

2 Tree Claim - 20a Crescent Rd

18 Crescent Road London N8 Limited
Flat 1, 18 Crescent Road
London
N8 8AX

Please Ask For: Jessica Hill
Email: Jessica.Hill@crawco.co.uk
DDI: 0151 452 0067

Our Ref: 100069.6068/JH

Your Ref:

Date: 17/03/23

Dear Sirs,

Re: Our Insurer client: AXA Insurance PLC
Our Client's Policyholder: Miss Suzy Bennett
Risk Address: 20a Crescent Road
London
N8 8AX

REQUEST FOR TREE REMOVAL

We refer to the above matter and previous correspondence dated 10th February and 24th of February sent by Crawford & Company Adjusters on behalf of our insurer client and their Policyholder. We have been instructed as you have failed to comply with the requests within previous correspondence.

CURRENT POSITION

You have previously been provided with clear evidence of the roots of the T1 Oak vegetation under your ownership, trespassing under our client's insured's property. You have been provided with the site investigation and Arboricultural reports which conclusively prove the roots are live and are taking moisture from the clay subsoil, thus causing the property to subside in the dry months and sustain damage.

Despite numerous requests for removal, you have failed to respond to our client's correspondence and / or carry out the requested tree works. The Expert Arborist has confirmed that unless is removed immediately the property will sustain further damage.

To date, the reserve to rectify the damage caused by the above vegetation stands at £8,000.00.

DOCUMENTATION

For completeness, please find enclosed the following evidence in support of our client's position:

1. Technical report dated 7th April 2022
2. Site investigation report dated 16th May 2022
3. Arboricultural report dated 15th July 2022
4. Level monitoring up to 9th February 2023

Crawford Legal Services, Suite 7D, The Plaza, Old Hall Street, Liverpool, L3 9QJ
T: 0151 433 0802 | F: 0151 242 3223

www.crawfordlegalservices.co.uk

Crawford & Company Legal Services Limited is authorised and regulated by the Solicitors Regulation Authority under registration number 631335.

A list of directors is available at our registered office: Suite 7D, The Plaza, Old Hall Street, Liverpool L3 9QJ
Registered in England and Wales under company number 10163594 | VAT registration number 252101754

Please contact us within the next **14 days** to confirm that you agree to undertake the requested works.

Yours sincerely

Jessica Hill
Crawford & Company Legal Services



Geotechnical Survey Report

FSI Ref: 24252
Issue Date: May 2022
Risk Address: 20a Crescent Road
London
N8 8AX

Engineer: Johnny Joannou

Company: Crawford
Claim Ref: SU2200639

Managing Director:
Finance Director:

Martin Rush MSc FGS
Louise Banks BSc (Hons)

Geotechnical Compliance &
Logistics Supervisor:

Perry Martin MCIHT

Laboratory Manager:

Jade McLellan

Senior Geologist:
Assistant Geologist:
Geotechnical Assistant:

George Baron BSc (Hons) FGS
Scott Parker BSc (Hons) FGS
Sarah Brand

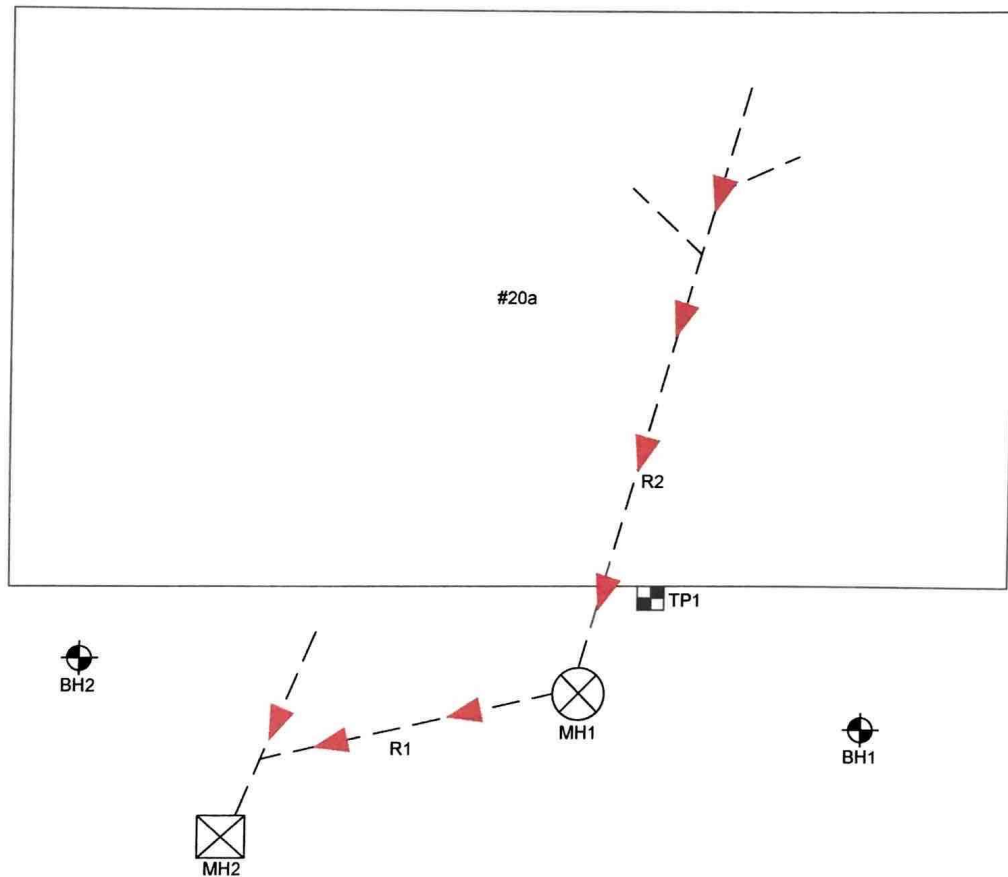
SITE PLAN

Property Address: 20a Crescent Road, London, N8 8AX

Client Claim Ref: SU2200639

Survey date: 16/05/2022

Operative: SE3



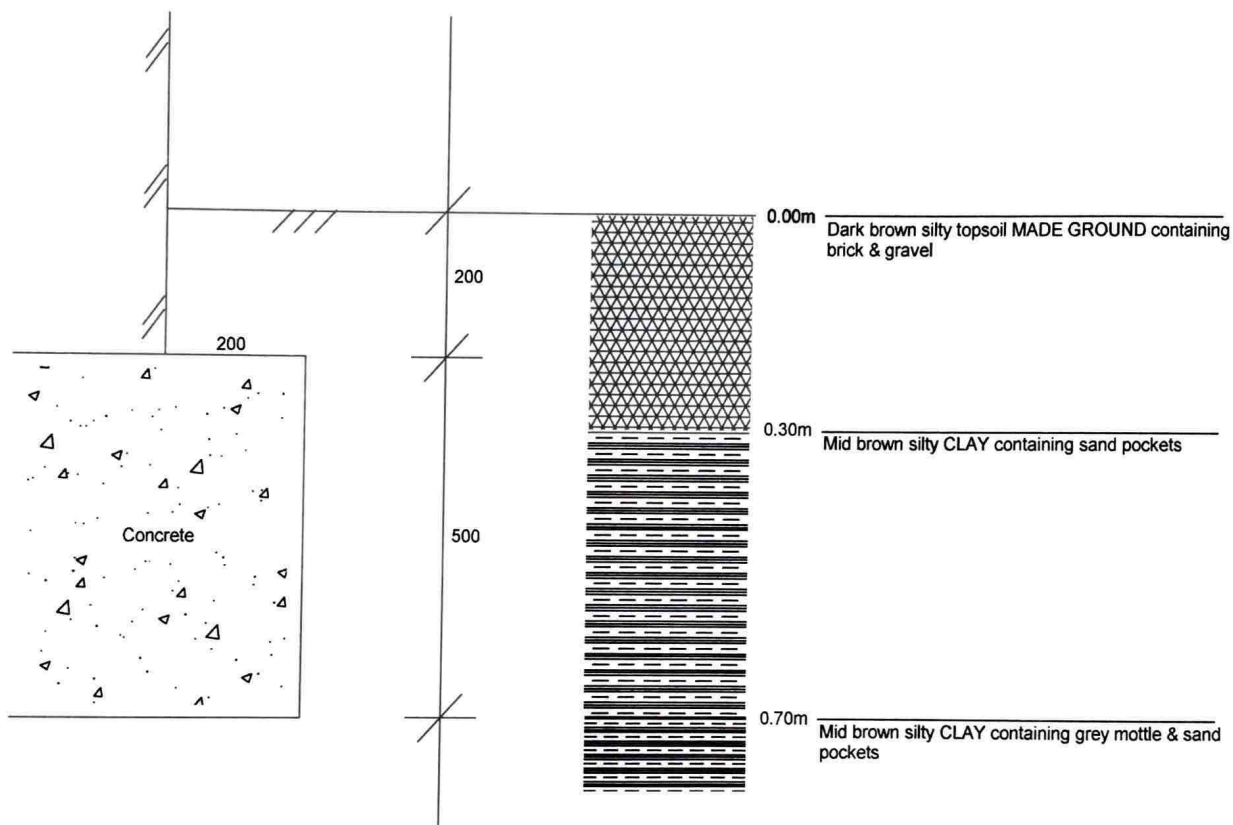
Scale: NTS	Drawn by: SB	Key:	 Trial Pit	 Manholes	 Rain Water Pipe	 Surface Water Gully	 Shrub	 Tree (Conifer)	 Tree (Deciduous)
			 Borehole	 Manholes	 Soil & Vent Pipe	 Foul Water Gully			

