

2 November 2023

Our reference: SU2302552

Ms Claire Bradbury
28 Spinney Drive
Botcheston
Leicester
Leicestershire
LE9 9FG

Dear Ms Bradbury

Your Insurance Claim at 28 Spinney Drive, Botcheston, Leicester Leicestershire LE9 9FG

We write to provide an update following our recent inspection of your property and the subsequent site investigations completed, a copy of the report is attached for your reference.

Summary

Unfortunately, the recent investigations have revealed the foundations of the conservatory are too shallow at 1000mm and have not been constructed in accordance with good building practice relevant at the time of construction, which recommends a minimum depth of 1300mm to 1600mm and therefore the insurance claim for the damage reported to the has been declined. I present our findings and reasoning below.

Coniferous trees

Foundation depth (m)		Tree height H (m)											
Distance D (m)		8	10	12	14	16	18	20	22	24	26	28	30
1		1.65	1.70	1.75	1.80	1.80	1.85	1.85	1.90	1.90	1.90	1.90	1.90
2		1.25	1.40	1.50	1.55	1.65	1.65	1.70	1.75	1.75	1.80	1.80	1.80
3		0.90	1.10	1.25	1.35	1.45	1.50	1.55	1.60	1.65	1.65	1.70	1.70
4			0.90	0.95	1.10	1.25	1.30	1.40	1.45	1.50	1.55	1.55	1.60
5				0.90	0.90	1.05	1.15	1.25	1.30	1.35	1.40	1.45	1.50
6					0.90	0.95	1.10	1.15	1.25	1.30	1.35	1.40	
7						0.90	0.90	1.00	1.10	1.15	1.25	1.30	
8							0.90	0.95	1.05	1.10	1.20		
9								0.90	0.95	1.00	1.10		
10									0.90	0.90	0.95		
11											0.90		
12												0.90	
13													0.90
14													
15													
16													
17													
18													
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21													
22													
23													

0.9m minimum foundation depth

Chartered Loss Adjusters

The tree that has been implicated in the damage, would have been well established at the time of construction and had been planted before the conservatory was built. Hence the reason that the foundation design should have taken the tree into consideration.

Investigations Undertaken

Trial pit and borehole investigations were undertaken to the conservatory and the left-hand side of the main house as a control. A CCTV survey of the drainage system in the area of subsidence damage was also undertaken.

Observations

- The main property was built in 1980 with the conservatory added in 2013.
- We were advised the damage to the conservatory was first observed in August 2023
- The foundations of the main house are founded at a depth of 1000 mm below ground level.
- The foundations of the conservatory are founded at a depth of 1000 mm below ground level.
- The foundations of the main house bear onto a clay soil with Medium shrinkage potential.
- The foundations of the structure¹ bear onto a clay soil with Medium shrinkage potential.
- Roots were recovered from beneath the foundations of the conservatory.
- The roots recovered were identified as Pine
- The roots identified are assumed to emanate from the Pine tree which were present at the time the conservatory was constructed in 2013 based on Google Earth Pro
- No Drainage defects were found in the area of subsidence movement.

Foundation Design

In the absence of an Engineer the obligation for design resides with the builder. It is therefore incumbent on the builders to exercise reasonable skill and care in formulating the design and to construct a structure fit for purpose. Good building practice should take into account the site conditions to ensure the foundations adequately support the building throughout its life. In certain circumstances Building Regulation approval would be required. However, this is not a guarantee that all works have been completed to the required design and workmanship standards. While some structures do not require formal Building Regulation approval, Building Regulations clearly state that the same principles of good building practice should apply to ALL structures. The Building Regulations available at the time of construction provide a valuable source of information surrounding the appropriate design and construction methods.

Seasonal changes affect clay soils due to changes in moisture content causing the soil to shrink in summer and swell in winter. There are therefore minimum foundation depths for different types of clay to avoid seasonal movement causing damage to structures. Broadly, new foundations should be constructed at a minimum of 750mm below ground in clay soils of 'LOW' shrinkage potential, 900mm in 'MEDIUM', and 1000mm in 'HIGH' to avoid normal seasonal movement. However, it should also be noted that surrounding vegetation should be considered and these minimum depths will need to be increased to ensure that the depth of foundations exceeds the depth of current and potential future root activity.

When considering foundation design in clay soils when there is vegetation present reference should always be made to NHBC Standards, in particular 'Chapter 4.2 – Building near trees'. These standards were developed in response to the hot, dry summer, of 1976 when the issue of root induced clay shrinkage became widely recognised. Even if vegetation was not present at the time of construction these guidelines provide details of minimum foundation depths in clay soils.

Based on these standards in 2013 the foundations for the conservatory in a Medium shrinkage clay should have been at least 1300mm deep to withstand the effects of the Pine located 5m from the conservatory, which was present prior to the construction.

NHBC Technical Standards from 2010 can be accessed via- <https://www.nhbc.co.uk/builders/products-and-services/techzone/nhbc-standards>

There is robust advice concerning foundation design from within the conservatory industry itself. In 2006 the Conservatory Association / Glass and Glazing Federation published "A Guide to Good Practice in the Specification and Installation of Conservatories within the United Kingdom". This recommends that the house foundations are a useful starting point in respect of conservatory foundation arrangements. It also recommends taking into account both Building Regulations Approved Document A and NHBC Standards when designing appropriate foundations. Therefore, as discussed above, we can be satisfied this was not followed.

Conclusion

The investigations have demonstrated that, regrettably, the foundations of the conservatory have not been designed and constructed with reasonable skill and are not fit for purpose. The recognised foundation guides within the industry do not appear to have been utilised for the design. The damage is attributed to the inadequacy of foundations at construction given the presence of the pine tree. In view of this we are obliged to consider the relevant policy wording and we note that your policy provides the following subsidence exclusion on page 16 of your policy booklet;

14. Subsidence or heave of the site on which the buildings stand, or landslip

But not for:

- i damage to or resulting from the movement of solid floor slabs unless the foundations beneath the external walls of the **home** are damaged at the same time by the same cause;
- ii loss or damage:
 - a caused by or resulting from coastal or river erosion;
 - b caused by the bedding down of new **buildings**;
 - c caused by or resulting from the settlement of newly made up ground;
 - d resulting from normal settlement, shrinkage or expansion;
 - e due to demolition, structural alteration or structural repair;
 - f caused by shrinkable or expandable materials within the foundations;
 - g caused by the compaction of infill materials within the foundations of the **home**;
 - h caused as a result of chemicals (e.g. sulphate) reacting with any building or foundation materials;
 - i to any part of the **home** affected that was not built to the correct buildings regulations at the time of construction;
- iii loss of or damage to patios, terraces, hard sports courts, sunken swimming pools, ornamental ponds, fountains, cesspits, septic tanks, central heating fuel tanks, paths, drives, walls, gates, fences, railings and lamp posts unless the **home** is damaged at the same time by the same cause.

On this occasion we are satisfied that the above exclusion is applicable and therefore must advise liability cannot be accepted for the damage reported to the conservatory. We have updated your

insurance company and advised them to close their file. We appreciate that this may not be the news that you would have wished for but hope our correspondence has explained the reasons behind this decision. In view that further investigation is beyond our brief you may wish to consider engaging the services of an appropriate construction professional to ensure the correct remedial action is taken.

I hope the above is clear, but if you have any queries, please contact the office on 0115 943 8203 or by email at subsidence@crawlco.co.uk.

Yours sincerely,

