



TECHNICAL REPORT ON A SUBSIDENCE CLAIM

Crawford Reference: [REDACTED]

[REDACTED]

**180 Camden Road
London
NW1 9HG**



Prepared for

[REDACTED]

[REDACTED]

SUBSIDENCE CLAIM

27th November 2019



Subsidence Division
Cartwright House, Tottle Road
Riverside Business Park, Nottingham, NG2 1RT

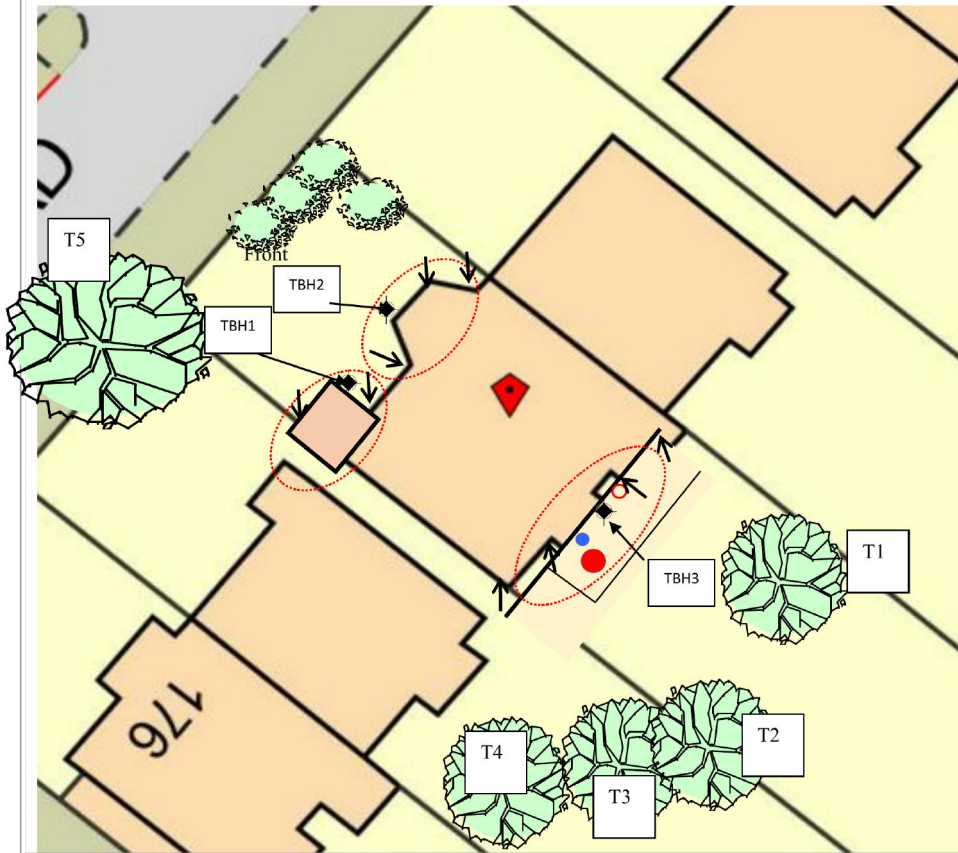
[REDACTED]

Chartered Loss Adjusters

[REDACTED]

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

INTRODUCTION

We have been asked by Allianz Commercial 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

Mr Briere-Edney has owned the leasehold the 2nd floor flat since 1995. The freehold to the building was later purchased in 2015. The leasehold to the garden basement flat and the first floor flat are separately owned.

We understand cracking to the front bay was discovered in August 2018. Damage to the front entrance porch was identified in August 2019.

An inspection by local Engineers, SB Consulting Engineers was undertaken on 20th September 2019 which recommends a subsidence claim is reported to Insurers.

PROPERTY

The property is a semi-detached three storey block consisting of traditional construction with part rendered masonry walls surmounted by a pitched tiled roof. The property incorporates three self-contained flats.

HISTORY & TIMESCALE

Site investigations are being organised and level monitoring established.

