

Mr J McNaughton
9 Elmbridge Close,
Ruislip
HA4 7XA

Date: 06 September 2014

Your ref:

My ref 14/086

FAO

By e mail

Dear Mr McNaughton

Trees and their possible effects on the house

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1. Further to my visit and inspection of the trees on 28 August I hope this report is helpful.
 2. You asked me to advise as you are concerned about possible effects on the house of the trees in the garden, particularly a large oak at the far end. This follows a claim to your insurers who subsequently withdrew cover, you have obtained cover from a new insurer but it does not include subsidence. You then had the house inspected by consulting engineer Mark Riley and have provided with a copy of his report for background, which summarises the findings of the insurers' site investigation.

Background

The house

3. The house is a detached bungalow, thought to date from about the 1930s, with an extension built across the rear elevation in about 2012. This work included converting the roof to provide a third bedroom.
4. Mark Riley's report notes cracks in various places, most of them small and, in his view, more consistent with shrinkage of the render rather than foundation movement. The main one is a vertical crack in the left hand flank wall at the junction between the original flank wall and the extension. You advised that there is an internal crack which reflects that. It is of even width and does not extend down to the ground, unlike typical subsidence cracks which tend to widen with height, but Mark is monitoring it for any signs of seasonal movement.

Foundations

5. GAB Robins, for your previous insurers, dig a trial pit at the junction with the house and extension, revealing a brick corbel foundation on a concrete footing with an overall depth of 560mm, which is typical of 1930s houses.

Ground conditions

6. A bore hole was sunk from the base of the trial pit and a second one was sunk near the rear corner of the extension, but these terminated at 1.2m and 1.3m respectively on an obstruction. The soil is described as a very stiff brown silty clay, but samples were not laboratory tested.

7. The online 1:50,000 scale British Geological Survey (BGS) shows the local subsoil as alluvial material associated with the River Pinn, overlying Lambeth group, a mix of clay, silt and sand, with London clay below that. Available records of bore hole sunk about 100m to the north are consistent with that showing a variable layers of sand and gravel interspersed with clay in places.
8. Not long ago I was involved in a subsidence case nearby and the soil there was a mix of sand, gravel and clay, but some of the clay samples had high potentials for shrinkage and swelling with changes in moisture content.

Roots

9. Roots found in the trial pit and bore holes were identified as ash and oak.

Trees

10. There are various several trees in the garden, including until recently some young ashes to the left of the house and sycamores to the rear right, which you have now cut down. The most significant is a mature oak in the far corner of the garden, which is protected by Hillingdon Council's tree preservation order (TPO) no.273. Their records show that in 2009 they allowed some pruning, which consisted of thinning by up to 30% and lifting the crown up to the height of the lowest limb, i.e. removing the small low growth up to the level of the first main branch. Some upper branches have also been shortened, possibly before that. There has been new growth since then, which is not very vigorous, as the shoots are short and the leaves small, although the foliage is a healthy dark green.
11. These are described individually in the attached schedule, with recommendations for any necessary or appropriate work and are shown on the site sketch.

Discussion

The oak

12. The site investigation here was not very comprehensive. All the available information indicates that the local subsoil has a significant clay content, although that is mixed with other material, which will reduce the overall shrinkage potential. There is therefore a potential for trees to affect buildings and, although the oak is mature and not as vigorous as it would have been earlier in its life, it is healthy and its size means that it will have a significant water uptake. The house is well within its influencing distance, as shown by the presence of roots under the rear left hand corner. Although it has responded slowly to being thinned the new growth is steady and the tree's water uptake will be increasing in the process, so it could cause movement in the house, particularly during dry summers.
13. As the tree is mature and growing slowly it would not need the severe reduction that might be appropriate with a younger, more vigorous individual. It has already been reduced and, as much of the growth is clustered at the branch ends, there is little scope for further reduction without leaving stumps, which would disfigure the tree and damage its health. A more suitable option with this one would be to thin the crown to reduce the leaf area by 20 - 25%, concentrated mainly on the upper and outer growth, with the end result of leaving a more event density of foliage. How frequently that would need to be repeated depends on the tree's response and any further information that might come to light but, on the basis of its current condition, 4 - 5 years should be sufficient to contain it.

Other vegetation

14. The ash trees were also rooting under the affected area and were young, so would have grown much larger if left, but have been removed. The sycamores were also young and could have caused problems if left to grow on. Both sets of stumps are sprouting and will grow rapidly, so either need to be removed or poisoned.
15. The other plants are less likely to affect the house, but the goat willow and pyracantha are close to the house at 3 Yeoman's Acre so could affect it if not managed suitably.
16. The schedule contains individual recommendations for work on the trees, based on the available information and the most suitable arboricultural management of the species concerned. It will reduce any drying effect on the sub soil, although it might need to be reviewed in the light of further investigation, particularly the monitoring, or if the problems persist.

Tree work

17. Any treework should be carried out in accordance with BS 3998: 2010, Recommendations for Treework, and any other relevant standards. It is essential that the contractor doing the work has appropriate third party and public liability insurance. The Arboricultural Association has a list of approved contractors, published in the Tree Services section of their web site at www.trees.org.uk.
18. Ideally stumps should be ground out, otherwise they can be poisoned to kill them, there are a number of herbicides available for domestic use. With healthy young trees like this that might involve more than one application.
19. As the oak is protected by a TPO Hillingdon Council's consent would be needed for any work on it. If this is refused it is possible to appeal to the Secretary of State. The application is straightforward and can be done online directly or via the Planning Portal. The application will need to be accompanied by a site plan showing the tree and a report setting out the reasons for it. This report covers both and I have prepared it on the basis that it can be sent in with the application.
20. I hope this is helpful but if you have any queries or wish to discuss the matter further please do not hesitate to contact me.

Yours sincerely,

Simon Pryce

Simon Pryce

Tree schedule

Tree no.	Species	Distance	Height	Trunk dia.	Est. age	Comments and recommendations
The trees are described in order, starting to the left of the house and going round clockwise. m/s = multiple stemmed.						
1	2 no. ash	2, 2.5m	10m?	200mm	10+	Pair of similar trees, probably self seeded, appear to have been healthy, but have been removed recently. Stumps are sprouting and they will grow back if left. • <i>Remove or poison stumps</i>
2	Hawthorn etc.	6.5m min	5 - 6m	100 - 150 mm	30+	Row of hawthorn and laurel, partly shaded by the oak. House is just within potential root range but they are no major threats. • <i>Trim lightly as needed to keep to 4 - 5m high or less.</i>
3	Oak	14m	17m	1460mm	180+	Large mature tree, not very vigorous but is healthy and the house is well within its root zone. • <i>Thin by 20 - 25% throughout the crown to leave an even density of foliage.</i>
4	Goat willow	7m	6m	150mm	10+	Young tree that has been cut back and is sprouting vigorously. Not unduly close to the house but is near 3 Yeoman's Acre. • <i>Cut back to former pruning points each winter.</i>
5	Pyracantha	5m	5m	m/s	20+	Healthy specimen, not unduly close to the house but is also near 3 Yeoman's Acre and is among the higher water demanding shrubs. • <i>Trim as necessary to keep it to this size or smaller.</i>
6	Sycamores	4m	10m?	150-200mm	10+	Recently felled and sprouting from the stumps. • <i>Remove or poison stumps</i>

