Davies
Subsidence

14 October 2019

HAVANT BOROUGH COUNCIL
- 4 FEB 2020
RECEIVED

Our Ref: 71814667

John Maunders Ltd
Persimmon House
Fulford
York
YO19 4FE

Dear Sirs

Claim for subsidence at
2 Acer Lane, Waterlooville, PO7 8RJ

We are Chartered Loss Adjusters and Engineers acting for the insurers of the above property which is owned by Miss Valler. There has been subsidence related crack damage to the above property which we consider has been caused by the action of roots from trees (for which you are responsible) on the shrinkable clay subsoil.

We enclose a copy of the Initial Technical Report & Arboricultural specialist report recommending action to the trees. I draw your attention to Table 1 Current Claim.

The purpose of this letter is:

1. To respectfully request that you take action, as noted in the report, to mitigate the damage caused by the trees for which you are responsible.

2. To advise that our Principals reserve the right to recover from you any costs incurred in rectifying the damage caused by the action of roots from your trees should you choose not to undertake appropriate tree mitigation measures.

Please note that this letter and the requests within it are written on behalf of the insurers of the above property and not at the instigation of the owners. It is hoped that it will not disrupt otherwise good neighbourly relations.

We recommend that the tree works be carried out by an insurance backed tree surgeon with consideration given to ensure that there are no restrictions prior to undertaking any tree works. We believe that you live within a conservation area and therefore you will need to apply to the local authority for permission to proceed with these works.

Finally, this letter is written on the understanding that you are the legal owner(s) of the vegetation in question. If this is not the position, please tell us by return confirming who you believe is the legal owner of the tree with contact details if possible. We look forward to hearing from you within 28 days of the date of this letter in any event as to the course of action that you propose to take and thank you in advance for your co-operation.

Should you require any further discussion, please contact the office below.

We thank you in anticipation.

Yours sincerely

[redacted]

Keeley Pelling
Claim Handler
Davies Subsidence
PO Box 2958
Stoke on Trent
ST4 9GH

[redacted]

Cc: *Modus Underwriting Limited*

Encs: *Technical Report*
Arborist Report

Arboricultural Appraisal Report

Subsidence Damage Investigation at:

2 Acer Lane
Woodleyville
PO7 8RJ



CLIENT:	Davies Group Ltd
CLIENT REF:	71814667
MWA REF:	SUB190802-5291
MWA CONSULTANT:	Mark Bisley (BSc Hons)
REPORT DATE:	27/09/2019

SUMMARY

Statutory Controls			Mitigation (Current claim tree works)	
TPO current claim	Yes T3		Policy Holder	No
TPO future risk	No		Domestic 3rd Party	No
Cons. Area	No		Local Authority	Yes
Trusts schemes	No		Other	No
Local Authority: -	Havant Borough Council			

MWA Arboriculture Ltd
Bloxham Mill Business Centre
Barford Rd, Bloxham
Banbury
OX15 4FF

Tel: 0191 432 9560
Email: office@mwaarboriculture.co.uk

Introduction

Acting on instructions from Davies Group Ltd, the insured property was visited on 24/09/2019 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 two storey, semi-detached house built c. 1980 with a garage to the rear.

External areas comprise gardens to the front and rear. The site is generally level with no adverse topographical features but land falls away to the right.

Damage Description & History

The current damage affects the front and right of the dwelling with internal and external cracking on both floors. It was first noticed in August 2018.

The property was the subject of a previous claim in 2013 which was resolved by removal of two Oaks to the front of the property. Repairs were completed in 2016.

At the time of the engineer's inspection (05/09/2018) 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 building surveyor's technical report.

Site Investigations

Site investigations were carried out by The Drainage Repair Company on 29/03/2019, 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)
TP1	Concrete	1800

Soils:

Ref	Description	Plasticity Index (%)	Volume change potential (NHBC)
TP/BH1	Firm to stiff, CLAY to 4.00m. Terminated at 4.00m.	38 - 44	Medium - High

Roots:

Ref	Roots Observed to depth of (mm)	Identification	Starch content
TP/BH1	2500	*Acer spp.*	-
		Quercus spp.	-

Acer spp. are the maples and includes Sycamore. *Quercus spp.* are the oaks.