TRIAL PIT 1

Property Address: 20a Crescent Road, London, N8 8AX

Client Claim Ref: SU2200639

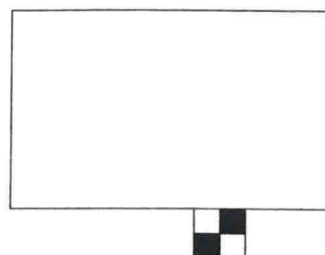
Survey date: 18/05/2022

Operative: SE3


D1 @ F.L. (0.20m)

V = 92-94kPa

Founding strata: Mid brown silty CLAY containing grey mottle
& sand pockets

Trial Pit Location:

Drawn by:

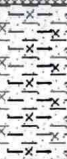
SB

Scale:

1:10

D= small disturbed sample, B= large bulk sample, U= undisturbed sample,
MP= mackintosh probe blow counts, V= shear vane reading (kPa)

		Fastrack Site Investigations Ltd Unit 9, Tyndales Farm Southend Road Maldon CM9 6TQ		Borehole Log		Borehole No. BH1 Sheet 1 of 1	
Project Name: SU2200639		Project No. 24252		Site Date: 16/05/2022		Hole Type BH	
Location: 20a Crescent Road, London, N8 8AX						Scale 1:17	
Client: Crawford						Logged By SE3	

Water Strikes	Sample and In Situ Testing			Depth (m)	Legend	Stratum Description	
	Depth (m)	Type	Results				
				0.30	 Dark brown silty topsoil clay MADE GROUND containing brick & gravel <i>Foundation top-0.20m (Concrete construct projects 200mm with a thickness of 500mm)</i>		
	0.70	D	V (kPa) = 92 V (kPa) = 94	0.70	 Mid brown silty CLAY containing sand pockets		
	1.00	D	V (kPa) = 102 V (kPa) = 104		 Mid brown silty CLAY containing grey mottle & sand pockets <i>Foundation level-0.70m</i> <i>Noted to contain hairlike-5mm roots at F/L</i>	1	
	1.50	D	V (kPa) = 128 V (kPa) = 130				
	2.00	D	V (kPa) = 140			2	
	2.50	D	V (kPa) = 140				
	3.00	D	V (kPa) = 140	3.00		End of Borehole at 3.000m	3

Key: D - Disturbed Sample V - Insitu Vane Test MP - Mackintosh Probe Test		
Remarks: Borehole closed at 3.00m. Borehole noted to be dry on completion.		





Fastrack Site Investigations Ltd
Unit 9, Tyndales Farm
Southend Road
Maldon CM9 6TQ

Borehole Log

Borehole No.

BH2

Sheet 1 of 1

Project Name: SU2200639

Project No.
24252

Site Date: 16/05/2022

Hole Type
BH

Location: 20a Crescent Road, London, N8 8AX

Scale
1:17

Client: Crawford

Logged By
SE3

Water Strikes	Sample and In Situ Testing			Depth (m)	Legend	Stratum Description	
	Depth (m)	Type	Results				
				0.20		Dark brown CONCRETE containing gravel	
				0.90 0.90		Mid brown silty CLAY containing sand pockets	
	1.00	D	MP = 18/75mm MP = 19/75mm MP = 19/75mm MP = 19/75mm	1.10		Mid brown clayey SAND Mid brown clayey SAND <i>Noted to contain hairline-6mm roots at 1.00m</i>	1
	1.50	D	V (kPa) = 104 V (kPa) = 106			Mid brown silty CLAY containing grey mottle & sand pockets	
	2.00	D	V (kPa) = 136 V (kPa) = 138				2
	2.50	D	V (kPa) = 140				
	3.00	D	V (kPa) = 140	3.00		End of Borehole at 3.000m	3

Key: D - Disturbed Sample V - Insitu Vane Test MP - Mackintosh Probe Test

Remarks: Borehole closed at 3.00m.
Borehole noted to be dry on completion.





Tyndales Farm, Southend Road, Woodham Mortimer,
Maldon, Essex, CM9 6TQ

Tel: 01245 223033

Fax: 0844 3358907

Email: enquiries@fastrackgroup.co.uk

Web: www.fastracksiteinvestigations.co.uk

Appendix No:

3

FSI Ref:

24252

LABORATORY RESULTS

Property Address: 20a Crescednt Road, Haringey, London, N8 8AX

Client Claim Ref: SU2200639

Client: Crawford & Company

SAMPLE DETAILS

Investigation date: **16/05/2022**
Sample details: **Bags as received**
Samples received: **19/05/2022**
Schedule recieved: **19/05/2022**
Samples tested: **20/05/2022 - 25/05/2022**
Results reported: **25/05/2022**

ANALYSIS REQUESTED

Moisture Content	☒	PSD	☐
Liquid Limit	☒	Soil Suction	☐
Plastic Limit	☒	Shear Strength	☐
Plasticity Index	☒	Contamination	☐
Root ID	☒	Root/Tree DNA	☐
Other (please state)			☐

TEST DETAILS

General

Sample descriptions were written in accordance with BS 5930:1999.

Samples were prepared in accordance with BS 1377: Part 1: 1990, section 7

Samples from this contract will be retained for 1 calender month following the issue of this report unless otherwise notified

Written approval is required from Fastrack Site Investigations Limited to reproduce report in full. The results shown within this report only relate to the samples tested

Moisture Content

Samples were tested in accordance with BS 1377: Part 2: 1990, section 3.2 (Oven drying method)

In accordance with Note 1 to paragraph 3.2.4 of BS 1377 Part 2 1990; these moisture contents have been corrected to give the equivalent moisture content of the fraction passing the 425µm sieve, to enable comparison with the liquid & plastic limits. (If condition of test is 'natural' the retained percentage is an estimated value, if condition is 'washed' the percentage is a measured value).

Samples are dried at 105-110°C unless otherwise stated.

Atterberg Limits

Samples were tested in accordance with BS 1377: Part 2: 1990, section 4.3 (4 drop LL), 4.4 (1 drop LL), 5.3 (PL) and 5.4 (PI)
Test results on samples with a sand content, may show less accurate results. If condition of test is 'washed' results relate to the fraction passing the 425µm sieve only.

* *Driscoll's rules deem the soil to be desicated where the moisture content is less than the value calculated using driscoll's rule 1 and/or 2*

Particle Size Distribution

Samples were tested in accordance with BS 1377: Part 2: 1990 section 9.2 (Wet sieving method)

Undrained Shear Stength

Samples were prepared in accordance with BS 1377: Part 7: 1990 section 8.3 and testing in accordance with BS 1377: Part 7: 1990: section 8.4 (undrained shear strength in triaxial compression without measurement of pore pressure (UU))

Soil Suction

Samples were prepared and tested based on the BRE digest No:IP4/93 (Corrected). 'A method of determining the state of desiccation in clay soils.' (Filter paper method).

Test results on samples with a sand or silt content, may show less accurate results. Deviation to standard procedure - Polythene bags are not used from weighing filter papers.

Fastrack Site Investigations Ltd
Unit 9 Tyndales Farm
Southend Road
Woodham Mortimer
Essex
CM9 6TQ

Intec
Parc Menai, Bangor,
Gwynedd, North Wales
LL57 4FG
Tel: 01248 672652
Fax: 01248 672601

ROOT IDENTIFICATION

20a Crescent Close, Haringey, London, N8 8AX

Client Reference: 5000/24252
Report Date: 23 May 2022
Our Ref: R45213

Sub Sample	Species Identified		Root Diameter	Starch
BH1:				
FL	<i>Quercus</i> spp.	1	1.5 mm	Abundant
1m	<i>Quercus</i> spp.	1	1 mm	Abundant
1.5m	broadleaved species, too juvenile for positive identification	2	<1 mm	Absent
2m	broadleaved species, too juvenile for positive identification	2	<1 mm	Low
2.5m	broadleaved species, too juvenile for positive identification	2	<1 mm	Moderate
3m	<i>Quercus</i> spp.		1.5 mm	Abundant
BH2:				
1m	<i>Acer</i> spp.	3	1 mm	Absent
1m	<i>Fraxinus</i> spp.		1 mm	Absent
1.5m	<i>Acer</i> spp.	3	1.5 mm	Absent
2m	<i>Acer</i> spp.	3	1 mm	Absent
2.5m	broadleaved species, too decayed for positive identification	4	<1 mm	Absent
3m	broadleaved species, too decayed for positive identification	4	<1 mm	Absent

Comments:

- 1 - Plus 1 other also identified as *Quercus* spp.
- 2 - Possibly also *Quercus* spp.
- 3 - Plus 2 others also identified as *Acer* spp. All in a state of decay.
- 4 - Plus 2 others the same.

