

Optera Structural Solutions
[REDACTED]

SOW 3663 Underpinning and reinstatement works for Crawford and Company

Date

April 16, 2019

Services Performed By:

Optera Structural Solutions

Services Performed For:Crawford and Company
[REDACTED]**POLICY HOLDER:**

Mr and Mrs Coveney

POLICY HOLDER ADDRESS:11 Shirlock Road, London. NW3 2HR
[REDACTED]**ANTICIPATED START DATE:**TBC
-----**PROJECT MANAGER:**

Spencer Caizley

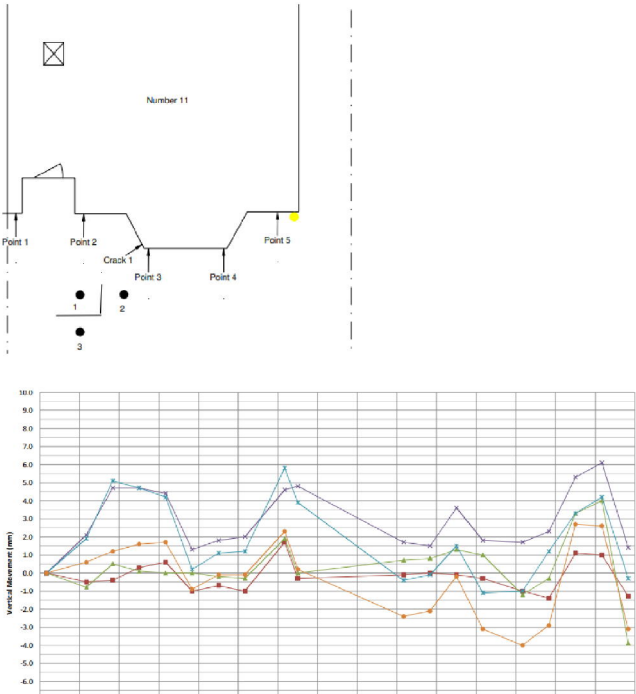
This scope of works # 3663 (hereinafter called the "SOW"), effective as of April 16, 2019, on approval by Crawford and Company is entered into by and between Contractor and Client.

Project Description

Optera attended the above property on Thursday 27th September 2018 to assess the viability of underpinning or installing a root barrier across the front of the property to mitigate the effects of the neighbours strawberry tree which is exacerbating clay shrinkage subsidence about the front right hand corner of the property. The insured advises that this has been ongoing for some time and following periods of previously dormant monitoring, the property was cosmetically repaired, only for the damage to re-occur. The extreme weather events of 2018 are well publicised and their effects are seen graphically in the level monitoring which shows a pronounced downward movement of the front elevation.

Given the repeat nature of the damage and the reluctance of the third party to remove their tree, we have been requested to consider the most appropriate form of permanent reinstatement. The front of the property is a bay and forecourt and access is via a gated opening in the front wall on to the pavement. The physical dimensions would

make installing a root barrier impossible. The site is simply too small to accommodate the size of necessary plant required to dig to a depth to sever the roots.



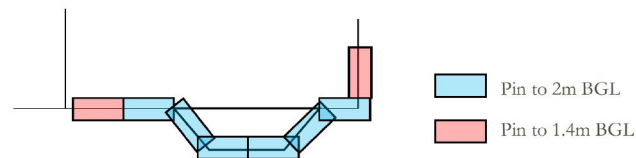
The level of enabling to allow a root barrier which would still be seriously compromised due to the access issues renders this unworkable in this scenario.



Photo 1: shows the front of the property and relative proximity of the neighbour's tree.

The proposal is to traditionally mass concrete underpin the front elevation of the property, extending the footing beyond the zone of influence of the tree roots and supporting the property on volumetrically stable ground.

Previous site investigations have indicated roots of live appearance from Pomoideae and Salix were noted to 2.5m below ground level. We believe these emanate from a street tree which has subsequently been removed. We are looking to extend the foundations to 2m in depth, extending half a metre beyond the last root. The underpinning is to extend the full width of the front elevation, stepping up towards the left hand party wall and returning around the right hand flank.



Having spoken to the insured who is a keen gardener, it was agreed that Mrs Coveney would dig up and pot those plants within the forecourt which she wished to retain. For the purposes of the quote, we assume that the forecourt vegetation will have been transplanted prior to our arrival.

We will mark out the pins and carry out a services search and mark them clearly on the ground prior to commencement of excavations. The pins will be excavated on a hit and miss basis to the required depth, extending 500mm under the front face of the wall. The inside face of the pins will be lined with 90mm claymaster and each pin poured to within 500mm of the underside of the existing footing and allowed to cure. We will dry pack with a 3:1 sand cement mix and allow this to cure before commencing excavations on the adjacent pin.

Sequence of works

- Mobilise trade, welfare and plant to site. Delineate the works area with hedges fencing and secure for the duration of the project.
- Carefully protect the surrounding areas to ensure that we do not damage any paving beyond the works area.
- Mark out pins and carefully CAT scan and mark any services on the ground clearly. All services are believed to enter from the front of the property.
- Excavate the first two pins to depth, removing all waste to the skip which will be located in the highway. The road is residents permit parking and we will need to arrange for two bay suspensions for the duration of the works. Parking bay suspensions for the duration of the works amount to over £1500 on this occasion.
- Once the first two pins are excavated to depth, they will be inspected by local building control and once approved, poured with C35 concrete and allowed to cure. The pins will be dry packed before commencing excavations on the adjacent pins.
- This process will be repeated on all 8 pins with the two end pins stepping up to mitigate differential movement.
- Once all underpinning is completed, we will backfill the excavations with type 1 MOT and topsoil placed on the top 200mm ready for replanting.

- The forecourt hard standings will be concreted upon completion. By the front door, there is a tiled mosaic pattern. No allowance has been made for relaying this and we have assumed this will be undertaken by the reinstatement contractor.

Project Fee

- The total value for the services detailed in this SOW, including contract management, all labor, plant and materials (unless detailed via a PC SUM) totals



GANT Chart

Activity	Week 1												Week 2															
	Mon		Tue		Wed		Thur		Fri		W'end		Mon		Tue		Wed		Thur		Fri		W'end		Mon		Tue	
	T	WF	T	WF	T	WF	T	WF	T	WF	T	WF	T	WF	T	WF	T	WF	T	WF	T	WF	T	WF	T	WF	T	WF
set up site, secure fencing and skip within the road and arrnage parking suspensions.	2	1																										
Excavate pins 1&2			2	1																								
BC inspect and pour					2	1																						
Excavate pins 3&4							2	1																				
BC inspect and pour									2	1																		
Excavate pins 5&6											2	1																
BC inspect and pour													2	1														
Excavate pins 7&8																2	1											
BC inspect and pour																		2	1									
Backfill and tidy																				2	1				2	1	2	1