

TECHNICAL REPORT ON A SUBSIDENCE CLAIM

Crawford Reference: SU2201802

**2 Lansdowne Road,
London
N17 9XE**



prepared for

**Arch Insurance
Arch Insurance, 40 Mitre Street, London, EL3A 5DE**

Claim Reference RG-001-7611

SUBSIDENCE CLAIM

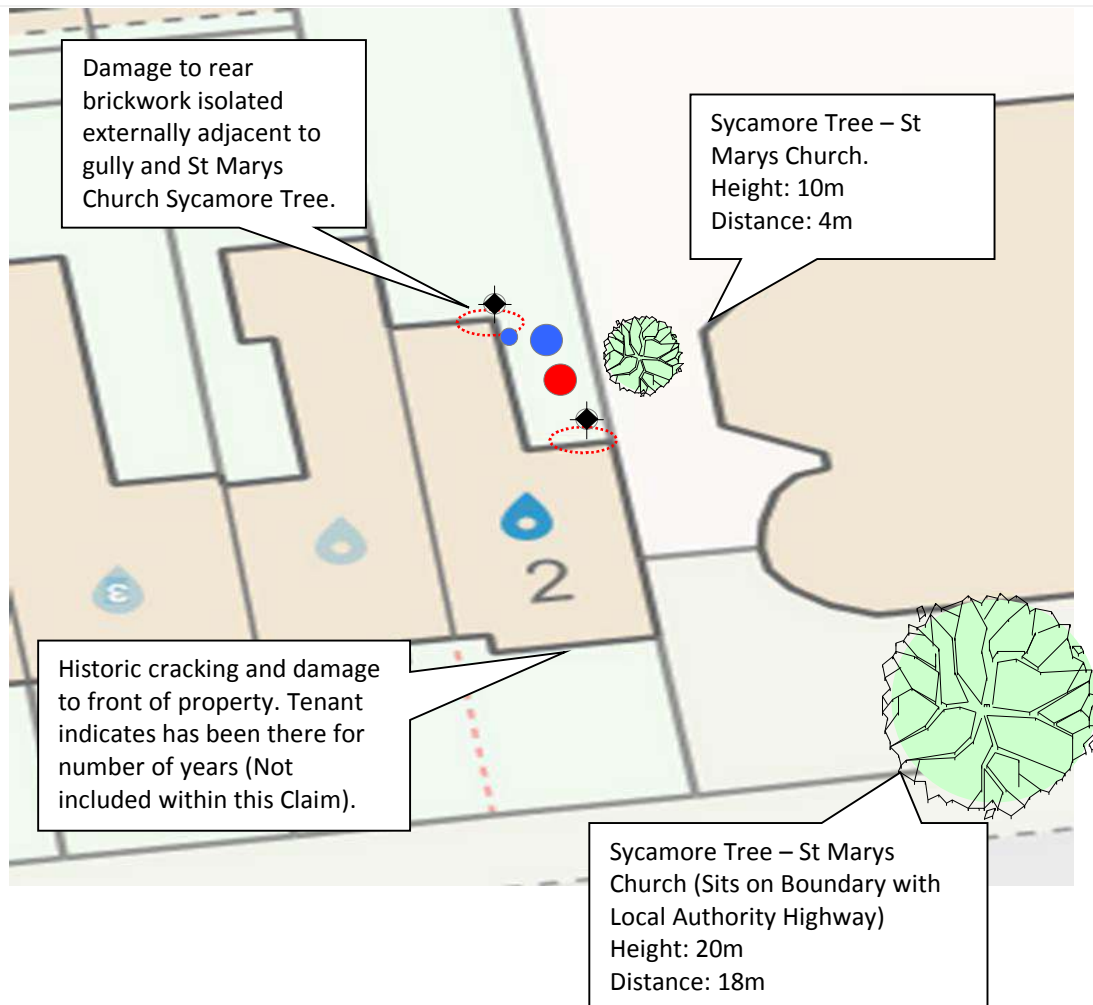
7th July 2022

Crawford Claims Solutions – Subsidence
Cartwright House,
Tottle Road,
Riverside Business Park, Nottingham, NG2 1RT
Tel: 0115 943 8203
Fax: 0121 200 0309

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.