Quercus spp. are oaks (both deciduous and evergreen).
Acer spp. are maples, including sycamore, Norway maple, and Japanese maples.
Fraxinus spp. include common ash.

Signed: M D Mitchell

Unless we are otherwise instructed in writing, the above sample material will normally be disposed of 6 years after the date of this report.



INVESTOR IN PEOPLE

Registered in England No. 295427 Registered Office: Unit 4 Linnet Court, Cawledge Business Park, Alnwick, NE66 2GD





Tyndales Farm, Southend Road, Woodham Mortimer,
Maldon, Essex, CM9 6TQ

Tel: 0844 3358908

Fax: 0844 3358907

Email: enquiries@fastrackgroup.co.uk

Web: www.fastrackgroup.co.uk

Appendix No: 4
FSI Ref: 24252

DRAINAGE SURVEY

Property Address: 20a Crescent Road, London, N8 8AX

Client Claim Ref: SU2200639

Survey date: 16/05/2022 Operative: SE3

Following your recent instruction we attended the above property and carried out a cctv camera survey and hydraulic testing of the drainage, in accordance with procedures detailed in the WRc Drain Repair Book.

Manhole / Inspection chamber Summary:

Node	Invert Level (m)	Manhole Construction	Pipe Size	Pipe Material	Manhole Condition	Type of Cover	Size of Cover
MH1	0.40	UPVC	110mm	UPVC	Good	UPVC	450x450mm
MH2	0.40	UPVC	110mm	UPVC	Good	Cast iron	680x530mm

Hydraulic Testing Summary:

Run	From	To	Result	Remarks
1				
2				
3				
4				
5				
6				

Serviceability:

1	Is the system failing to discharge normal household flows to the sewer system? (i.e. recurrence of blockage)	No
2	Is there evidence of leakage occurring (infiltration or exfiltration)?	No
3	Is there intermittent storm-water flooding?	Undetermined
4	Has a hydraulic leakage test failed?	N/A
5	Do observed defects make the drain unserviceable?	No

Comments:

Recommendations for Repair:

Run	Grade	Recommended action
1	A	None required
2	A	None required
3		
4		
5		
6		

TECHNICAL REPORT ON A SUBSIDENCE CLAIM

Crawford Reference: SU2200639

**Miss Suzy Bennett
20a Cresent Road
London
N8 8AX**



prepared for

**AXA Retail - Avantia
PO Box 7073, Willenhall, WV1 9ZW**

Claim Reference 12529820G

SUBSIDENCE CLAIM

7th April 2022



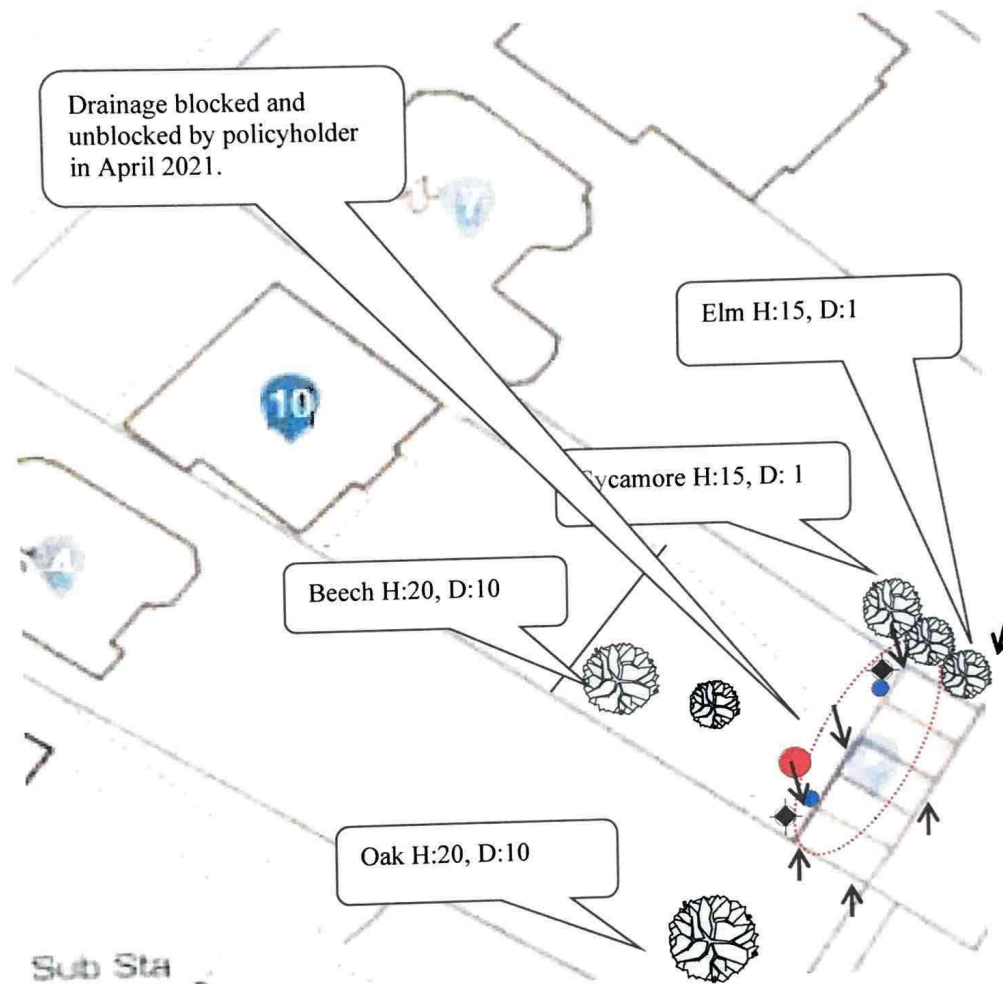
**Crawford Claims Solutions – Subsidence
Cartwright House,
Tottle Road,
Riverside Business Park, Nottingham, NG2 1RT
Tel: 0115 943 8266**

Chartered Loss Adjusters

Site Plan

This plan is 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 trees etc. The boundaries are not accurate, and do not infer or confer any rights of ownership or right of way. Position of utilities is only indicative and contractors must satisfy themselves regarding actual location before commencing works.



© Bluesky International & © Infoterra 2006.

Map Reproduced with the Permission of Ordnance Survey License Number #####

Key:

	Tree: Deciduous		Tree: Conifer		Shrub
	Hedge		Area of Damage		Bore Hole
	Trial Hole		Trial & Bore Hole		Level Monitoring
	Rain Water Manhole		Rain Water Gully		Rain Water Pipe
	Waste Water Manhole		Waste Water Gully		Toilet Pipe
	Rain Water Drain		Waste Water Drain		Electricity Cable
	Water Supply Pipe		Gas Supply Pipe		Incoming Gas Pipe
	Incoming Water		Incoming Electrics		

Chartered Loss Adjusters

INTRODUCTION

We have been asked by AXA Retail - Avantia to comment on movement that has taken place to the above property. We are required to briefly describe the damage, establish a likely cause and list any remedial measures that may be needed.

Our report should not be used in the same way as a pre-purchase survey. It has been prepared specifically in connection with the present insurance claim and should not be relied on as a statement of structural adequacy. It does not deal with the general condition of the building, decorations, timber rot or infestation etc.

The report is made on behalf of Crawford & Company and by receiving the report and acting on it, the client - or any third party relying on it - accepts that no individual is personally liable in contract, tort or breach of Statutory duty. Where works address repairs **that are not covered** by the insurance policy we recommend that you seek professional advice on the repair methodology and whether the works will involve the Construction (Design & Management) Regulations 2015. Compliance with these Regulations is compulsory; failure to do so may result in prosecution. We have not taken account of the regulations and you must take appropriate advice.

We have not commented on any part of the building that is covered or inaccessible.

TECHNICAL CIRCUMSTANCES

The policyholder purchased the property in 2018 as a cash purchase. No pre purchase survey or mortgage valuation reports were commissioned. The property appeared in sound structural condition. Approximately 1 year ago, the policyholder noted minor cracking to the brickwork of the front elevation. The policyholder undertook repairs and redecorations as part of routine maintenance. The damage recently reappeared both externally and internally to the property and subsequently, the policyholders friend (an architect) inspected the property and suggested the policyholder notified Insurer regarding possible subsidence damage.

PROPERTY

Single storey detached bungalow (originally converted garages) of traditional construction with brick walls surmounted by a flat roof. The property was converted into residential dwelling in 2018.

HISTORY & TIMESCALE

Date of Construction.....	2018
Purchased	2020
Policy Inception Date	24/02/2020
Damage First Noticed	01/04/2021
Claim Notified to Insurer.....	25/02/2022
Date of our Inspection	05/04/2022
Issue of Report	07/04/2022
Anticipated Completion of Claim.....	March 2024

TOPOGRAPHY

The property occupies a reasonably level site with no unusual or adverse topographic features.

