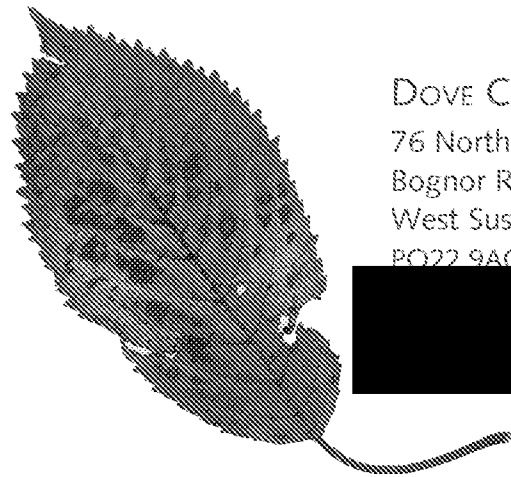


Application to fell yew tree

14 Feb 2022



DOVE COTTAGE
76 North Bersted Street
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Background

We have lived at 76 North Bersted Street for 38 years, and when we bought the house, the boundary wall alongside the house showed no apparent indication of lean.

We first noticed a small amount of lean about 20 years ago, and pointed it out to the previous owner of the neighbouring house, Mr Turner, who owned the tree. I later mentioned it to the current owner, Mr Irwin, probably about 10 years ago, and there has been an on-going discussion about it since that time.

I started taking measurements of the lean around 6 years ago, and I had a survey done about three years ago. The surveyor fitted additional measuring devices, so the wall has been monitored fairly carefully over the last six years and the measurements are included in a separate document. In summary, the measurements, and calculations made from them, show that the wall is likely to fall within ten years.

Mr Irwin, the neighbour at no. 78 (who owns the yew tree), had a survey done last year, which stated unequivocally that the wall was leaning and was unstable and that the lean was caused by the tree and the elevated ground. The report also advised that the tree be felled and the ground level lowered, further that the wall be taken down to a height of 300 mm and then rebuilt, incorporating buttresses as appropriate. The survey is included as a separate document.

The forces on the wall arise from two sources: firstly direct pressure from the tree roots; secondly distributed pressure from the elevated ground level on the tree side of the wall.

In the first case, the roots have pressed directly on the wall immediately opposite our kitchen door (approximately 2 m away), resulting in cracks and an obvious bulge in the wall. The cracks have become noticeably more extensive over recent years, and the bulge has become greater. In addition, we have seen in the last few years that the wall is becoming very wet over a large area (about 1.5 m high by 6 m wide) next to the tree. This is causing the structure of the wall in that area to deteriorate and it is likely there will be a local collapse of the lower part of the wall adjacent to the tree in the near future. As this weighs many tonnes and is immediately outside our main door, it is endangering anyone who uses that door, and should it collapse, it will block what is effectively the only entrance to our house.

In the second case, the elevated ground has been caused by 'drop-off' from the tree, which has been allowed to accumulate, and after some years the ground level, and also the base of the tree, have risen, so that currently the ground level on the tree side is about 1.5 m above the ground level on our side. The elevated ground level extends over a distance of about 8 metres, and produces a sideways force on the wall, which has caused the wall to lean. The maximum angle of lean is almost half way along the wall, and at that point the wall is 1.2 m from the corner of our house. The wall is about 3 m tall and contains perhaps a hundred tonnes of material and if it falls it will demolish part of the house. The financial costs would be measured in hundreds of thousands of pounds and if anyone is under the wall at the time, or in that part of the house, they would certainly be killed.

The yew tree has caused many problems and much expense over the last 38 years. It blocks the light from the eastern side of our house, and makes the rooms on that side very dark; bird droppings are a constant problem just outside our kitchen door; the drop-off from the tree (mainly in the form of pine needles and small twigs) accumulates alongside our house and I have to take away many dustbins full per year; the drop-off also falls into the thatch of our roof, and our thatcher has commented that the material from the tree contaminates the thatch and means the thatch has to be renewed much more frequently than normal, which effectively adds several thousand pounds to the cost.

However, we have tolerated these problems with good grace, on the grounds that the tree is a living thing and an asset to the area, and we have a responsibility to protect it. But it now is causing a serious danger to our lives and is a significant threat to our house, so we feel that this can no longer be tolerated and the wall will have to be made safe.

Discussion and summary of attached documents

Document 2. Report by Philip Goacher Associates. (Summary and conclusions only. The full report is available if required)

This report, based on an inspection by Mr D. Gierke CEng, MEng, AStructE, MSAICE, Associate Director, Chartered Structural Engineer, on 29 October 2021, concludes that the only effective permanent solution to prevent the wall from falling would be to take down the yew tree and level the ground.

Document 3. Measurements.

I started measuring the angle of lean at a fixed point on the wall in June 2016, and in 2019 I started taking monthly readings of the width of two cracks in different parts of the wall, using micrometer gauges, and also the distance from the wall to the house at two fixed points. This equipment was set up by Mr Jack Tupper, MA (Cantab) Est. Man., FRICS, ACI Arb, IRRV, in April of 2019.

The tables of readings, along with some explanatory diagrams, are contained in the attached document.

Document 4. Graphs.

Graphs were drawn to assist in the interpretation of the measurements. Trend lines (in orange) are indicated on each graph, and they show the very slow but gradual movement of the wall and opening of the cracks during the time period. The easiest one to interpret is the angle of lean as measured by a plumb bob, which shows an increase in lean angle of approximately 0.8 degree during a six year period. The readings also show the distance between wall and house has decreased by about 2 mm and the cracks have opened up horizontally by about 0.3 mm

A calculation which extrapolates the readings to the point at which the centre of mass of the wall becomes centred vertically over the outside bottom edge (i.e., the point at which the wall can no longer support itself) suggests that the wall will fall in about six years.

These changes are not proceeding at a steady pace — sometimes going backwards, sometimes going quickly, sometimes slowly — so this makes it difficult to predict with certainty the behaviour of the wall. It might fall in six years or if there were a strong easterly gale, it might fall tomorrow.

Document 5. 'Drop off' from the tree.

The fall of seeds, pine needles and general detritus from the tree over the years has caused the increase in ground level, and this document makes some calculations to justify that. It concludes that the only way the wall can be reliably made safe is by removing the tree.

Document 6. Photographs and location plan

This contains a few photos, taken to show the effect of the tree/ground on the wall, and the proximity of the wall to the house. Also, there is a location plan to aid in identification of the tree.

Appendices

2. Report by Philip Goacher Associates
3. Measurements taken over the last few years.
4. Graphs.
5. Calculation of the effect of 'drop-off' from the tree.
6. Photos and plan.