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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		

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INTRODUCTION

We have been asked by Arch Insurance 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 was seeking to re-mortgage his property. The Mortgage Surveyor attended and noted the cracking to the rear outrigger highlighting the potential concern to the policyholder. The policyholder subsequently notified the Insurer.

PROPERTY

Two storey end-terrace house of traditional construction with brick walls surmounted by a pitched tiled roof.

HISTORY & TIMESCALE

Site Investigations will be instructed to determine the cause of damage. By nature of the damage location, there is a drain and rainwater / foul water gully adjacent which may be damaged. This will need investigating. The neighbours Sycamore tree is also in close proximity adjacent to area of damage and, following site investigations, we will be able to determine its influence.

Date of Construction.....	Circa 1920
Purchased.....	1999
Policy Inception Date	29/12/2021
Damage First Noticed	10/06/2022
Claim Notified to Insurer.....	21/06/2022
Date of our Inspection	05/07/2022
Issue of Report	07/07/2022
Anticipated Completion of Claim	Winter 2022

TOPOGRAPHY

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

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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.

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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
Sycamore	10 m	4 m	St Marys Church
Sycamore	20 m	18 m	St Marys Church / Local Authority

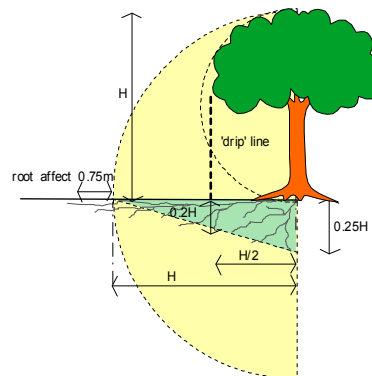
¹ Driscoll R. (1983) “Influence of Vegetation on Clays” Geotechnique. Vol 33.

² Driscoll R. (1983) “Influence of Vegetation on Clays” Geotechnique. Vol 33.

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.

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 activity³.

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 6mtrs⁴. 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.

OBSERVATIONS

The rear right corner of the outrigger is the focal point of damage at the property.

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

INTERNAL



Rear Elevation Kitchen – Outrigger Ground Floor. Hairline cracks historically repaired. Not indicative of subsidence.



First Floor Rear Right Bedroom. Delamination of wallpaper, historic in nature and not indicative of subsidence.

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

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

Rear Kitchen

- No evidence of structural damage noted.

None subsidence related damage.

- There are hairline cracks to the rear plastered wall finish and across the ceiling. These cracks appear historic in nature whilst also attributed to thermal movement of the finish materials. Damage is not consistent with structural movement.

First Floor Rear Bedroom - Left Side above Outrigger

- No evidence of structural damage noted. Due to the tenant's stored items, clear access and inspection was not achievable.

First Floor Rear Bedroom - Right Side

- No evidence of structural damage noted.

None subsidence related damage.

- There is evidence of delamination of wallpaper under the window of the rear bedroom.

EXTERNAL

Rear Elevation Outrigger – Ground Floor.
Stepped cracking through 8 courses of
brickwork.



Rear Elevation Main House – Ground Floor.
Hairline crack through soldier course and 2
brick courses above.

Rear Elevation**Outrigger**

- There are stepped cracks to brickwork to the rear right corner of outrigger extending 8 courses of brickwork 1-2mm in width.
- There is a vertical crack to the underside of the rear window of the rear outrigger extending 4 brick courses 1-2mm in width. Note, full observation / inspection not possible due to tenants stored items in garden.

Rear Elevation of Main House

- There is a stepped crack to soldier course brick lintel extending 2 courses 1mm width.

CATEGORY

In structural terms the damage falls into Category 2 of Table 1, Building Research Establishment⁵ Digest 251, which describes it as "slight".

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 on behalf of Insurers, we will advise on causation and the scope of mitigation works required.

Johnny Joannou
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subsidence@crawco.co.uk

⁵ Building Research Establishment, Garston, Watford. Tel: 01923.674040

PHOTOGRAPHS



Neighbour (St Marys Church) Sycamore Tree 4m proximity from area of damage.



Neighbour (St Marys Church) Sycamore Tree to front of property.



First Floor Rear Bedroom over Outrigger and above Kitchen. Poor access due to Tenants stored items.

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