Date of Construction	Circa 1840
Purchased	2015
Policy Inception Date.....	21/10/2018
Damage First Noticed	September 2019
Claim Notified to Insurer.....	21/10/2019
Date of our Inspection.....	19/11/2019
Issue of Report.....	27/11/2019
Anticipated Completion of Claim	February 2022

TOPOGRAPHY

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



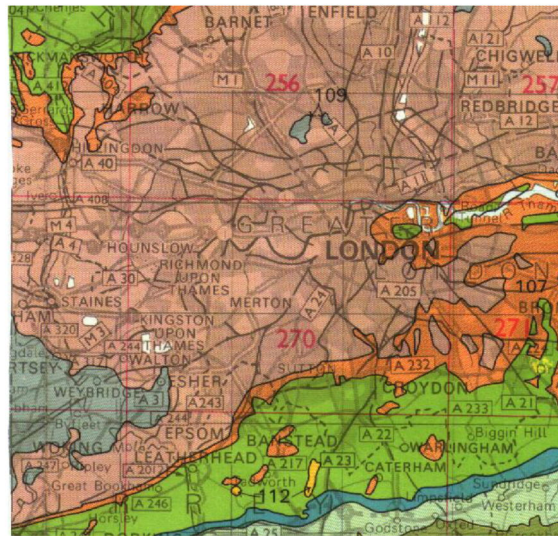
GEOLOGY

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

London Clays are marine deposits characterised by their silty, sandy composition. They are typically stiff, dark or bluish grey, weathered dark to mid-brown superficially with fine particle size (less than 0.002mm). Tomlinson¹ describes it as a 'fat' clay with high loadbearing characteristics due to pre-consolidation pressures in its geological history.

The superficial deposits are thought 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 vegetation² 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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¹ Tomlinson M.J. (1991) "Foundations Design & Construction" Longman Scientific Publishing.

¹ B.S. 5930 (1981) "Site Investigations"

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

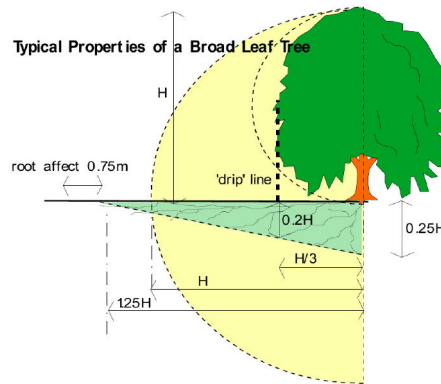
VEGETATION

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
T1 - Deciduous	20 m	4 m	Owners
T2 - Deciduous	20 m	8 m	Owners
T3 - Deciduous	20 m	5 m	Neighbour 1
T4 - Deciduous	20 m	8 m	Neighbour 1
T5 - Deciduous	25 m	11 m	Council

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.

Broadleaf trees typically have wider spreading roots and higher water demands than coniferous species and many are better adapted to growing on heavy clay soils. Some are capable of sprouting from cut stumps or bare wood and most will tolerate pruning better than conifers.



Typical proportions of a broadleaf tree. Note the potential root zone. It must be noted that every tree is different, and the root zone will vary with soil type, health of the tree and climatic conditions.

However heavy pruning of any tree should be avoided if possible, as it stimulates the formation of dense masses of weakly attached new branches which can become dangerous if not re-cut periodically to keep their weight down.

OBSERVATIONS

The main areas of damage affect the front bay, front porch and rear elevation.

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

INTERNAL

Cracking to first floor flat

Cracking to first floor flat

Garden Basement Flat:

Entrance hall

- Slight cracking was noted above the lounge door.
- Slight horizontal cracking was noted to the rear wall at head height.

Front lounge

- Slight cracking was noted to the left hand side of the bay at its junction with the main house.
- To the right hand wall cracking was noted either side of the hall door head.

Rear bedroom

- To the right hand wall slight cracking was noted above the corridor door (seen both sides).
- To the rear wall, 3mm wide cracking was noted to the top right of the window.

1st Floor Flat:

Front lounge

- Slight cracking was noted to the left hand side of the bay at its junction with the main house.
- To the right hand dividing wall, a slight diagonal crack was noted to the front corner which extends up to the rear.

EXTERNAL



Rear elevation

Cracking to bay

Front entrance porch:

- Cracking, up to 10-15mm in width, was noted at the junction between the porch and main house/extension.
- Stepped cracking, up to 6mm in width was noted the right hand wall of the porch.

Front bay:

- Stepped cracking / displacement of flat brick lintels were noted to the left hand return wall of the bay.

Rear elevation:

- Diagonal / stepped cracking was noted to above and below door and window openings.

CATEGORY



In structural terms the damage falls into Category 3 of Table 1, Building Research Establishment³ 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 we are not aware of any previous underpinning.

RECOMMENDATIONS

We will report further once these investigations have been completed.

John Buckley BSc (hons) MCIQB C.Build E MCABE Dip CII (Claims)
Subsidence Division



³ Building Research Establishment, [REDACTED]



PHOTOGRAPHS



Trees at rear



Trees at rear



Cracking to porch



Cracking to bay





Cracking to rear elevation



Cracking to rear elevation



Rear Bedroom - Garden floor flat - rear wall



Garden flat - Lounge

