

GHA Trees
5 South Drive
High Wycombe
Bucks
HP13 6JU



Glen Harding MSc (Forestry), MArborA
t: 07884 056025
e: info@ghatrees.co.uk
www.ghatrees.co.uk

Mr D Wrigley
16 Pound Lane
Sonning
RG4 6XE

2nd December 2024

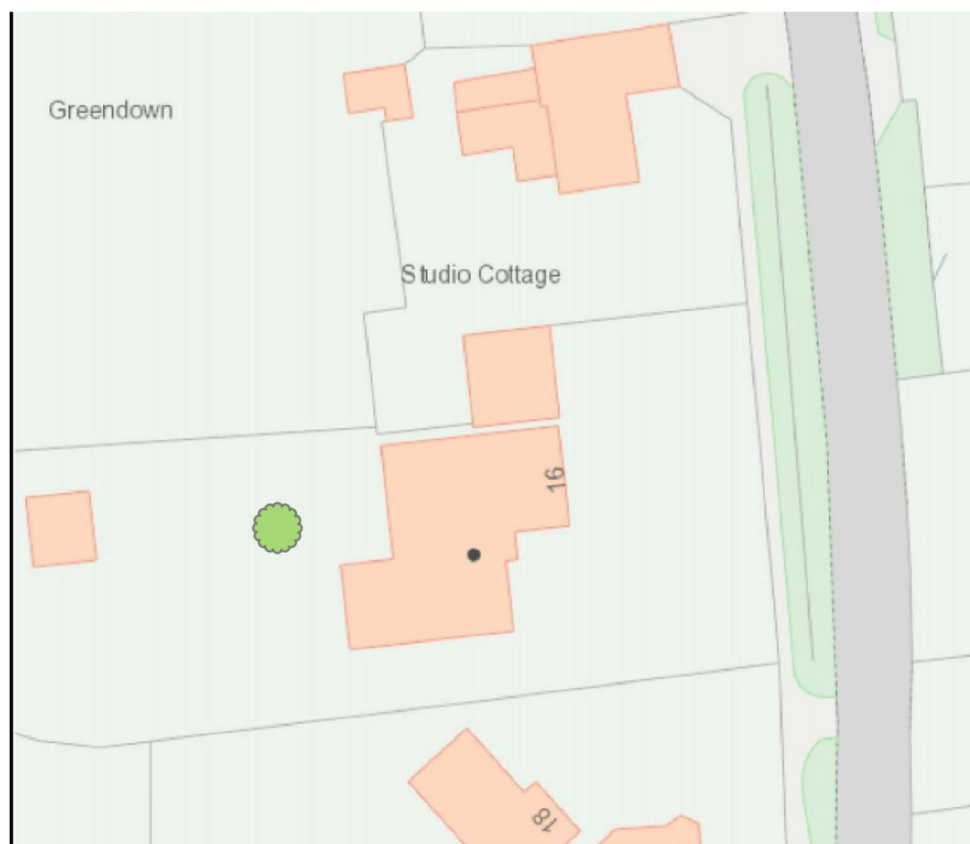
Dear Mr Wrigley,

RE: Red oak tree at 16 Pound Lane, Sonning, RG4 6XE

Thank you for your instruction to undertake an assessment of the red oak tree at the above site. You asked me to undertake a visual assessment of the tree and make comment on the damage caused to a nearby retaining wall. I duly visited on the 27th November 2024 and can now advise as follows.

The tree in question is a red oak (*Quercus rubra*) approximately 18 metres in height. It has a stem diameter of 780 mm (measured at 1.5 metres in height).

The tree sits in your rear garden as shown in the plan below:



The tree is located 8.5m from the nearest part of the house and 6.8m from the nearest part of the subject retaining wall as shown in the photo below. The wall is circa 1m tall.



Soil type:

The soil type for the site is known to be clay as was reported when the house was originally built and within the soil analysis you supplied to me.

Wall construction make up:

The affected retaining wall is built off a foundation 600mm below ground level to a depth of 500mm to a width of 750mm. The "retaining" element of the wall is of 100mm 10N dense concrete block laid flat for maximum strength and the face of the wall is brickwork tied in.

Between the back of the blockwork and the lawned portion of the garden is a void encapsulated with a polythene membrane filled with reject stone, at the base of the wall 100mm drainage outlets were installed at approximately 1M intervals as evidenced by the images below taken during construction.





Wall damage



The wall is suffering from cracking consistent with clay shrinkage subsidence, this theory has been confirmed by an engineer who has stated:

The crack profile indicates that differential foundation movement has occurred within the footing lower towards the steps. The movement is caused by the Oak tree root action on the bearing strata. The soil conditions are noted in the original ground investigation report undertaken for the house construction in 2012 The report states the strata is highly plastic clay with an index of 65 which shows the clay is highest volume change potential. The water demand of the Oak tree roots result in significant shrinkage of the clay up to 20m from the tree.

As the wall is 6.9M from the tree, foundation movement will be progressive unless action is taken to remove the tree, following which the blockwork can be repaired and brickwork reinstated.

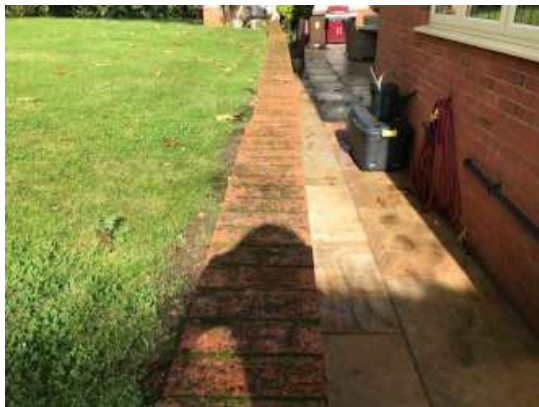
A previous tree report in 2020 (Venner Arboriculture report date June 2020) also recorded this issue so it has clearly been ongoing for some time and you have confirmed it first began in around 2019.

You have now removed the brickwork to expose the main wall structure and to assist in determining the cause of the damage.

Even to the 'naked-eye' the wall is bulging / leaning away from the tree. The cracks in the blockwork run from the top of the wall down the top of the first block off the foundation.

There are two visible cracks to the blockwork, the first as can be seen in the image above which has caused this section of the blockwork to move by 40mm, resulting in distortion and "bellying" of the blockwork between this point and the vertical crack through the blockwork at the other end, where the brickwork has been taken down and raked back.

These cracks are 5m apart, this section of the blockwork retaining wall is falling towards the house. Images contained within Sarah Venners report in 2020 depict affected areas of brickwork then and images below reflect the progressive movement to the brickwork, prior to it being taken down to reveal blockwork movement behind.



Conclusion and recommendation:

It is my considered opinion that any attempt to repair and reinstate the wall will be futile, a view shared with the Structural Engineer. Given the size of the tree, the soil type and proximity of the tree to the wall I concur with the Engineer and agree damage to the wall will continue as long as the tree is present. Given that the wall now presents a risk of failure (which is of particular concern for children and pets) a permanent solution is required and tree removal is the only sensible solution.

The existence of the tree also causes concern for future damage to the fabric of the house.

I consider the tree to be a poor example of its species given the lean that is present; this is also a species which is native to the UK and is not a commonly found tree in Sonning. It is also located too close to the house and wall for a tree of this species. Finally, its loss will not be of significant detriment as it is not visible from the public highway as it is behind the house and set well back from the road.

Best regards



Glen Harding MICFor, MSc (Forestry), MArborA
For and on behalf of GHA Trees

