the immediate and future management of the trees and shrubs in relation to the damage at the insured property

The property was attended and assessed on 05/01/2026.

Shrinkable clay soil

Also known as shrink/swell clay, shrinkable clay soil shrinks as it dries and swells as it rehydrates. The top few metres of soil will tend to dry out in the summer months when the water demands of vegetation and evaporation exceed the replenishment by rainfall. During the winter months when trees have lost their leaves and/or become dormant, heavier rainfall exceeds the water demand of the vegetation and the soil moisture level increases again.

The composition and volume change potential of clay soils can be determined by laboratory analysis of soil samples.

Approximately 70% of all subsidence problems can be attributed to the behavior of clay soils. Structures built on clay soil will move up and down as the clay swells and shrinks through the seasons. Problems arise when different parts of a structure move at different rates leading to cracking of walls and foundations. This can be caused by a range of factors:

- Trees and other vegetation abstracting water leading to the drying and shrinking of the soil in one area more than another causing cracking. Approximately 60% of clay-related subsidence is exacerbated by the presence of trees and/or other vegetation.
- Leaking pipes can cause clay to swell and soften with a resultant drop in bearing capacity. The leak may also wash away the softened clay or smaller particles in non-cohesive soils leading to a loss of support for foundations.
- Different foundation depths: shallow foundations will be much more susceptible to seasonal volume changes of the clay whilst deep foundations may be founded below the level of seasonal influence. Different parts of a property built on different foundation depths may be subject to differential movement leading to cracking at the join.

This report concerns the first of these factors.

Almost half of all structural subsidence problems involve trees, and in a drought year this can increase to 70% of all claims. Size and leaf area are important factors in the water demand of vegetation so significant pruning will reduce the amount of water abstracted from the soil, but the effects are often short-lived. Trees and shrubs often respond to pruning with a prolific flush of growth that quickly replaces the lost leaf area. For this reason, removal of the influencing vegetation often offers a more reliable solution to rehydrate the moisture content of clay and stabilise the building. Where there are many trees and shrubs within potential influencing distance it may be appropriate to remove some and prune others. Follow-up monitoring will show whether the property has stabilised or whether further measures are required.

Environmental Impact Assessment (EIA)

The environmental impact assessment (EIA) process evaluates the potential biophysical, social and other effects of a subsidence request to avoid, mitigate or offset significant adverse effects. Its

Property details

The property is a two-storey detached house. External walls are of brick, with a pitched tiled roof.

The property occupies a reasonably level site with no adverse topographical features.

Council area

Kirklees Council

Details of damage

Damage to the main building of the property.

Recorded information

The following details were recorded for each tree or shrub and tabulated in the schedule of findings:

- Species
- Height in metres
- The radius of the canopy spread in metres
- Trunk diameter measured 1.5m above ground level (diameter at breast height – DBH) and number of stems (# denotes estimated measurement where trunk is inaccessible)
- Estimated age and life stage based on trunk diameter and species
    - Young: establishing, usually with good vitality but as yet of limited significance in the landscape.
    - Semi-mature: established, normally vigorous, increasing in height and of increasing landscape significance.
    - Early-mature: established; approaching mature height with crown spreading.
    - Mature: fully established trees around the middle of their typical life expectancy; generally retaining good vitality and achieving full height but their crowns still spreading.
    - Over-mature: fully established trees toward the end of their typical life expectancy with declining vitality.
- Distance from property in metres *('#' denotes estimated distance*)
- Tree owner/location
- Vitality, previous works and comments
- Statutory protection (Tree Preservation Order or Conservation Area)

Data for subsidence risk

Arboricultural assessment considered the Davies Subsidence Site Note Pack.