Chartered Loss Adjusters

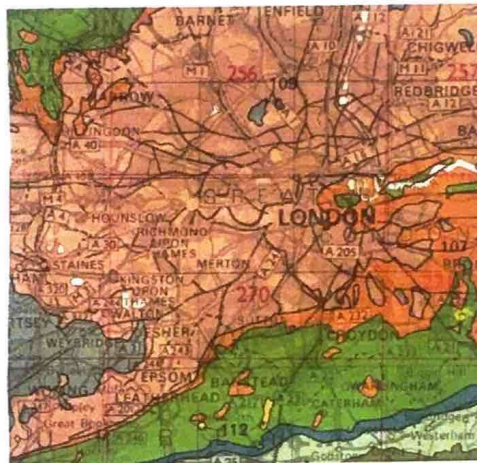
GEOLOGY

Reference to the 1:625,000 scale British Geological Survey Map (solid edition) OS Tile number TQNW suggests the underlying geology to be Clay Soils.

Clay soil superficial deposits are a cohesive soil characterised by their fine particle size and are usually derived from weathering of an underlying "solid geology" clay soil such as London Clay or Oxford Clay.

Like the solid geology sub-soil from which they are derived they shrink when dry, and swell when wet and can be troublesome when there is vegetation¹ nearby and Gypsum and selenite crystals can be encountered (particularly in the south east). Protection using Class II Sulphate Resisting cement is therefore recommended for buried concrete.

The solid geology appears to outcrop in this location, although we cannot rule out the presence of superficial deposits at shallow depth.



Geology. Reproduced with consent of The British Geological Survey at Keyworth.
Licence IPR/34-7C CSL British Geological Survey. ©NERC. All rights Reserved.

VEGETATION

There are several trees and shrubs nearby, some with roots that may extend beneath the house foundations. The following are of particular interest:-

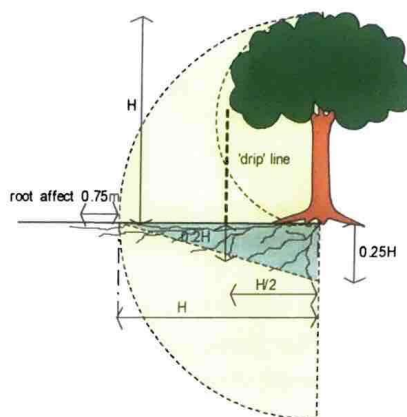
Type	Height	Distance	Ownership
Cherry	4 m	8 m	Owners
Beech	20 m	10 m	Owners
Oak	20 m	10 m	Neighbour 1
Sycamore	15 m	1 m	Neighbour 2
Holly	14 m	1 m	Neighbour 2
Elm	15 m	1 m	Neighbour 2

See sketch. Tree roots can be troublesome in cohesive (clay) soils because they can induce volumetric change. They are rarely troublesome in non-cohesive soils (sands and gravels etc.) other than when they enter drains, in which case blockages can ensue.

¹ Driscoll R. (1983) "Influence of Vegetation on Clays" Geotechnique. Vol 33.
Chartered Loss Adjusters

Cherries, *Prunus* species, include Japanese flowering species, which are mainly small growing short lived moderate water demanders and the native wild cherry, *P. avium*, which is generally longer lived and capable of reaching over 20m.

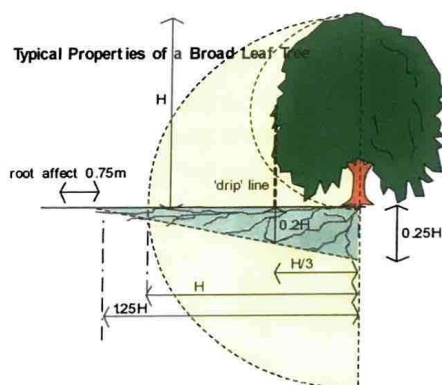
The growth rate is 300mm a year and they have medium root activity. They can be associated with subsidence, although they are not regarded as a particularly aggressive tree.



Typical proportions of a Cherry tree. Note the potential root zone.

Most *Prunus* species have wide spreading roots and a tendency to send up sucker shoots, often a long way from the parent tree. The genus includes plums, laurels, Portugal laurel, the roots of which are indistinguishable from each other.

Beech, (*Fagus sylvatica*) is a large growing deciduous species. Water demand is low, but it's size can lead to problems. It will tolerate pruning when young and can be a useful hedge species. However mature and older trees will not stand heavy pruning and can be killed by it. Lifespan is typically up to about 200 years after which they often decline rapidly.



Typical proportions of a Beech tree. Note the potential root zone.

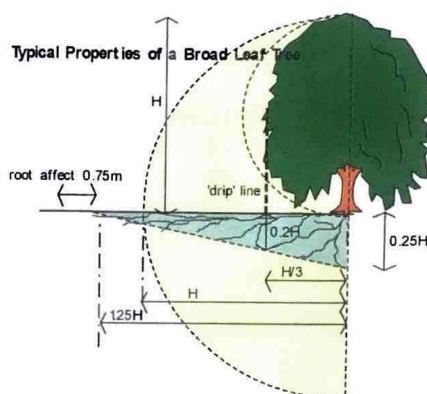
The beech grows at a rate of 300mm a year to reach heights of between 20 - 28mtrs depending on soil and climate etc. It is regarded as having weak root activity².

Oak trees (*Quercus*) are deciduous and native to Europe. They can reach heights in excess of 35m, but more typically grow to between 18 - 25m, depending on health, environment and soil conditions. They have a medium growth rate of around 250mm per year and strong root activity³.

² Richardson & Gale (1994) "Tree Recognition" Richardson's Botanical Identifications

³ Richardson & Gale (1994) "Tree Recognition" Richardson's Botanical Identifications

Chartered Loss Adjusters



Typical proportions of an Oak showing the potential root zone. They have by far the most aggressive of root systems, often spreading considerable distances (1.5 x height or more).

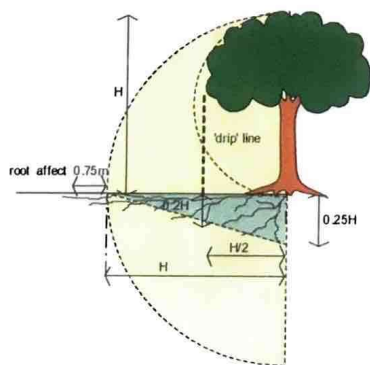
Maximum tree-to-damage distance recorded in the Kew survey was 30mtrs, with 50% of all cases occurring within 9.5mtrs⁴. Life expectancy > 100 years, although they are vulnerable to insect and fungal attack. Old and young trees are tolerant of quite heavy pruning and crown reduction, although re-growth can be an ongoing problem.

Oaks are, in my experience, worthy of considerable respect when dealing with subsidence claims. Their root system extends for surprising distances and can be associated with particularly high soil suctions.

Because of difficulties in controlling the oak, and its vigorous root system, I regard it as being far more significant (in terms of a subsidence league table) than either the willow or poplar tree.

Sycamores (Acer) are deciduous and can reach heights between 20-30m depending on health, environment and soil conditions. They have a fast growth rate of around 600mm per year and medium root activity⁵.

The Sycamore is a hardy tree, and can withstand quite aggressive environments. Maximum tree-to-damage distance recorded in the Kew survey was 20mtrs, with 50% of cases occurring within 6mtrs⁶. They are deep rooting on clay soils and have a life expectancy > 100 years.



They can usually tolerate quite heavy pruning or crown thinning, although this can create large wounds which decay rapidly.

⁴ Cutler & Richardson (1991) *"Tree Roots & Buildings"* Longman Scientific

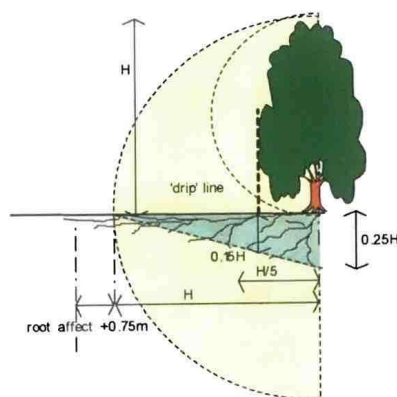
⁵ Richardson & Gale (1994) *"Tree Recognition"* Richardson's Botanical Identifications

⁶ Cutler & Richardson (1991) *"Tree Roots & Buildings"* Longman Scientific

Chartered Loss Adjusters

Holly (*Ilex*) is an evergreen that reaches a height of up to 20mtrs or so with a slow growth rate and weak root activity.

Elms, *Ulmus* species, include English elm and wych elm. They were one of the commonest species in lowland areas until the Dutch elm disease epidemic of the 1970s. Since then numerous sucker shoot have arisen from the root systems of killed trees, many of which grow to 10m or more high before being re infected and killed, following which another generation is frequently produced.



Typical proportions of an Elm Tree. Note the potential root zone.

They are high water demanders with strong root activity, well adapted to growing on heavy clay soils and, even though short lived, frequently cause subsidence damage.