Drains: The drains have been surveyed and defects identified, although leaking drains are concluded not to be a cause of the current damage.

Monitoring: No information available at the time of writing.

Discussion

Opinion and recommendations are made on the understanding that Davies Group Ltd are satisfied that the current building movement and the associated damage is the result of clay shrinkage subsidence and that other possible causal factors have been discounted.

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 plastic and liquid limits has not confirmed desiccation below the foundations. It should however be noted that the site investigation was conducted at a time when soil moisture content may be expected to have recovered from low levels in the previous year.

Roots were observed to a depth of 2500mm bgl in TP/BH1 and recovered samples have been positively identified (using anatomical analysis) as *Acer spp.* and *Quercus spp.*, the origin of which will be T1 and T3 respectively, confirming their influence on the soils below the foundations.

Two other Oaks were removed to the front of the property in relation to a previous claim in 2013/2014 and these could be the origin of the roots, but no decay was noted in the root report and some degradation of their roots may be expected by this time.

Irrespective of the identification of recovered root samples, the roots of TG1 are also likely to be present below foundation level in proximity to the area of movement/damage and influencing soil moisture and volumes.

T3 is a mature tree and not therefore likely to have significantly increased its water demand in recent times, while T1 and TG1 are younger and will be increasing their moisture uptake. This would suggest that T3 is not one of the main causes of the current damage, but due to its size and the presence of roots below the foundations action should be taken in relation to this tree.

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. Having considered the information currently available, it is our opinion that T1, T3 and TG1 are the principal cause of or are materially contributing to the current subsidence damage.

If an arboricultural solution is to be implemented to mitigate the influence of the implicated trees/vegetation we recommend that T1 is removed, TG1 partially removed and T3 reduced.

Recommended tree works may be subject to change upon receipt of additional information. Other vegetation recorded presents a potential future risk to building stability and management is therefore recommended.

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.

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
T1	Maple	10	300 Ms *	9	3	Similar Age to Property	Third Party David Wilson Homes Ltd
Management history		No recent management noted.					
Recommendation		Remove (fell) to near ground level. Owner to physically remove any regrowth (no chemical treatment due to translocation risk).					
T3	Oak	14 *	750	16	18 *	Older than Property	Third Party John Maunders Group Plc
Management history		No recent management noted.					
Recommendation		Reduce height to 12m and crown spread to 12m leaving a balanced crown. Prune on a biennial cycle to maintain at broadly reduced dimensions.					
TG1	Maple, Hazel	9 *	190 Ms *	8	5	Similar Age to Property	Third Party John Maunders Group Plc
Management history		No recent management noted.					
Recommendation		Remove (fell) specimens within 10m of dwelling to near ground level. Owner to physically remove any regrowth (no chemical treatment due to translocation risk). Do not allow remainder to exceed 10m in height.					