Underlying geology

The BGS Geology Viewer suggests that the bedrock geology is likely to be Falhouse Rock-Sandstone. These sedimentary rocks are fluvial, palustrine and shallow-marine in origin. They are detrital,

Site investigation plan showing location of boreholes

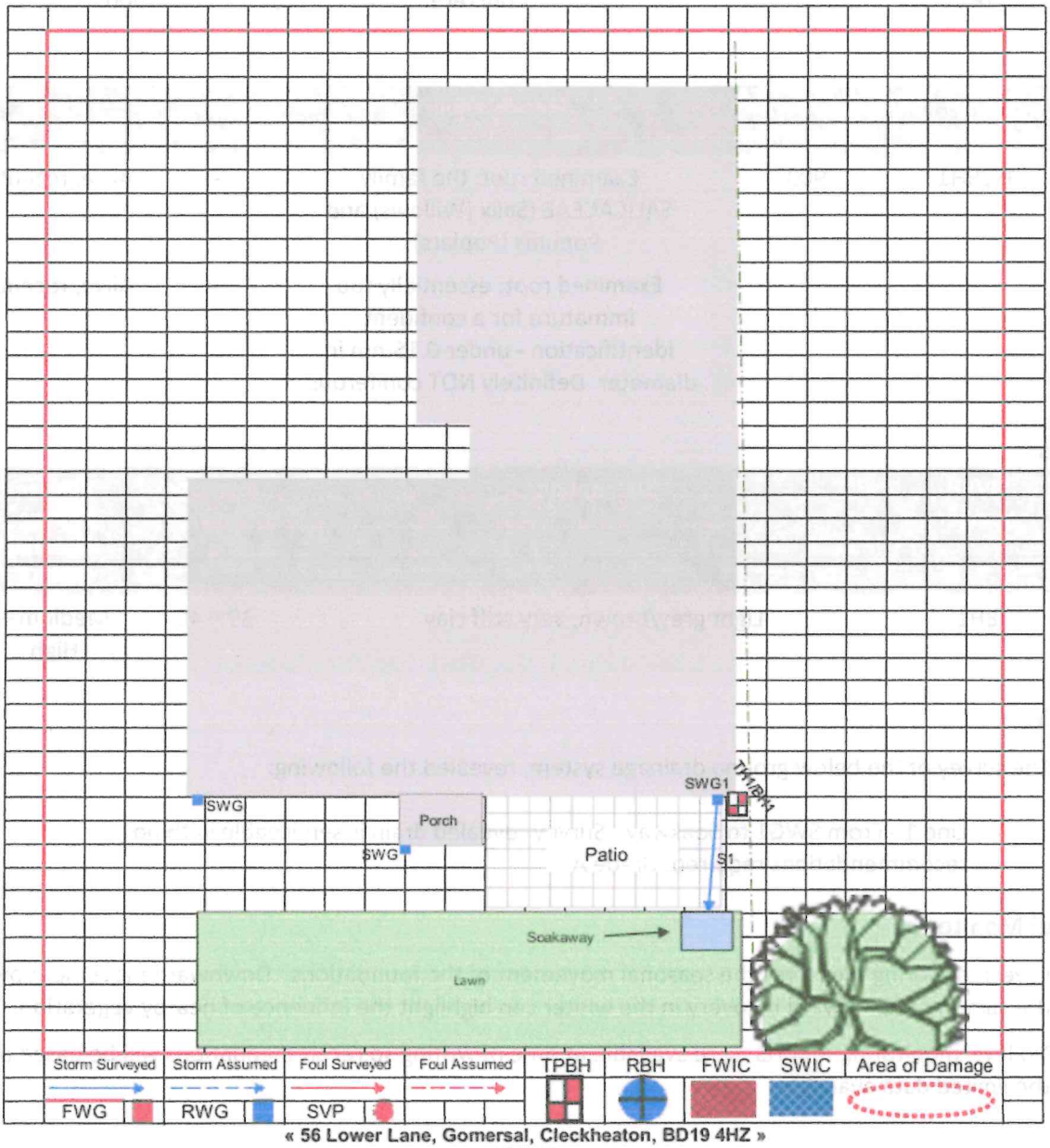
Site Investigation Report

Site Plan

Catalyst

Site Plan Not to Scale

This plan is diagrammatic only and has been prepared to illustrate the general position of the property and its relationship to nearby drains and trees etc. The boundaries are not accurate, and do not infer or confer any rights of ownership or right-of-way.