They reach heights of around 30mtrs and grow at a rate of something like 300mm a year⁷.

OBSERVATIONS

The front of the property is the focal area of damage.

The following is an abbreviated description. Photographs accompanying this report illustrate the nature and extent of the problem.

INTERNAL



Crack to left of radiator to front bedroom window.



Crack to ceiling in kitchen / living area.

Kitchen / Living Room

⁷ Richardson & Gale (1994) "Tree Recognition" Richardson's Botanical Identifications
Chartered Loss Adjusters

- Distortions to front window and door frame near kitchen area preventing opening and closing freely due to movement.
- Crack noted to ceiling - separation of plasterboard at joint line.
- Diagonal crack to either side of the entrance door plasterboard surface finish - hairline - 1mm.

Hallway

- Diagonal crack above entrance door to Kitchen / Living Room area.
- Minor separation of coving from plastered wall finish.

Bedroom 1 - Master

- Diagonal crack to front plastered wall to right hand side of window - hairline to 1mm.
- Wardrobe doors appear to be sticking slightly as does the door to the walk in wardrobe which is now wedged to the floor finish and will neither open or close.

Bedroom 2

- Diagonal crack to front plastered wall to left hand side and right hand side of window - 3mm.
- Minor separation of coving from plastered wall finish.

EXTERNAL



Crack to front left brickwork.



Localised vegetation to right of property in neighbours garden.

Front Elevation

- Left hand corner brickwork appears to have dropped slightly. Stepped cracking noted to cover 12 courses of brickwork - crack width approximately 1-10mm.

CATEGORY

Chartered Loss Adjusters

In structural terms the damage falls into Category 3 of Table 1, Building Research Establishment⁸ Digest 251, which describes it as "**moderate**".

Category 0	"negligible"	< 0.1mm
Category 1	"very slight"	0.1 - 1mm
Category 2	"slight"	>1 but < 5mm
Category 3	" moderate "	>5 but < 15mm
Category 4	"severe"	>15 but < 25mm
Category 5	"very severe"	>25 mm

Extract from Table 1, B.R.E. Digest 251
Classification of damage based on crack widths.

DISCUSSION

The pattern and nature of the cracks is indicative of an episode of subsidence. The cause of movement appears to be either clay shrinkage or subsoil softening/erosion due to drains leakage.

Further site investigations will be required. Typically, these would involve trial pit(s) to determine the nature of the footings and subsoil and a localised drainage survey.

We will report further once these investigations have been completed.

No structural changes to the building have been carried out which has contributed to the current subsidence related damage under investigation. Furthermore there has been no previous underpinning installed

RECOMMENDATIONS

On receipt of the Site Investigation reports which we shall now instruct, we will advise on causation and the scope of mitigation works required.

Site investigations to be organised will include:

- Trial pit and borehole investigations to include foundation depth detail, soil analysis, root retrieval and laboratory testing.
- CCTV Drainage inspection.
- Arboriculture Survey and TPO investigation.
- Level Monitoring - 12 months.

Johnny Joannou
Crawford Claims Solutions – Subsidence
Office Dial : 0115 943 8266
subsidence@crawco.co.uk

⁸ Building Research Establishment, Garston, Watford. Tel: 01923.674040

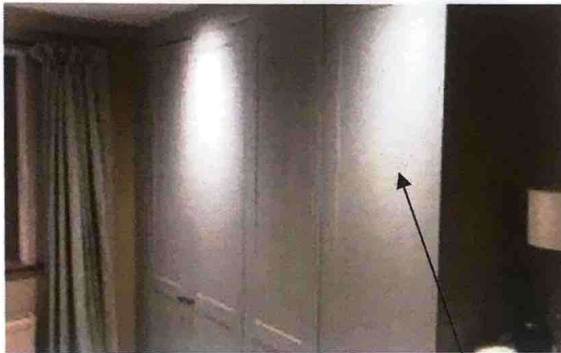
PHOTOGRAPHS



Cracks to plastered wall entrance to kitchen living room.



Coving separation in hallway.



Bedroom wardrobes sticking.

Arboricultural Appraisal Report

Subsidence Damage Investigation at:

20a Crescent Road
London
N8 8AX



CLIENT:	Crawford & Company
CLIENT REF:	SU2200639
MWA REF:	SUB220629-10263
MWA CONSULTANT:	Andy Clark
REPORT DATE:	15/07/2022

SUMMARY

Statutory Controls		Mitigation (Current claim tree works)	
TPO current claim	No	Policy Holder	No
TPO future risk	Yes – TG4 (Yew)	Domestic 3 rd Party	Yes
Cons. Area	Yes	Local Authority	No
Trusts schemes	No	Other	No
Local Authority: -	London Borough of Haringey		

Introduction

Acting on instructions from Crawford & Company, the insured property was visited on 14/07/2022 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 single storey detached dwelling, originally a block of 5 single garages and converted into a residential dwelling in 2018.

External areas comprise gardens to the front with the rear elevation and side flanks directly abutting third-party land.

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

Damage Description & History

Damage relates to the front sections of the property, with cracking first observed during April 2021.

At the time of the engineer's inspection (25/02/2022) 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.

We have not been made aware of any previous claims.

Site Investigations

Site investigations were carried out by FASTRACK on 16/05/2022, when a single trial pit was hand excavated to reveal the foundations, with a borehole sunk through the base of the trial pit to determine subsoil conditions. Two remote boreholes were also excavated, and a drains survey was also undertaken.

Foundations:

Ref	Foundation type	Depth at Underside (mm)
TP1	Concrete	700

Soils:

Ref	Description	Plasticity Index (%)	Volume change potential (NHBC)
TP1	Mid brown silty CLAY containing grey mottle & sand pockets	No samples retrieved	N/A
BH1	Mid brown silty CLAY containing grey mottle & sand pockets	39 – 52	Medium – High
BH2	Mid brown silty CLAY containing sand pockets from 200mm to 900mm, with mid brown clayey SAND to 1100mm and mid brown silty CLAY containing grey mottle and sand pockets below	41 – 49	High

Roots:

Ref	Roots Observed to depth of (mm)	Identification	Starch content
BH1	3000	Quercus spp. and broadleaved species, too juvenile for positive identification	Present
		Broadleaved species, too juvenile for positive identification	Absent
BH2	3000	Acer spp., Fraxinus spp. and broadleaved species, too decayed for positive identification	Absent

Quercus spp. are oaks (both deciduous and evergreen)

Acer spp. are maples, including sycamore, Norway maple, and Japanese maples

Fraxinus spp. include common ash

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

Monitoring: Level monitoring is in progress, commencing 11/04/2022 and with one subsequent reading available at the time of writing, showing downward movement focussed at the right-hand side of the building of up to -8.0mm [stud 4].

Discussion

Opinion and recommendations are made on the understanding that Crawford & Company 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 suggests moisture depletion 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 to a depth of 3.0m bgl in BH1 and BH2, and recovered samples have been positively identified (using anatomical analysis) as *Quercus* spp., *Acer* spp., *Fraxinus* spp and broadleaved species, too juvenile for positive identification.

The most significant of the retrieved samples are the *Quercus* spp. roots. These will originate from T1 Oak to the right-hand side of the building. Given that the focus of movement is downwards towards the right-hand side, T1 Oak is considered the likely principal cause.

The *Acer* spp. and *Fraxinus* spp. roots retrieved from the left hand side of the property are currently not considered relevant given the lack of movement to the left hand side.

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 Oak is the principal cause of 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 Oak is removed. Other vegetation recorded presents a potential future risk to building stability and management is therefore recommended. 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 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 and identified samples correspond to vegetation identified on site.
- Replacement planting may be considered subject to species choice and planting location.

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	Oak	18.0 *	600 *	17.5	5.0	Older than Property	Third Party 18 Crescent Road N8 8AX
Management history		No significant past management noted.					
Recommendation		Remove (fell) to near ground level and treat stump to inhibit regrowth.					

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	Sycamore	18.0 *	600	12.5 *	7.0 *	Younger than Property	Third Party 18 Crescent Road N8 8AX
Management history		No significant past management noted.					
Recommendation		Remove (fell) to near ground level and treat stump to inhibit regrowth.					
T3	Sycamore	12.5	320 *	9.0	0.8	Younger than Property	Third Party Standard Apartments 22a Crescent Road N8 8AW
Management history		No significant past management noted.					
Recommendation		Remove (fell) to near ground level and treat stump to inhibit regrowth.					
T4	Cherry	5.5	240	3.0	7.8	Younger than Property	Policy Holder
Management history		Subject to past management/pruning - previously pollarded at approx. 4.0 m.					
Recommendation		Maintain broadly at no more than current dimensions by periodic pruning.					
T5	Beech	18.0 *	560	11.0	13.3	Similar Age to Property	Policy Holder
Management history		No significant past management noted.					
Recommendation		Maintain broadly at no more than current dimensions by periodic pruning.					
T6	Hornbeam	13.0	160	5.5	0.2 *	Younger than Property	Third Party Standard Apartments 22a Crescent Road N8 8AW
Management history		No significant past management noted.					
Recommendation		Remove (fell) to near ground level and treat stump to inhibit regrowth.					

