

TECHNICAL REPORT ON A SUSPECTED SUBSIDENCE CLAIM

Crawford Reference: SU1808160

Falkland Road Flat Management Limited
28 Falkland Road
London
NW5 2PX



Prepared for

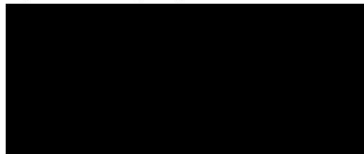
LV= Commercial

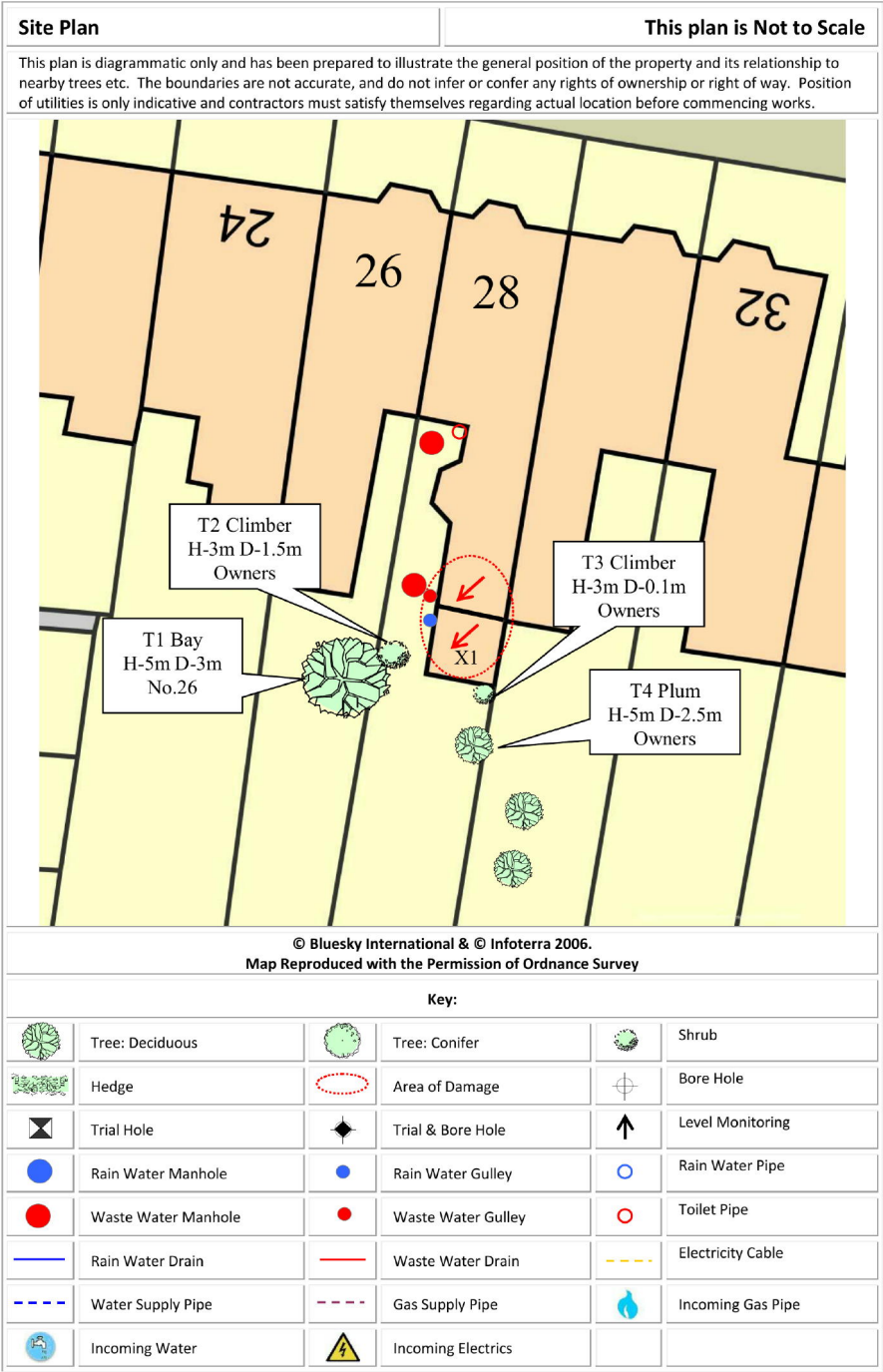


SUBSIDENCE CLAIM

DATE 06 February 2019


Crawford[®]
Specialist Property Services UK





INTRODUCTION

We have been asked by LV= 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

The previous owner of the flat submitted a subsidence claim in March 2018 (LVB894752/SU1801058) but was subsequently withdrawn. The current owner and the other flat owners were not informed of this until the current claim was submitted.

The current owners of the flat purchased the ground floor flat in May 2018. A general structural inspection report was carried out by Structural Environment Limited under the instruction of the previous owner in December 2017. The report noted minor/slight damage to the rear projection and rear extension. They concluded the damage in the extension was the result of clay shrinkage subsidence and the vine tree should be removed or pollarded. The current owners of the flat advised that they were advised by the engineer that as the damage was minor no immediate action is required. A claim was then submitted when further cracking was noted in August 2018.

PROPERTY

Three storey multi-occupied mid-terrace of traditional construction with brick walls surmounted by a mansard roof.

HISTORY & TIMESCALE

We await insurer's advice on how they wish us to proceed with the claim.