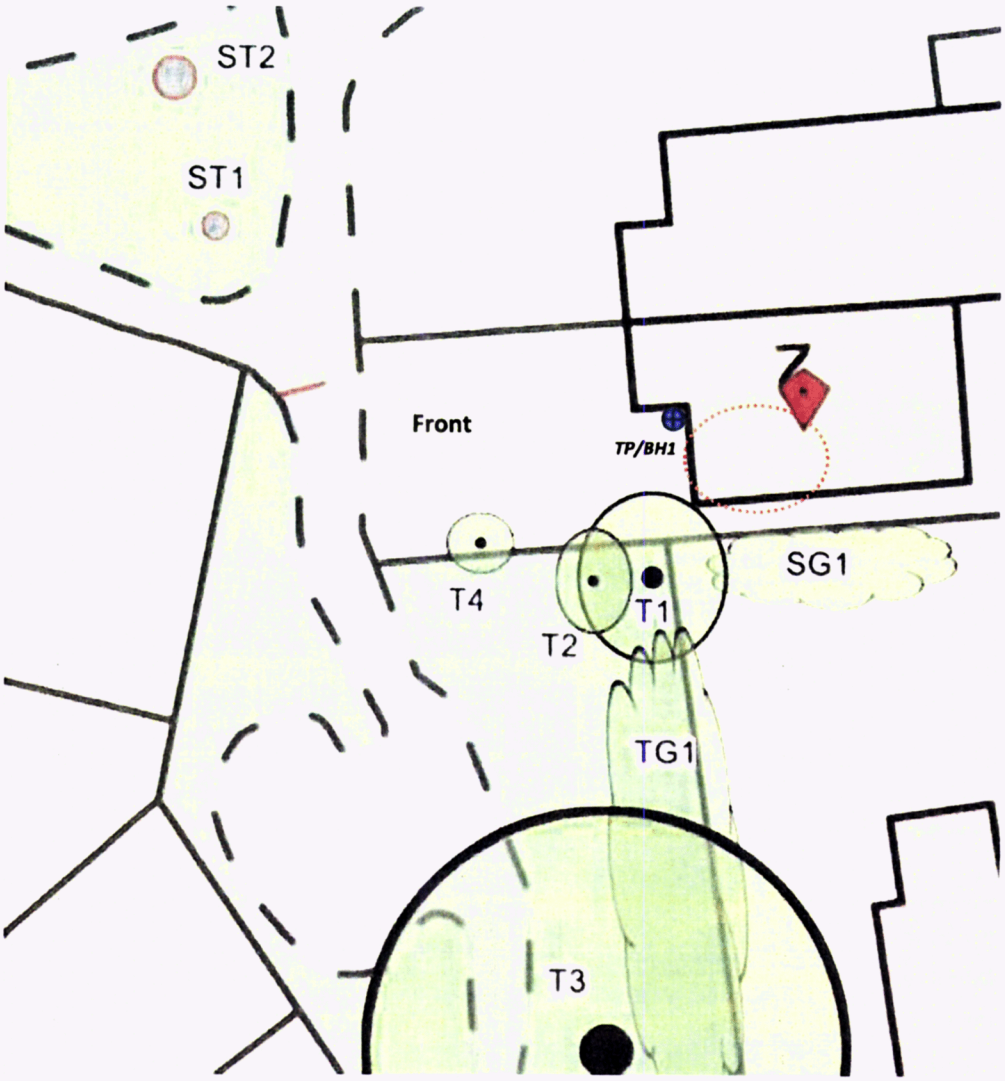
Ms multi-stemmed * Estimated value

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

Tree No.	Species	Ht. (m)	Dia. (mm)	Crown Spread (m)	Dist. to building (m)	Age Classification	Ownership
T2	Birch	6	175	5	6	Younger than Property	Policy Holder
Management history		No recent management noted. Suppressed by T1.					
Recommendation		Do not allow to exceed current dimensions.					
T4	Bay	1.5	10 Ms *	2	6	Younger than Property	Policy Holder
Management history		Subject to past management/pruning.					
Recommendation		Do not allow to exceed current dimensions.					
ST1	Oak	-	-	-	12	-	Third Party David Wilson Homes Ltd
Management history		No regrowth present.					
Recommendation		No works.					
ST2	Oak	-	-	-	14	-	Third Party David Wilson Homes Ltd
Management history		No regrowth present.					
Recommendation		No works.					
SG1	Euonymus, Forsythia	2 *	65 *	2 *	1.5 *	Younger than Property	Third Party 5 Cornbrook Grove PO7 8RD
Management history		Subject to past management/pruning.					
Recommendation		Do not allow to exceed current dimensions.					

