ADDENDUM TECHNICAL REPORT

[redacted]

[redacted]

22 Daleham Gardens
London
NW3 5DA

Prepared for

[redacted]

[redacted]

Crawford®

Subsidence Division

[redacted]

SUBSIDENCE CLAIM

DATE 04 May 2020

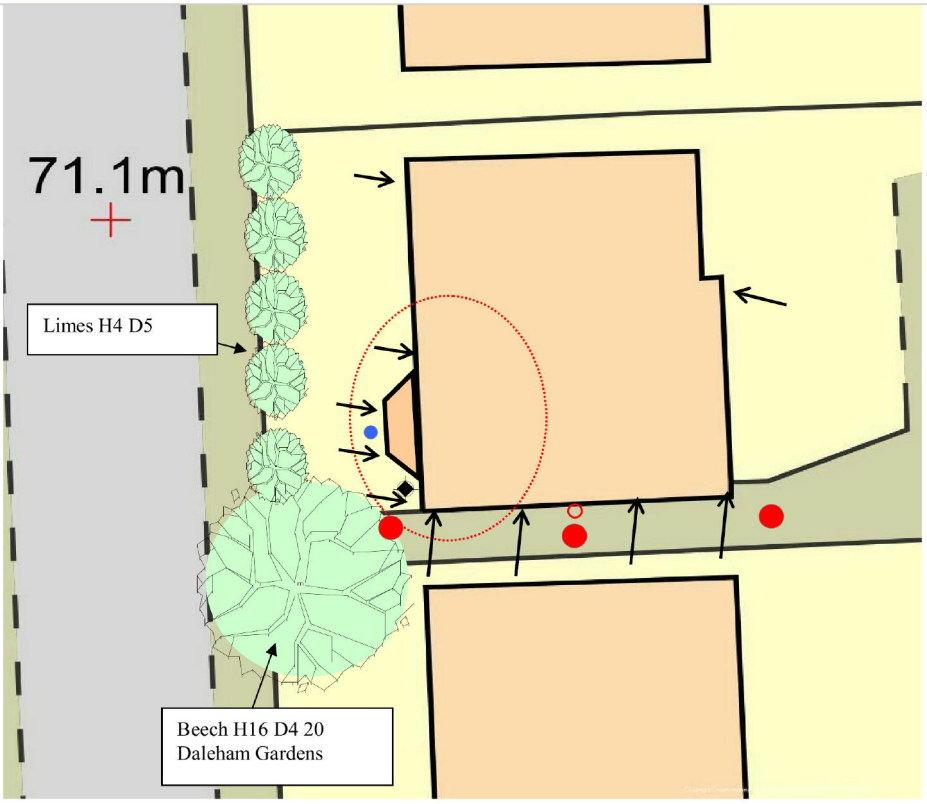
Chartered Loss Adjusters

[redacted]

Crawford®

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.



Key:

	Tree: Deciduous		Tree: Conifer		Shrub
	Hedge		Area of Damage		Bore Hole
	Trial Hole		Trial & Bore Hole		Level Monitoring
	Rain Water Manhole		Rain Water Gulley		Rain Water Pipe
	Waste Water Manhole		Waste Water Gulley		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

[redacted]

INTRODUCTION

We have been instructed by insurers to investigate a claim for subsidence at the above property. The area of damage, timescale and circumstances are outlined in our initial Technical Report. This report should be read in conjunction with that report.

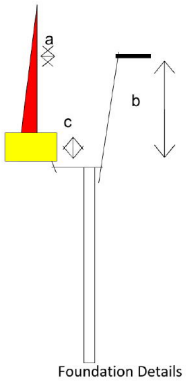
To establish the cause of damage, further investigations have been undertaken and these are described below.

INVESTIGATIONS

The following investigations were undertaken to identify the cause of movement.

TRIAL HOLES

A trial hole was excavated to expose the foundations - see site plan for location and the diagram below for details.



Foundation Details

No.	Borehole Depth	Footing (a)	Underside (b)	Thickness (c)
TH1	3.00 m.	300 mm.	900 mm.	800 mm.

Trial Hole 1 revealed a concrete strip footing founded at a depth of 0.9m below ground level which bears onto mid brown CLAY.

Root activity of live appearance was noted to the underside of the foundations.

AUGERED BOREHOLES

A 50mm diameter hand auger was sunk - see site plan for location.

Borehole 1 confirmed the continuation of the clay subsoil encountered within the trial pit, with roots to a depth of 2m below ground level. The borehole remained dry and open upon completion.

In-situ shear vane testing confirmed the clay subsoil to be stiff in nature.

[redacted]

SOIL SAMPLES

The following laboratory tests were carried out on soil samples retrieved from the boreholes :-

Moisture Content

Values ranged from 23.5% to 30.9% over the depth of Borehole 1.

Atterberg Limits

Results indicate that the clay subsoil can be classified as a high to very high plasticity clay in accordance with the Casagrande chart.

ROOTS

Roots in Trial pit & Borehole 1 were identified as the Species Fagus which includes common beech or copper beech. Starch was present which indicates that the roots were alive at the time of retrieval.

DRAINS

A CCTV survey of drainage in the vicinity of damage was carried out at the time of initial site investigations. This revealed that the drains surveyed were clear of damage and would rule out that the subsidence occurring through a result of leaking drains.

DISCUSSION

The results of the site investigations confirm that the cause of subsidence is root-induced clay shrinkage. The clay is plastic and thus will shrink and swell with changes in moisture content. Roots have extracted moisture below the depth of the footings, thus causing differential foundation movement to occur. This is supported by the following investigation results :-

- The foundations are at a depth of 0.9m which is below the level that normal seasonal movement would occur.
- The moisture content profile indicates a reduction in moisture content between a depth of 0.9m and 2m which is indicative of desiccation at this level. This is also co-incident with the depth of root activity.
- Atterberg limit testing indicates that the soil has a high to very high plasticity and hence will shrink and swell with changes in moisture content.
- Roots were found to a depth of 2m.

RECOMMENDATION

The cause of the movement needs to be dealt with first. From the results of the site investigation, we are satisfied that the Beech tree can be removed. Based on our analysis, we are satisfied there is no adverse heave risk to the property.

Our Mitigation Unit will liaise with the Local Authority to arrange a TPO application to be submitted and advise of the outcome when it is received. A decision is normally taken by the Local Authority after 8 weeks of submission.

If the decision is favourable, our Mitigation Unit will arrange for the tree works to be undertaken.

In the event of TPO consent for work to the beech, superstructure only repairs will be required and we currently hold a reserve circa [redacted] for this. Should localised underpinning need to be

implemented to stabilise the property as a result of tree work refusal, the reserve will increase to circa [redacted]

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