Date of Construction	Circa 1890
Purchased	Flat A - May 2018
Policy Inception Date	01/03/2018
Damage First Noticed	September 2018
Claim Notified to Insurer.....	21/11/2018
Date of our Inspection.....	25/01/2019
Issue of Report	01/02/2019
Anticipated Completion of Claim	TBC

TOPOGRAPHY

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

GEOLOGY

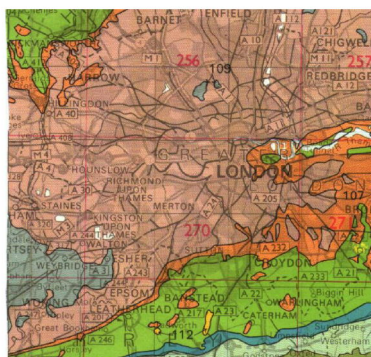
Reference to the 1:625,000 scale British Geological Survey Map (solid edition) OS Tile number TQNW suggests the underlying geology to be **London Clay**.

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 upper horizon is often encountered at shallow depth, sometimes just below ground level. They have high shrink/swell potentials^{2,3} and can be troublesome in the presence of vegetation.

The superficial deposits are thought to be **None - Solid Outcropping.**

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



Geology.

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 - Bay	5 m	3 m	26
T2 - Climbers	3 m	1 m	Owners
T3 - Climbers	3 m	1 m	Owners
T4 - Plum	5 m	2 m	Owners

¹ Tomlinson M.J. (1991) *"Foundations Design & Construction"* Longman Scientific Publishing.

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

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

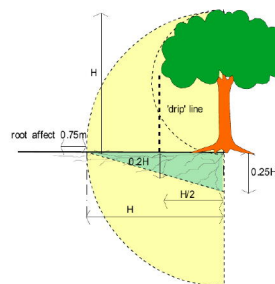
³ Table 1, Chapter 4.2, Para. 2.3 of N.H.B.C. Standards, 1986.

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.

The Bay (*Laurus*) is an evergreen that can reach heights of between 10 – 14mtrs. It's a slow growing tree (150mm p.a.) with weak root activity.

Climbers: Can be significant in subsidence cases as they are frequently planted close to the property, trained up house walls. As their roots do not need to spread to provide support they are frequently compact, and can have an intense but localised desiccation effect. Most tolerate pruning well, but respond by sprouting vigorously and need regular maintenance. *Pyracantha* or firethorn is common and has roots which cannot be distinguished anatomically from apple, pear and other members of the *Pomoideae* group of the rose family. *Wistyeria* roots are similar to those of other members of the pea family, including laburnum and false acacia.

Plums are members of the genus *Prunus*, which includes cherries, common and Portugal laurels and blackthorn. They are common in gardens and orchards and, although moderate water demanders, have wide spreading root systems that frequently send up sucker shoots a considerable distance from the original parent tree.



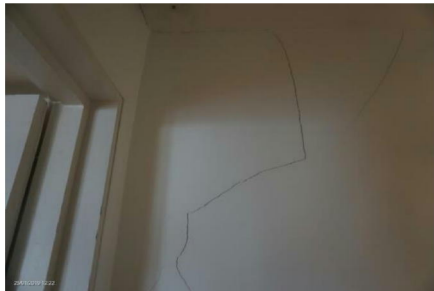
Typical proportions of a Plum tree showing the potential root zone.

They will tolerate light pruning when young, but heavy cutting in older trees can lead to decay and infection by the fungus that causes silver leaf disease. This risk can be reduced by pruning in summer when they are more resistant to invasion.

OBSERVATIONS

The focal area of damage is to the single storey rear extension.

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

INTERNAL

Rear Hall - Diagonal crack to left wall



Rear Hall - Ceiling junction separation to the front

Rear Hall

Vertical crack to left wall - 1mm
Ceiling junction separation to the front - 1mm
Crack in ceiling - 0.5mm

Bathroom

Hairline diagonal crack to front wall

Rear Right Lobby to Garden

Vertical crack to right wall - 1mm
Ceiling junction separation to the front - 1.5mm
Hairline vertical crack to the rear

Rear Lounge

Vertical crack above and below the right wall - 0.5mm
Crack in coving to the right wall - 1mm
Outline of crack to left wall
Crack in coving to front right corner - 1mm

EXTERNAL

Right Elevation - Vertical crack



Right Elevation of Extension - Vertical crack

Right Elevation

Hairline crack and outline of crack to left of extension

Vertical crack to left of window - 0.5mm

The insured carried out minor crack repairs in August and repainting

CATEGORY

In structural terms the damage falls into Category 2 of Table 1, Building Research Establishment⁴ 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 clay shrinkage.

The timing of the event, the presence of shrinkable clay beneath the foundations and the proximity of vegetation where there is damage indicates the shrinkage to be root induced. This is a commonly encountered problem and probably accounts for around 70% of subsidence claims notified to insurers.

Fortunately, the cause of the problem (dehydration) is reversible. Clay soils will re-hydrate in the winter months, causing the clays to swell and the cracks to close. Provided the cause of movement is dealt with (in this case, vegetation) there should not be a recurrence of movement.

⁴ Building Research Establishment, Garston, Watford. Tel: 01923.674040

TECHNICAL REPORT

28 FALKLAND ROAD



RECOMMENDATIONS

We have reserved policy liability pending the review of the claim circumstances by insurers.

We will provide a further update once we have heard back from LV.

Callan Harwood-Griffith BSc (Hons)
Subsidence Division



Chartered Loss Adjusters



PHOTOGRAPHS



Bathroom - Diagonal crack to front wall



View of Rear Elevation



View of T1 Bay



View of T2 Climber



View of T3 Climber



View of T4 Plum