Ms multi stemmed * Estimated value

Site Plan



Plan not to scale – indicative only

Approximate areas of damage

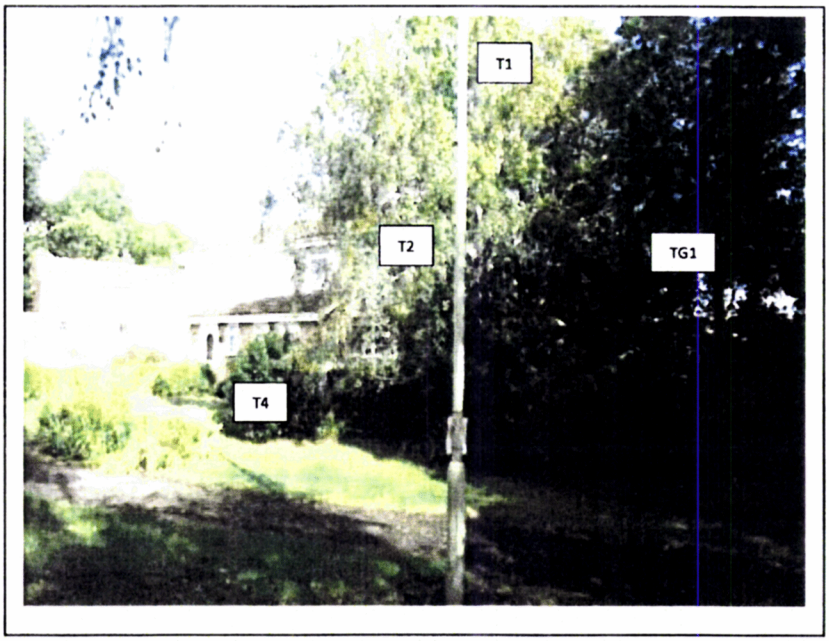
Images



View of property from front left



View of trees to front right



View of property from front right

Davies
Subsidence

INITIAL TECHNICAL REPORT

Retained

DATE OF ISSUE:	13th September 2018
OUR REFERENCE NO:	71814667
YOUR REFERENCE NO:	320180814001584

Modus Underwriting Limited
Davies Group Ltd (Stoke)
PO Box 3061
Trinity Street
Hanley
Stoke-on-Trent
Staffordshire
ST4 9ND

Miss Valler
2 Acer Lane
Woodleyville
PO7 8RJ



General view of property

Davies Subsidence is a division of the Davies Group Ltd, Registered Company Number 06479822. Registered in England and Wales. Registered Address 8 Lloyds Avenue, London EC3N 3EL

Davies
Subsidence

POLICYHOLDER DETAILS

[redacted]

POLICY INFORMATION, HISTORY & TIMESCALES

[redacted]

Policy wording:	Modus Underwriting Limited
Authority:	Retained
Date of construction:	1980
Date of purchase:	April 2015
Date of policy inception:	01 April 2017
Date damage first noticed:	13 August 2018
Date claim notified to insurers:	14 August 2018
Date of our initial inspection:	05 September 2018
Supposed cause:	Subsidence

[redacted]

INTRODUCTION

The technical and insurance aspects of this claim are being overseen by our Regional Technical Manager, James Leaver BEng(Hons) MCIOB Cert CII, in accordance with our Project Managed Service.

This report has been prepared specifically in connection with the current insurance claim and is not a structural survey. As such, this report should not be relied upon as a statement of structural adequacy. It does not deal with the general condition of the building, decorations, services, timber rot, infestation or the like and does not include any part of the building that is either covered or inaccessible.

DESCRIPTION OF PROPERTY

The risk address is a 3 bedroom semi-detached domestic dwelling comprising mainly brick elevations beneath a pitched roof clad in tiles.

The property is arranged over two storeys and is believed to have been constructed in the early 1980's. There is a detached garage to the rear which was constructed at the same time as the house.

TOPOGRAPHY & GENERAL LOCATION

The property is located on a level site, with no adverse features noted.

GEOLOGY

The precise geology in the immediate area can only be established by undertaking localised site investigations. However, published geological data suggests that the property is underlain by soils from the London clay formation. Superficial geology has not been recorded.

Our own knowledge and experience of the area would suggest that the property sits in a location where incidences of subsidence are relatively high.