Ms: multi-stemmed

* Estimated value

Property: 20a Crescent Road
London
N8 8AX

Client Ref: SU2200639
MWA Ref: SUB220629-10263

Table 2 **Future Risk - Tree Details & Recommendations (contd.)**

Tree No.	Species	Ht (m)	Dia (mm)	Crown Spread (m)	Dist. to building (m)	Age Classification	Ownership
T7	Ash	18.0	500 *	10.0	18.0 *	Younger than Property	Third Party Standard Apartments 22a Crescent Road N8 8AW
Management history		Recently reduced/pruned.					
Recommendation		Maintain broadly at no more than current dimensions by periodic pruning.					
TG1	Hazel	4.5	100 Ms *	5.0	1.7	Younger than Property	Third Party 18 Crescent Road N8 8AW
Management history		Subject to past management/pruning - previously topped at approx. 2.0m.					
Recommendation		Reduce height to 2.5m and trim on an annual cycle to maintain at broadly reduced dimensions.					
TG2	Boundary group of mostly Holly and Hazel	8.0 *	140 Ms *	6.0	1.4	Younger than Property	Third Party Standard Apartments 22a Crescent Road N8 8AW
Management history		No significant past management noted.					
Recommendation		Remove (fell) all within 3.0m of the building to near ground level and treat stumps to inhibit regrowth. Reduce height of remainder within 10.0m of the building to 2.5m and trim on an annual cycle to maintain at broadly reduced dimensions.					
TG3	Beech group	17.5 *	500	11.0	18.0 *	Similar Age to Property	Third Party 20 Crescent Road N8 8AW
Management history		No significant past management noted.					
Recommendation		Maintain broadly at no more than current dimensions by periodic pruning.					
TG4	Group of Yew, Laburnum and Horse Chestnut	15.5	500 *	10.5 *	8.8	Younger than Property	Third Party 18 Crescent Road N8 8AW
Management history		No significant past management noted.					
Recommendation		Maintain broadly at no more than current dimensions by periodic pruning.					

Ms: multi-stemmed * Estimated value

Property: 20a Crescent Road
London
N8 8AX

Client Ref: SU2200639
MWA Ref: SUB220629-10263

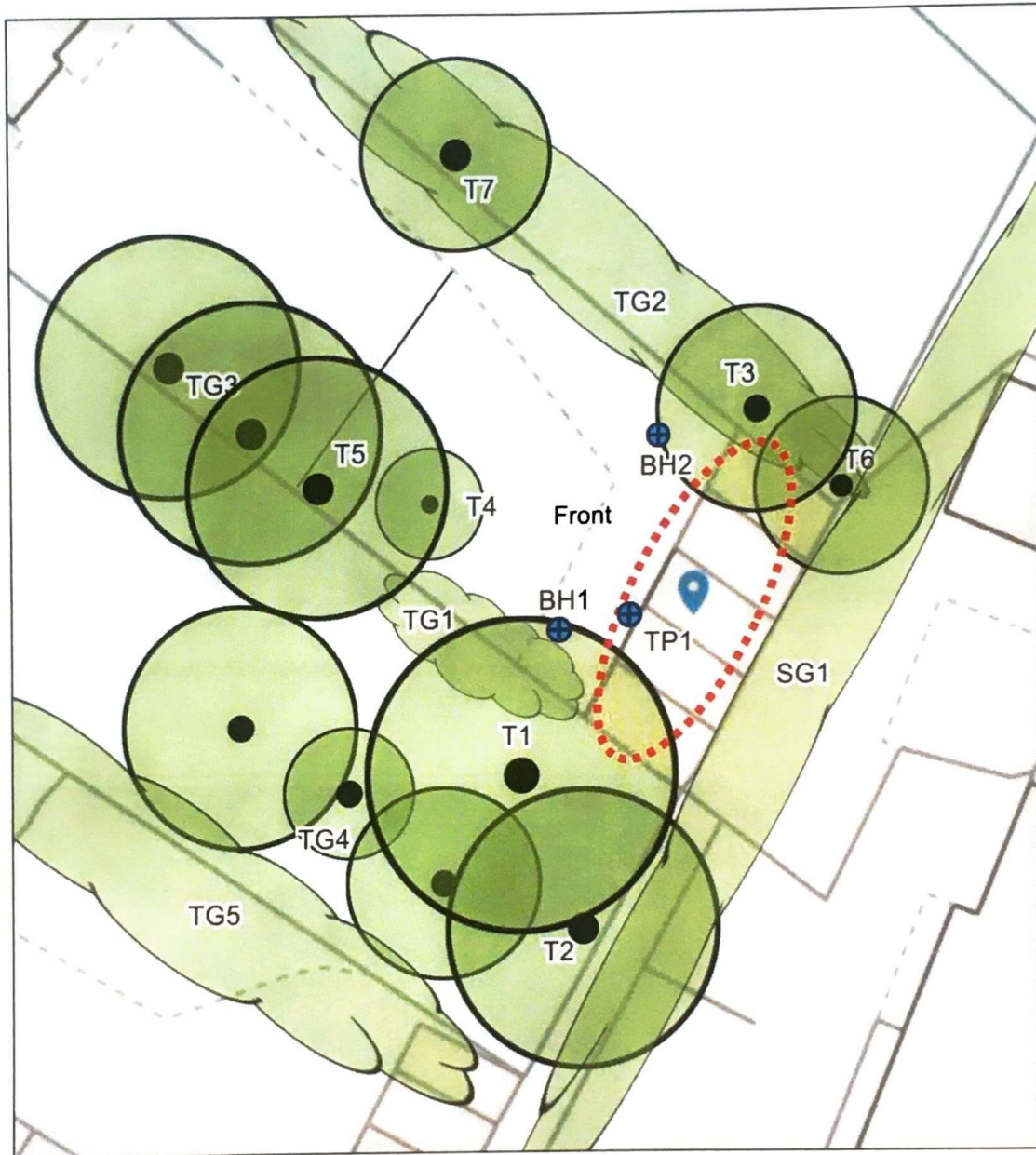
Table 2 **Future Risk - Tree Details & Recommendations (contd.)**

Tree No.	Species	Ht (m)	Dia (mm)	Crown Spread (m)	Dist. to building (m)	Age Classification	Ownership
TG5	Cypress group	19.0	500 *	8.5 *	15.9	Similar Age to Property	Third Party 1-21 Crescent Court N8 8AU
Management history		No significant past management noted.					
Recommendation		Maintain broadly at no more than current dimensions by periodic pruning.					
SG1	Mixed spp. boundary group of mostly Ivy and Bramble	5.0	20 Ms *	4.5	1.0 *	Younger than Property	Third Party Coleridge Primary School N8 8AT
Management history		No significant recent management noted. Limited visibility from subject property.					
Recommendation		Remove (fell) all within 3.0m of the building to near ground level and treat stumps to inhibit regrowth.					

Ms: multi-stemmed

* Estimated value

Site Plan



Plan not to scale – indicative only



Approximate areas of damage

Images



View of T1 Oak, with TG1 Hazel group and T4 Cherry to foreground and T2 Sycamore visible to rear of T1 Oak



View of T3 Sycamore and T6 Hornbeam with TG2 understorey



View of T7 Ash, with T3 Sycamore to left of frame and TG2 understorey



View of T1 Oak, with TG1 Hazel group and T4 Cherry to foreground and T5 Beech to right of frame

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 abstracted by vegetation exceeds inputs from rainfall, which typically occurs 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 are susceptible to movement as the clay shrinks and swells which can result in cracking or other damage.

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 predictable and quickest solution in stabilising the clay and hence the building and for this reason is frequently initially recommended as the most appropriate solution.

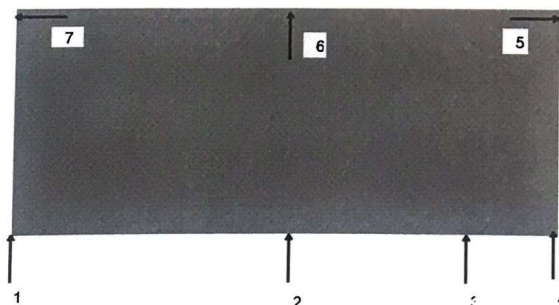
Often this is unavoidable due to the size or number of influencing trees, shrubs etc and their proximity to the building. Very heavy pruning of some species to a level required to effectively control its water use can result in the trees decline and ultimately death and is one factor considered when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

In some circumstances however, where vegetation initially recommended for removal is subsequently pruned and monitoring indicates the building has stabilised, removal becomes unnecessary with decisions based on best evidence available at the time.

