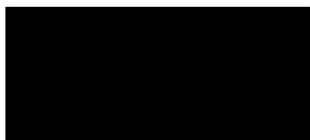




SJ Stephens Associates

ARBORICULTURAL, LANDSCAPE & MANAGEMENT CONSULTANTS



11th December 2019

Dear Felicity,

Re: Walnut Tree at 10 Brookwood Park

Following my visit on 27th November 2019, and review of the following:-

- Auger, Site Investigation Report [REDACTED]
- Property Risk Inspection Ltd, Arboricultural Assessment Report [REDACTED] dated 02-04-2019
- Sedgwick Engineering Appraisal Report, dated 11-10-2019

I am pleased to attach some photos and comment.

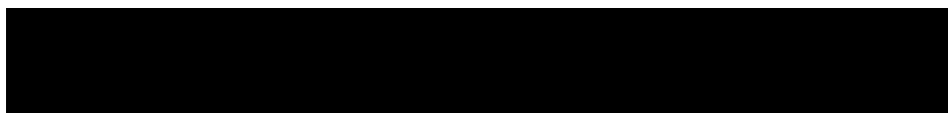
The walnut tree, shown as T4 in the Arboricultural Assessment Report and in the photo attached, is 16.5m in height, with a stem diameter of 720mm and crown spread of approximately 15m. It is 9.6m from the single story rear extension and 11.8m from older two storey part of the house. It is a fine tree, with high amenity value and a life expectancy of greater than 40 years, which I understand is protected by a Tree Preservation Order.

No structural damage has been reported to the single story rear extension. However, the majority of the front hall has visibly sunk by approximately 75mm and the adjacent stairway is showing extensive cracking to internal walls. In addition, there have been repeated problems with movement and cracking to the front steps.

To demonstrate vegetation related subsidence, rather than other factors, it must be shown that there is a clay soil with a high Plasticity Index, that roots of matching genera are present adjacent to the foundations and that there is seasonal movement occurring.

The Sedgwick report states that laboratory tests show a soil of high volume change potential. I have contacted Sedgwick on two occasions to request a copy of the results to verify but, so far, failed to get a response. The auger trial log records sandy fine to medium gravelly silty clay adjacent to the damage site. The presence of sand, gravel and silt will normally reduce the Plasticity Index of a clay soil.

The Sedgwick report states "examination of the roots found the original to be from a walnut tree". It is not clear what this means or where the root was found and I have not been able to get further information.





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The Sedgwick report states "we consider crack monitoring is required" and says that this was undertaken from November 2017 to May 2018. I assume no further monitoring has taken place but, despite contacting Sedgwick on two occasions, I have failed to get any further information to be able to verify seasonal movement.

It is clear that there has been serious movement in the front hall, the internal staircase and also to the front steps. It is surprising that, if the walnut tree is responsible, there is no damage to structures, such as the single storey rear extension, which are much closer to the tree. For such extensive movement in parts of the building most distant from the tree, it is possible that some other cause of subsidence is the major factor. You mentioned that neighbours have referred to tributaries of the Fleet River flowing under the locality.

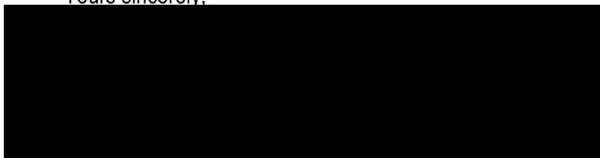
The crown of the walnut has been reduced in the past but not for many years. Regular crown reduction will control water demand and will help prevent subsidence problems from occurring, however it is seldom an effective solution once a problem has occurred. Installation of a root barrier will solve subsidence problems if one can be sure that they prevent roots passing. However, there is a risk that roots can grow round a barrier, or through it if gaps have to be cut for service runs.

In this case, the canopy of the tree could be reduced by reducing the height of the tree by approx. 2m and the crown spread by approx. 2.5m in all directions. This would remove a significant percentage of the leaf area. You could also install a root barrier. The best location would be from the boundary on either side of the garden under the line of paving stones furthest from the house, where indicated on the photo attached. A product such a Dendro-Scott root barrier (see www.rootbarrier.com) would be suitable and they would give guidance on the best product and method of installation.

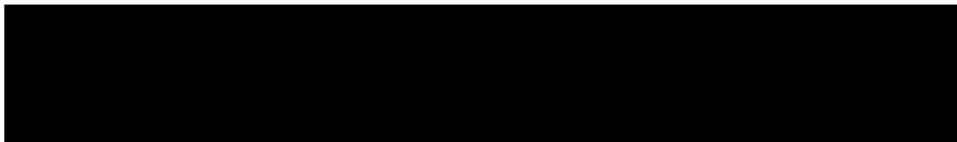
Unless further information is forthcoming which clearly shows the walnut tree is responsible for subsidence damage, I do not consider there is adequate justification to fell such a valuable tree. I, therefore, suggest you prune the tree and install a root barrier over the winter, as detailed above, then prune the tree regularly every three years. This will significantly reduce the risk of the tree causing future subsidence damage.

If you require any further information, please get in touch.

Yours sincerely,



Simon Stephens MA Oxon, Dip Arb(RFS), MArborA. CEnv, MICF
Arboricultural Association Registered Consultant







Possible location of a root barrier, under outer line of paving slabs

T4



Extensive cracking to steps - on opposite side of house to T4