

Engineers Report

Risk Address 6 Orchard Close
Cuffley, Potters Bar
Hertfordshire
EN6 3QD

360 Reference DLG-SH-19-001241
Claim Refence 068795442

Date Notified 20.11.2019
Date Of Visit 26.11.2019
Report Date 10.12.2019



Description of premises

The insured's property is a 4-bedroom, detached house with cavity brick and rendered walls covered by a hipped tiled roof. Purchased by the policyholder in 1988, there have been two additions to the property both in 2001, involving a side extension that forms the lounge area and a second storey bedroom extension.

The property resides within a cul de sac arrangement set back from the access road within a larger mainly residential area, with similar detached neighbouring properties to both sides. The site itself is split level with the house being raised up above the access road and driveway / entrance. There are no adverse features to comment upon.

Discovery of Damage

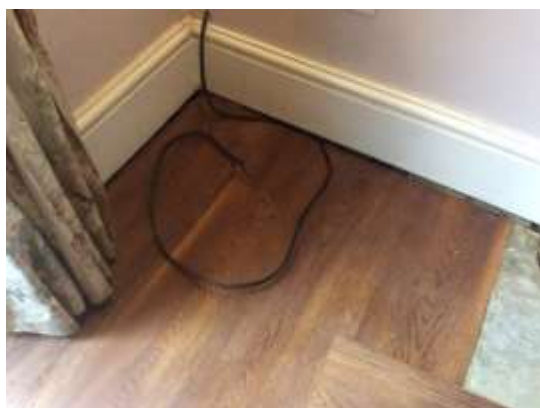
We are informed that damage was first noticed around the start of November this year, when a plumber undertaking some general works, noted that the floor in the study room (extension) had dropped away from the skirting line, this prompted a further inspection and the subsequent damage to the walls and ceilings within the same area were discovered and the claim notified.

Focus of Damage and Report

The damage and movement are focused to the rear of the property within the study area that forms part of the original structure as well as the first floor landing area also to the rear.

Internally the damage is less evident but there is a suggestion that the floor slab has started to drop towards the rear of the structure with gaps evident between the wooden floor finish and plastered walls. Within the study damage has been observed to the walls and ceiling area, with tapered cracking to the plasterworks as well as dropping of the floor away from the skirting line to the rear of the room.

On the landing there is cracking around the window reveal. There are no obvious signs of damage externally at this stage. A more detailed assessment of the damage and works considered necessary will be provided as a separate cover in the schedule of works.



Dropping of the floor in study



Internal cracking



Neighbouring tree



Rear of property

Non-Subsidence Related Damage

None noted at this stage.

Site Geology and ground conditions

Indicative Site Geology and Soils Data for: 5 Orchard Close, Cuffley, Potters Bar, Hertfordshire, EN5 4QD Ref: DLG-SH-19-001241								
No of SIs within 0.73km from address on identical lithology. (See comments)	9							
Closest - Furthest distance of a site investigation from the address (km).	0.05 - 0.72							
Total number of boreholes.	12							
Percentage of site investigations where root samples were taken.	78%							
Percentage of site investigations where drainage was recorded.	11%							
Number of samples tested at greater than 1m depth.	42							
BRE Digest 240. "Volume change potential" from Av. Modified Plasticity Index (I _p) of 48%.	High							
Previous Soils Data <small>n = Non recorded</small>	Depth <small>m.</small>	M.C. <small>(%)</small>	L.L. <small>(%)</small>	P.I. <small>(%)</small>	P.L. <small>(%)</small>	425um <small>(%)</small>	Suction <small>kPa</small>	Oed <small>Strain</small>
Sample population	42	42	16	16	16	16	14	16
~ Minimum (Av + 1 StdDev)	1.1	25	60	38	21	90	216	0.0207
~ Maximum (Av + 1 StdDev)	3.6	33	79	54	27	100	1425	0.0421
Average	2.1	29	70	46	24	96	712	0.0207
General soils description	Firm brown/grey CLAY with some sand / fine gravel / silt							
BGS 1:50 000 maps as a:	1:50 000 scale bedrock geology description:							
Bedrock Geology	London Clay Formation - Clay, Silt And Sand. Sedimentary Bedrock formed in the Palaeogene period. Local environment previously dominated by deep seas. Setting: Deep seas. These sedimentary rocks are marine in origin. They are detrital and comprise coarse- to fine-grained shales of debris from the continental shelf flowing into a deep-sea environment, forming distinctively graded beds.							
BGS 1km Hexagonal Superficial	1:50 000 scale superficial geology description:							
Deposit Depth Data	None recorded.							
Mean Depth =	2m							
Max Depth =	4m							
Coverage =	28%							
<small>Note: The BGS only record superficial deposits greater than 2m in depth.</small>								
BGS 1:50,000 Artificial Ground	None recorded							
BGS "Geohaz" 5km Hexagonal Hazard Ratings								
Shrink/Swell	Significant with areas of localised significant rating.							
Collapsible Deposits	Low							
Compressible Ground	Low with areas of localised significant rating.							
Landslides	Low with areas of localised significant rating.							
Running Sand	Low							
Soluble Rocks	Low with areas of localised significant rating.							
Mining (not incl coal) 1km hex	Localised small scale mining may have occurred in the area.							
Government Coal Authority Data	No data recorded for this location.							
Comments: The location is in a medium SI density area. The nine SIs reported above are on exactly the same Bedrock Geology with no overlying Superficial deposits.								
<small>Contains British Geological Survey materials. © NERC [2019]</small>								

Evidence of external influences

Trees.

To the rear of the property within the domestic neighbouring gardens there are several large and mature broadleaf trees including a significant Oak tree, all within influencing distance to the property. At this stage we do not know whether there is any protection order in place.

The significance of the trees and their potential removal will be further clarified during site investigations that will aid in the progress of the claim and any discussions with the third-party neighbour.

Drains.

There are drainage provisions at the property and in close proximity to the affected structure that will be surveyed as part of the further investigations to eliminate any secondary influence.



Summary and Conclusions

All the indications from the evidence obtained suggest that the damage results from subsidence of the site upon which the property stands. Live roots in firm active clays have led to cyclical shrinkage and expansion below the foundations of the property, which together have led to consequent building movement and damage.



This influence and movement is consistent, as the clay continues to change volume in the presence of the tree identified, thus the problem continues.

The optimum solution in this instance would be to remove the cause of the problem, allowing the property to recover stability immediately thereafter.

The removal of tree belonging to third parties can be problematic and the success of securing any agreement can vary dependant on the individual circumstances. In this instance to facilitate the necessary steps that will allow us to engage with the Third Party and make a further assessment, we will need to obtain sufficient evidence through site investigations that will shortly be instructed. During these site investigations we will also look to check any drainage provisions to the front of the property through a CCTV survey.

Upon receipt of the initial results we can make a further assessment on the likely hood of successfully securing removal and update accordingly with further steps.

Next Steps

- Site investigations to obtain root identification, soils analysis and check drainage provisions to be instructed.
- Instruct and Arborist to provide a professional report to enable an informed assessment for tree removal application.
- Update all parties on a regular basis.
- Provide a schedule of work for repairs to be considered.

James Preston
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