LEVEL MONITORING - RELATIVE SURVEY READINGS

Provider Details		Client Details		Risk Address	
Name:	Knight & Associates Ltd	Insurance Co.:	Axa	Occupier:	
Our Ref:	SU2200639	Client Name:	Crawford	Address:	
		Technical Mgr:	J Joannou	Address:	
		Email:		Town:	
		Client Ref:		County:	
Monitoring Details		Address:	National Subsidence Unit	Post Code:	
Instruction Date:	8/4/22	Address:	4th Floor 30 St Pauls Square	Tel Home:	
First Reading Date:	11/04/2022	Town:	Birmingham	Tel Work:	
Maximum No Visits:	7	County:		Mobile:	
Anticipated Expiry Date:	April '23	Post Code:	B3 1QZ	Other:	
Monitoring Int (Wks):	8	Other Email:	subsidence.monitoring@crawco.co.uk	Other:	

Target Date:															
Reading Date:		11/4/22	6/6/22	11/8/22	3/10/22	1/12/22	9/2/23								
Issue Date:		11/4/22	7/6/22	11/8/22	3/10/22	2/12/22	9/2/23								
Row No.	Point Name	X Co-ordinate	Y Co-ordinate	1	2	3	4	5	6	7	8	9	10	11	12
1	1	0.00	0.00	12.7100	12.7090	12.7060	12.7020	12.7070	12.7110						
2	2	6.00	0.00	12.6480	12.6480	12.6460	12.6450	12.6480	12.6520						
3	3	10.00	0.00	12.7570	12.7550	12.7280	12.7250	12.7360	12.7470						
4	4	14.30	0.00	12.7990	12.7910	12.7500	12.7440	12.7540	12.7700						
5	5	14.30	6.20	12.8970	12.8900	12.8600	12.8440	12.8620	12.8730						
6	6	7.00	6.20	12.7400	12.7400	12.7410	12.7370	12.7410	12.7440						
7	7	0.00	6.20	12.8300	12.8300	12.8300	12.8280	12.8300	12.8330						
8		0.00	0.00												
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															
26															
27															
28															
29															
30															
31															
32															



Remote datum

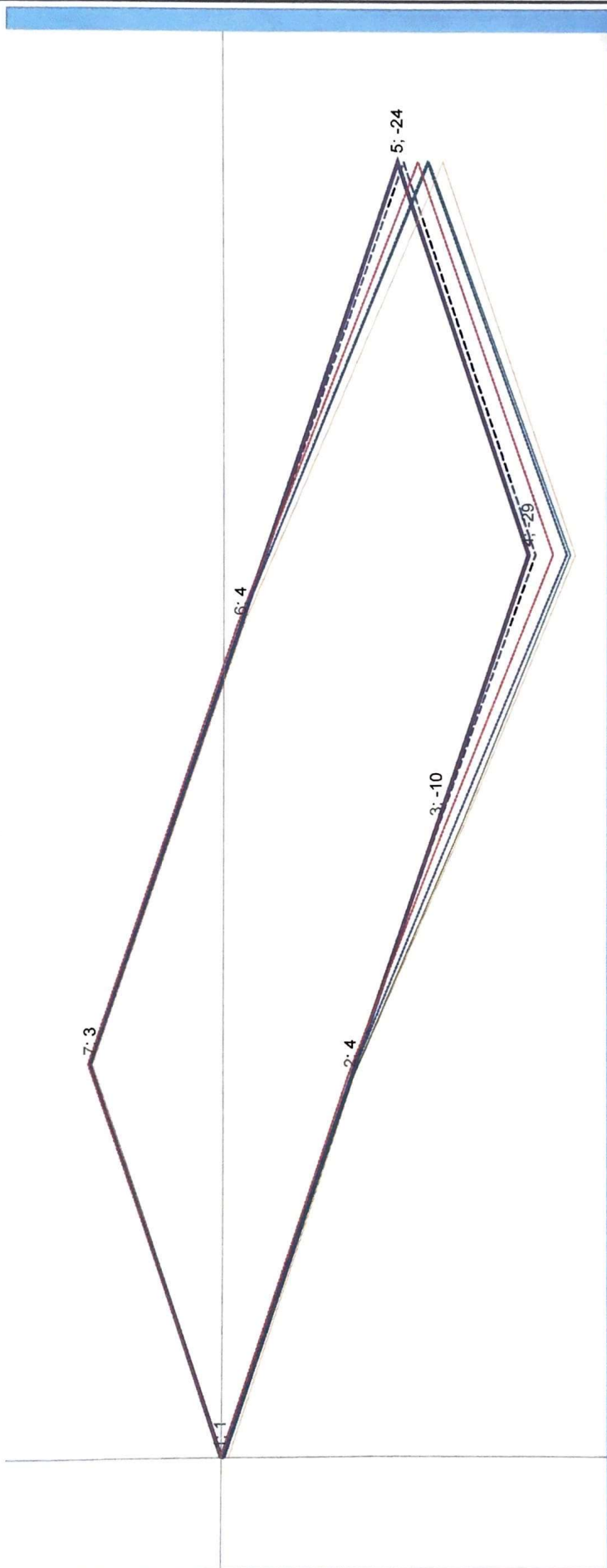
FRONT.

- 09/02/23 Readings taken. 11/04/22 Points fitted where possible.
- A common brickcourse could not be followed, subsequently relative data only.
- A further visit is due in April

LEVEL MONITORING - RELATIVE MOVEMENT SKETCH

Client: Crawford

Client Ref: 0



Datum Reading	Reading 1 (11/4/22)	Reading 2 (6/6/22)	Reading 3 (11/8/22)	Reading 4 (3/10/22)	Reading 5 (1/12/22)	Reading 6 (9/2/23)
Reading 7 (0/1/00)	Reading 8 (0/1/00)	Reading 9 (0/1/00)	Reading 10 (0/1/00)	Reading 11 (0/1/00)	Reading 12 (0/1/00)	

Notes:

Vertical distorted scale 1: 20

Point labels give level difference of last reading from original datum in mm.

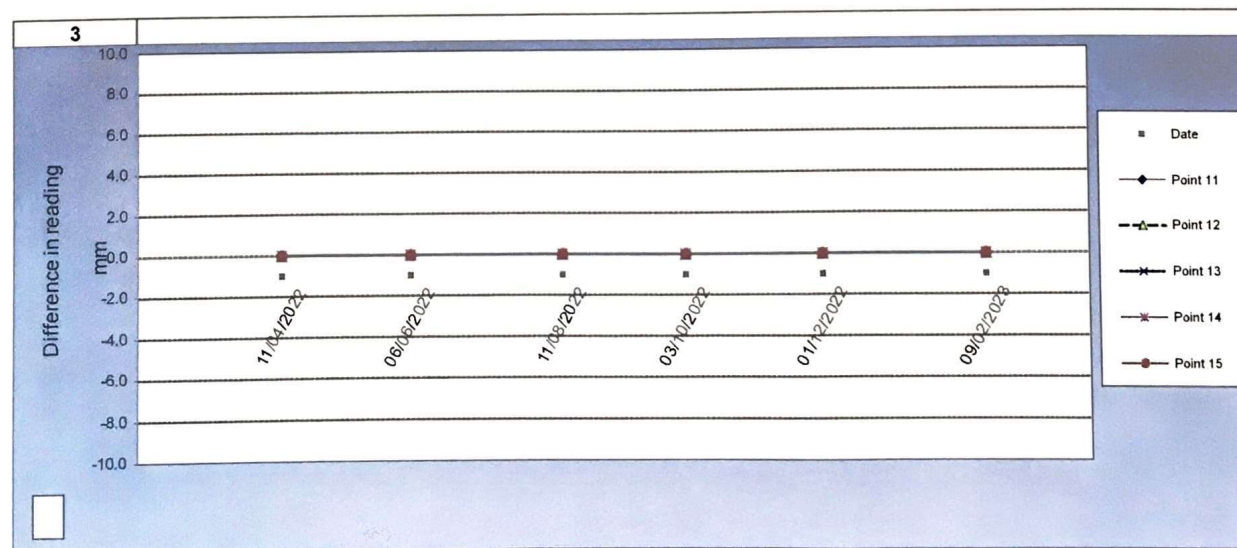
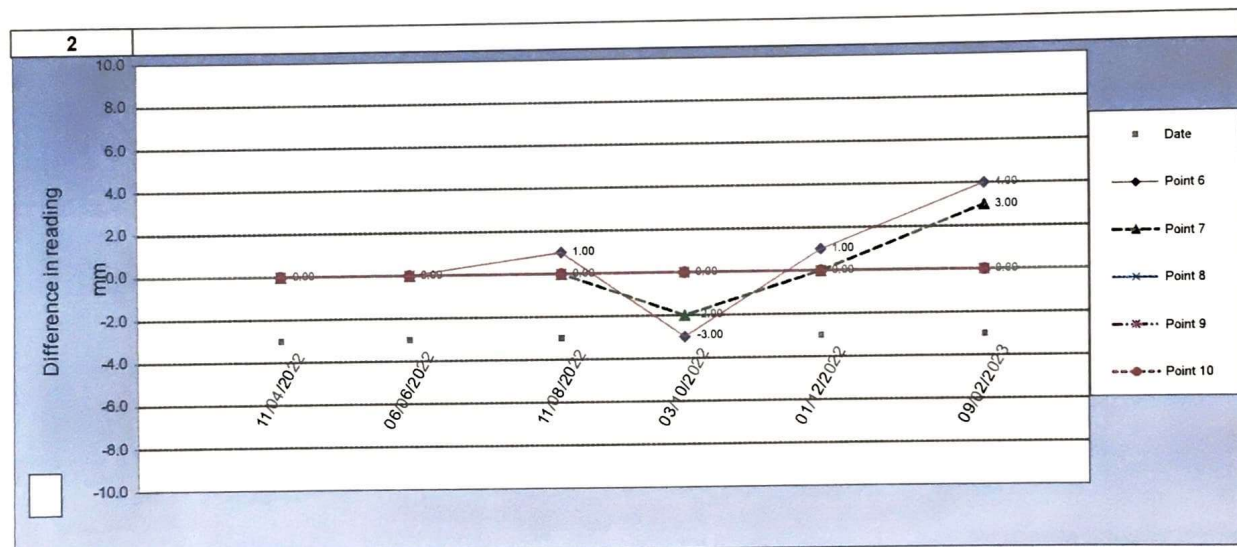
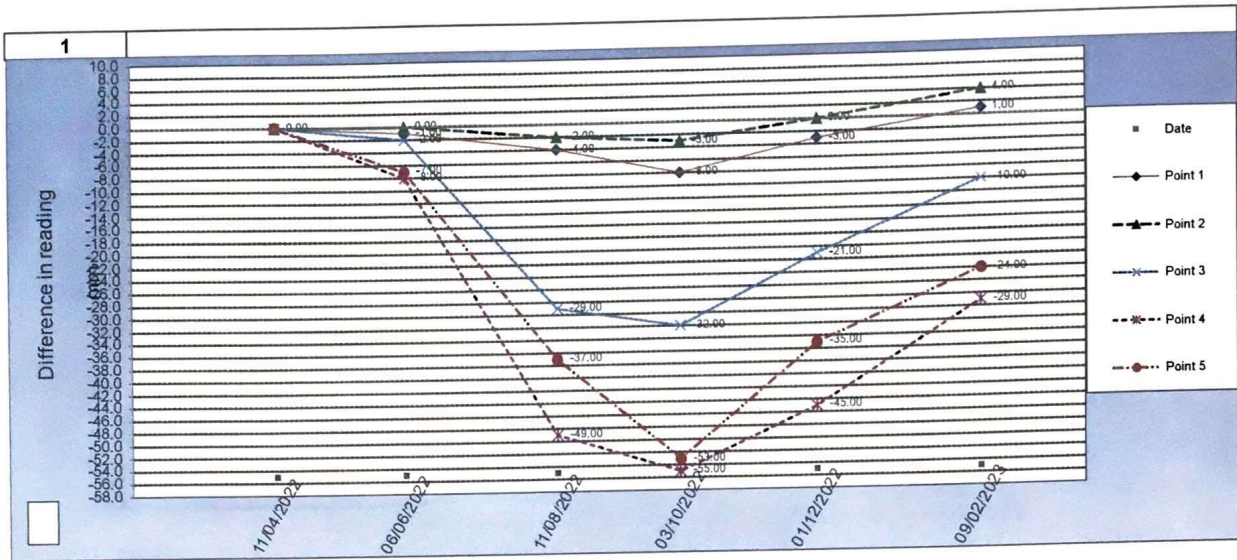
LEVEL MONITORING - RELATIVE SURVEY READINGS