VEGETATION

The following describes the major items of vegetation that are within influencing distance of the property and could therefore be implicated in the current damage:

Type of tree	Silver Birch	Field Maple	Oak
Approx. height	6.0m	10.0m	18.0m
Approx. distance	6.6m	4.0m	16.0m
From where	Front right corner of house	Front right corner of house	Front right corner of house
Ownership (PH or TP?)	TP	TP	TP
If TP - Name of TP	Possibly John Maunders Group Ltd	Possibly John Maunders Group Ltd	Possibly John Maunders Group Ltd

	(original developers)	(original developers)	(original developers)
If TP – Address of TP	Persimmon House Fulford YORK YO19 4FE	Persimmon House Fulford YORK YO19 4FE	Persimmon House Fulford YORK YO19 4FE
TPO (if known)	Unknown	Unknown	Unknown

CIRCUMSTANCES

During the course of our discussions with the policyholder we were advised of the following circumstances which led to the claim being presented:

The policyholder purchased the property in April 2015. During the course of the purchase the insured became aware that the property was the subject of a previous claim for subsidence damage affecting the front right-hand corner of the property. During our inspection the policyholder allowed us to view the homebuyer questionnaire filled out by the previous owners. Under the section enquiring about any previous insurance claims, the previous owners confirmed that there had been a previous claim for "*house movement*". The policyholder's own homebuyer survey confirmed that there was evidence of historic cracking which was understood to be the result of "*tree root action*". The surveyor confirmed that two oak trees had been removed from public land nearby, and repairs had been completed but not to a particularly good standard. The surveyor was also able to obtain a copy of a certificate of structural adequacy (CSA) issued by The Innovation Group dated February 2013. The policyholder provided us with a copy of this CSA during our inspection. The CSA confirms that the previous claim related to damage resulting from "*Vegetation*" and that following removal of vegetation, a period of monitoring confirmed stability. The document also confirms that the repairs were cash settled. Up to this point, there had been no mention of subsidence in any of the documents.

The policyholder advises that at the time of purchase she was going through some personal issues relating to a previous relationship, and was looking to purchase a property quickly. The presence of the poor repairs did not seem to be a cause for concern, and in fact the insured confirms she had not noticed them when she initially viewed the property but also adds that she viewed the property at night. The pre-purchase survey report did not suggest that there was anything to be concerned about and recommended further cosmetic repairs to improve the appearance.

The policyholder advises that when taking out buildings insurance at the point of exchange of contracts, she was informed by an insurance company that there had been a previous subsidence claim at the property. The policyholder advises that cover was provided by Direct Line for her first year at the property, and following on from this she engaged the services of brokers Highworth Insurance, who advertise as being able to provide insurance for properties with a history of subsidence. The policyholder advises that she fully disclosed the previous claim to both Direct Line, and Highworth Insurance, and has obtained buildings insurance via Highworth Insurance since 2016. The policyholder added that Highworth Insurance were specifically chosen because of their expertise in providing insurance following subsidence problems.

The policyholder confirms that further repairs were undertaken externally in November 2016. These repairs involved the installation of 12 helical reinforcing bars within the front and right-hand elevations at the locations of previous repairs. The policyholder advises that she arranged these

repairs for her own peace of mind, not because there had been any deterioration in the previous repairs completed by the previous owner.

No problems were experienced at the property until this Summer. The policyholder advises that she returned from holiday on the 14th of August to find severe cracking in the same areas as previous repairs. The claim was therefore submitted to insurers.

DESCRIPTION OF DAMAGE

The damage takes the form of tapered diagonal cracking, up to 5mm in width, predominantly to the front elevation but some cracking does extend around the front right corner of the property on to the right elevation. Internally the cracking affects the kitchen and front right bedroom above.

Significant historic distortions are also evident from the previous claim, as well as the poor repairs noted in the homebuyer survey obtained at purchase. It is clear that the previous owners took a cash settlement for the repairs, but did not complete the required works. The repairs carried out appear to be cosmetic in nature as opposed to structural, and have been poorly finished.

The damage is indicative of a pattern of downward and rotational movement to the front right-hand corner of the house.

We would draw attention to the photographs attached as Appendix 1.

CATEGORY OF CRACKING

In accordance with Table 1 of BRE Digest No.251, (as reproduced below), the current cracking in the property would be described as category 2, however the level of historic distortion as a result of poor previous repairs would be classed as category 3.