« 56 Lower Lane, Gomersal, Cleckheaton, BD19 4HZ »
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Schedule of findings

Ref.	Species	Height (m)	Canopy radius (m)	DBH (cm) No. of stems	Estimated age and Life stage	Distance to area of damage (m)	Tree owner/ location	Vitality, previous works, comments	TPO/ CA
T1	Willow	11	3	60 # 1	50 Mature	9	Neighbour 54 Lower Lane	Good. High-water demand.	CA
T2	Beech	10	2	30 # 1	60 Early-mature	14	Neighbour 68 Lower Lane	Poor. Moderate-water demand.	Unknown

 # denotes that the distance was estimated

Analysis

- Willow (T1) has a high-water demand and is within the 75% distance for damage in the C&R study. Laboratory analysis of the roots found below foundation depth during the site investigation identified them as Salix spp.
- Beech (T2) is toward the maximum distance for damage in the C&R study.
- At time of writing, no level monitoring reports were available to confirm seasonal movement therefore any recommendations to mitigate current or future risk are based on the limited data available.

Note: the radius of the zone of influence is taken from *"Tree Roots & Buildings"* Cutler, D.F. and I.B.K. Richardson, (1989) or determined in accordance with NHBC Standards Chapter 4 2021.

Conclusions

- Reference to the British Geological Society Geological Viewer indicates that the underlying soils are likely to include shrinkable clay.
- The site investigations have shown the presence of shrinkable clay soil.
- This survey has identified woody vegetation within influencing distance of the property.
- The site investigations have found roots below the foundations which have been matched to the vegetation identified in the schedule of trees and shrubs in this report.
- Engineers are satisfied that the damage to the insured property is attributable to clay soil shrinkage resulting from moisture abstraction by vegetation.

Recommendations - Current claim

These recommendations are made based on the information available and may be revised on receipt of additional information.

A period of level monitoring is also recommended to establish a seasonal pattern of movement that would indicate the influence of nearby vegetation.

Consideration has been given for pruning alone as a means of mitigating the vegetation impact. However, in this case this is not considered a viable long-term solution.

Ref.	Species & estimated age	Height DBH (m)	Dist. to area of damage (m)	Vitality & previous works	Tree owner/ location	Recommendation	TPO CA
T1	Willow 50 Mature	11 (0.60)	9	Good	Neighbour 54 Lower Lane	Remove close to ground level and treat stumps with herbicide to inhibit regrowth.	CA

 # denotes distance was estimated

contains embedded debris such as metal, stone, or concrete. In such cases, the stump may be left slightly higher to avoid equipment damage or safety risks.

Herbicide Application and Stump Management

Where herbicide treatment has been recommended or applied, it should be understood that herbicide acts as a growth inhibitor rather than a guaranteed means of killing a stump. While it can significantly reduce the likelihood of regrowth, complete dieback cannot be assured due to variations in species resilience, stump size, timing of application, and environmental conditions.

It remains the responsibility of the property owner or manager to monitor and manage the treated stumps following the initial application. This may include reapplying a form of commercially available herbicide where signs of regrowth appear, or arranging for further mechanical treatment (such as stump grinding or excavation) if regrowth persists.

Regularly removing any suckers or shoots that emerge from the stump or roots can also help suppress regrowth by depleting the remaining root system's stored energy. Consistent management over time is usually necessary to ensure the stump becomes inactive.

Enviro Trees cannot guarantee that herbicide treatment alone will permanently prevent regrowth, and subsequent management remains the ongoing responsibility of the property owner or manager.

Replacement Planting

Replacement planting may be possible but would require careful choice of species and position to avoid a recurrence of the current claim.