Client: Crawford

Client Ref:

0

Chart Scale 1:1000



Standard Comments for selection in Readings and Sketch Worksheets
User may edit these as appropriate

Standard Comments	
No Comment	
Standard Comment 1	A further visit is due in
Standard Comment 2	No further readings are planned
Standard Comment 3	The Insured requested an update.
Standard Comment 4	Points fitted and readings taken.
Standard Comment 5	

Standard Bullet
●

18 Crescent Road London N8 Limited
Flat 1, 18 Crescent Road
London
N8 8AX

Please Ask For: Jessica Hill
Email: Jessica.Hill@crawco.co.uk
DDI: 0151 452 0067

Our Ref: 100069.6068/JH
Your Ref:
Date: 30/03/23

Dear Sirs,

Re: Our Insurer client: AXA Insurance PLC
Our Client's Policyholder: Miss Suzy Bennett
Risk Address: 20a Crescent Road, London, N8 8AX.

URGENT

FINAL REQUEST FOR TREE REMOVAL & NOTICE OF SUBSTRUCTURE WORKS

We refer to the above matter and previous correspondence dated 10th February and 24th of February 2023 sent by Crawford & Company Adjusters on behalf of our insurer client and their Policyholder. We also refer to correspondence sent by ourselves dated 17th March 2023. We have been instructed as you have failed to comply with the requests within previous correspondence.

CURRENT POSITION

You have previously been provided with clear evidence of the roots of T1 Oak tree, vegetation under your ownership, trespassing under our client's insured's property. You have been provided with the site investigation and Arboricultural reports which conclusively prove the roots are live and are taking moisture from the clay subsoil, thus causing the property to subside in the dry months and sustain damage.

Despite numerous requests for removal, you have failed to respond to our client's correspondence and carry out the requested tree works. The Expert Arborist has confirmed that unless the T1 Oak tree is removed immediately the property will sustain further damage.

To date, the reserve to rectify the damage caused by T1 Oak tree stands at £18,251.72.

Our client's position remains as clearly stated within previous correspondence. Should the T1 Oak tree not be removed **immediately** our client will have no choice but to proceed with a structural engineering or underpinning scheme to stabilise the risk address and protect our Policyholder's assets.

Crawford Legal Services, Suite 7D, The Plaza, Old Hall Street, Liverpool, L3 9QJ
T: 0151 433 0802 | F: 0151 242 3223
www.crawfordlegalservices.co.uk

Crawford & Company Legal Services Limited is authorised and regulated by the Solicitors Regulation Authority under registration number 631335.

A list of directors is available at our registered office: Suite 7D, The Plaza, Old Hall Street, Liverpool L3 9QJ
Registered in England and Wales under company number 10163594 | VAT registration number 252101754

The cost of a substructure scheme is quoted in excess of £80,000.00 (excl VAT). This sum is exclusive of the rectification works of the damage already caused to the property as a result of your vegetation. We reserve the right to amend this figure to reflect any further costs so arising as a result of your failure to abate the nuisance.

DOCUMENTATION

For completeness, please find enclosed the following evidence in support of our client's position:

1. Technical report dated 7th April 2022
2. Site investigation report dated 16th May 2022
3. Arboricultural report dated 15th July 2022
4. Level monitoring up to 9th February 2023

LEGAL LIABILITY

Please take note that a claim will be pursued against you for the damage already sustained to the property.

Additionally, should you fail to comply with this final request for the removal of the T1 Oak tree the action to be brought against you will also include: the investigation costs, underpinning / stabilisation scheme of the risk address, rectification of all damage and any other resulting losses will be sought from you in addition to the legal costs of pursuing the claim.

The action, which will proceed in the Courts if necessary, will be brought as a result of:

- a. The Council's negligence in failing to maintain the vegetation and thus permitting it to be a foreseeable risk to the risk address; and
- b. The Council's ongoing nuisance in failing to abate the vegetation from causing ongoing damage to the risk address property.

We draw to your attention the case of **Delaware Mansions Ltd & ANR V City of Westminster (2001)** at this time, as this will be relied upon by the Claimant in proceedings: *"If reasonableness between neighbours is the key to the solution of problems in this field, it cannot be right to visit the authority or owner responsible for a tree with a large bill for underpinning without giving them notice of the damage and the opportunity of avoiding further damage by removal of the tree as a general proposition, I think that the defendant is entitled to notice and a reasonable opportunity of abatement before liability for remedial expenditure can arise. In this case Westminster had ample notice and time before the underpinning and piling and is in my opinion liable"*.

The current cost risk to you stands at £18,251.72, should you fail to comply with our request this will increase to circa £80,000.00. We remind you that our client's policyholder is a member of your community and does not wish for such an increased sum to be taken from public funds when this action could be avoided with cooperation.

We consider the Court will find in our favour that our client has been more than reasonable hold you liable for the costs incurred as a result of your failure to remove the vegetation.

Should you wish to discuss replanting options please address these directly to the adjuster. For the avoidance of doubt Crawford & Company donate to the Woodland Trust in respect of the regular replanting of trees.

We also wish to draw to your attention that CO2 emissions generated as a result of an engineering substructure scheme far outweigh the impact on the environment of tree removal and replanting of a lower water demand species.

STEPS TO BE TAKEN IMMEDIATELY

- A. T1 must be felled to near ground level **by no later than 28 days from the date of this letter** and all regrowth must be removed following fell.

Please note this correspondence is a **final demand** for the agreed works to be carried out.

Should you fail to respond with confirmation of agreement to the works in the next 28 days a substructure repair scheme will commence without further notice and a formal claim will be intimated against you for all of the costs incurred.

We reserve our right to draw this and previous correspondence to the Court's attention.

Yours faithfully,



Jessica Hill
Crawford & Company Legal Services