Category 0	Negligible	Less than 0.1mm
Category 1	Very slight	0.1-1.0mm
Category 2	Slight	1mm to 5mm
Category 3	Moderate	5mm to 15mm
Category 4	Severe	15mm to < 25mm

CAUSE OF DAMAGE

From our initial visual inspection, we would confirm the following:

The pattern of cracking is indicative of downward movement to the front right-hand corner of the property. The timing of the movement in July/August 2018 follows a prolonged period of hot and dry weather. The geological survey maps for the area confirm the subsoil to be London clay, and the previous subsidence claim for damage due to clay shrinkage subsidence confirms that the house is underlain by clay. There are a number of trees within influencing distance of the front right-hand corner of the property, which are believed to be owned by the original developers of the site.

In our opinion it is therefore extremely likely that the damage is the result of further clay shrinkage subsidence brought about by the moisture demands of nearby vegetation.

The trees that were removed during the previous claim were located to the front and left of the property, approximately 16 metres from the front right-hand corner of the building. Insurers will note that there are trees listed above which are much closer to the front right-hand corner of the property, and therefore it is puzzling as to why these were not removed as part of the previous claim, as it is likely that these would have been the dominant cause of the movement at that time.

DISCUSSION

The pattern of cracking is indicative of downward movement to the front right-hand corner of the property. The timing of the movement in July/August 2018 follows a prolonged period of hot and dry weather. The geological survey maps for the area confirm the subsoil to be London clay, and the previous subsidence claim for damage due to clay shrinkage subsidence confirms that the house is underlain by clay. There are a number of trees within influencing distance of the front right-hand corner of the property, which are believed to be owned by the original developers of the site.

In our opinion it is therefore extremely likely that the damage is the result clay shrinkage subsidence brought about by the moisture demands of nearby vegetation.

RECOMMENDATIONS

In order to prevent further movement, the vegetation will need to be removed. The owners of the vegetation will therefore need to be identified and contact made with them to request removal of their trees. Site investigations will be required in order to gather evidence to present to the third party, as well as level monitoring data.

Before accepting liability and proceeding with the above actions, consideration will need to be given as to whether the previous subsidence claim was disclosed when cover was granted, and also whether a limit should be placed on the level of indemnity in view of the condition of the repairs to the property prior to the loss.

APPENDICES

Attention is drawn to the following appendices:

Appendix 1: Photographs
Appendix 2: Site Plan

APPENDIX 1: PHOTOGRAPHS



Front view



Trees to right of property



Stump from previously removed trees

Davies
Subsidence



Cracking below front kitchen window



Cracking to front right corner



Render cracking to front right corner



Cracking below kitchen window

Davies
Subsidence



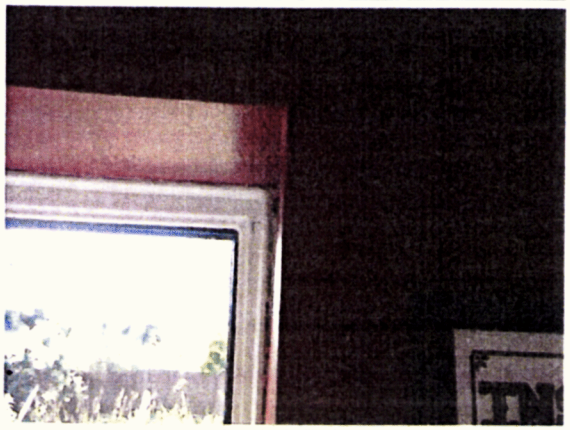
Cracking above kitchen window



Separation of worktop



Separation of window board



Separation of window frame

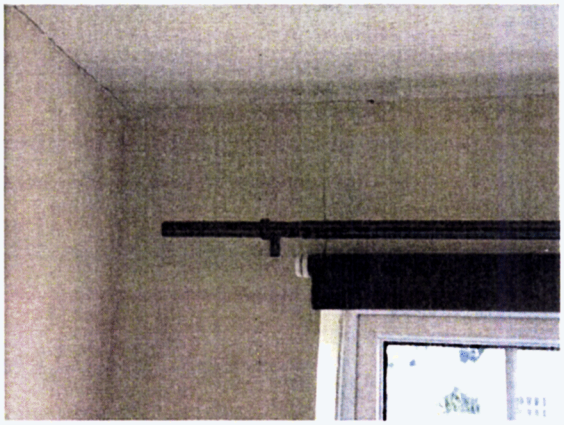
Davies
Subsidence



Crack below bedroom window



Cracking to front right corner of bedroom

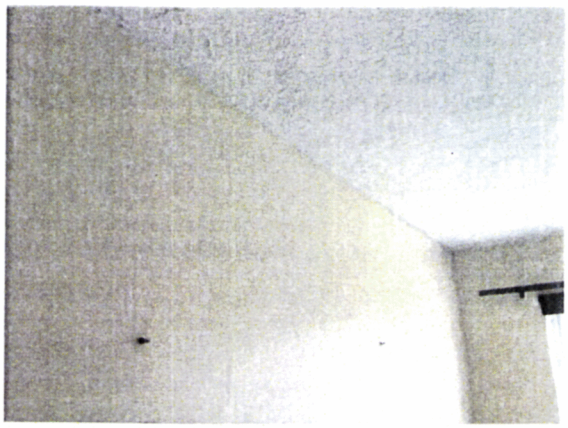


Cracking above bedroom window



Cracking above bedroom window

Davies
Subsidence



Separation along right wall/ceiling junction in front bedroom



Cracking to rear right corner of front bedroom



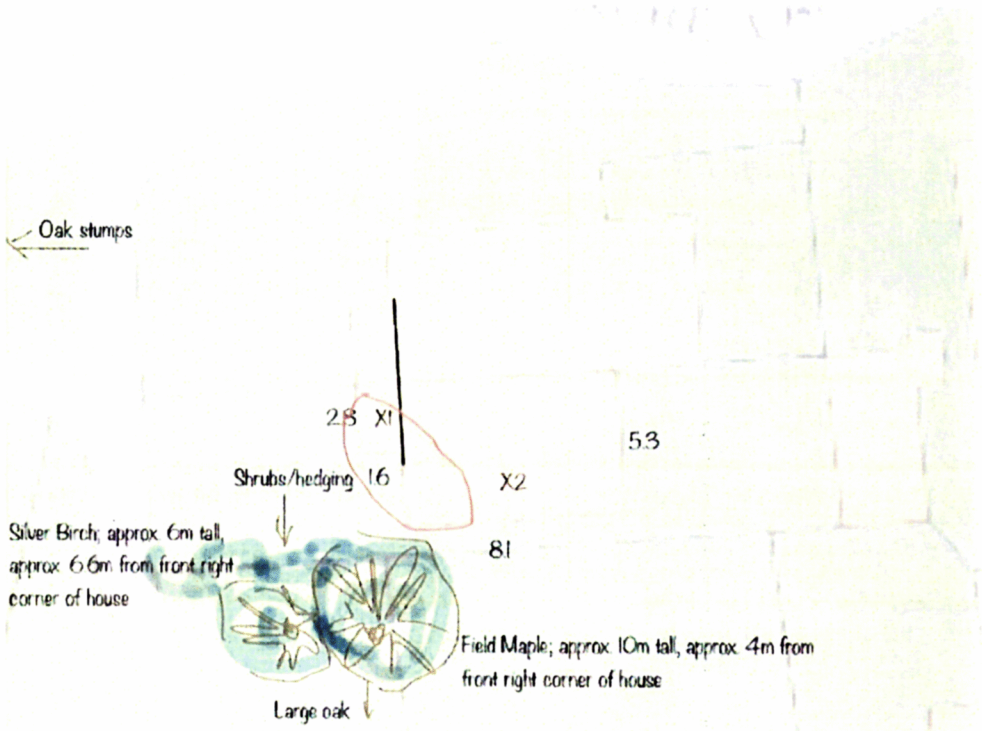
Distortion to bedroom window frames

Davies Subsidence

APPENDIX 2: SITE PLAN

KEY

- Foul Drain
- SW Drain
- Foul IC
- SW IC
- Foul DP
- SW DP
- Hedge
- Shrub
- Conifer
- Broad leaf tree
- Area of damage
- Trial hole
- Borehole
- Trial/BH
- Level monitoring point
- Site Boundary



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.


Davies
Subsidence