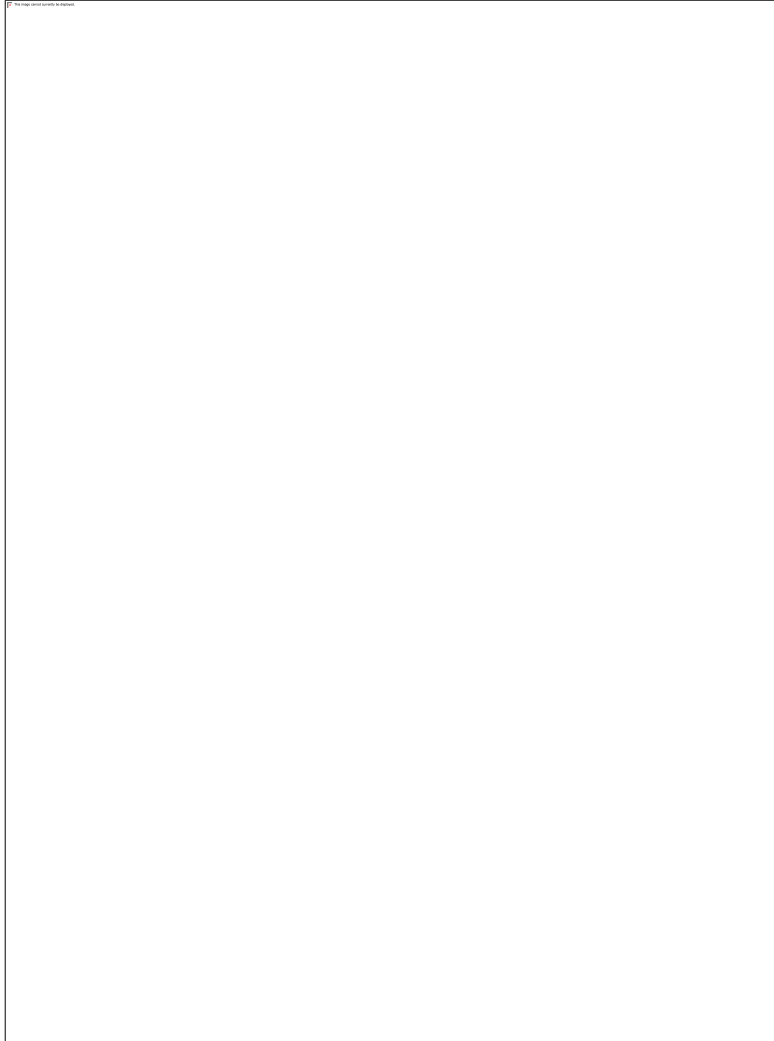


Hi John,

Hope you're well and apologies for taking so much time to get back to you.

I understand your predicament. The problem with reducing a tree with root problems is that it's impossible to quantify without further investigation by how much you would need to reduce the tree by to get acceptable safety factors.

As regards the oak, based on its material properties and dimensions, in an undamaged state the tree would be around nine times stronger than it would need to be to withstand a 1/50 year storm. We would normally want a tree to have a safety factor of at least 1.5. The question is how much the roots have been decayed, and whether they have used up those margins, and that is impossible to say with any confidence without further diagnostic tests. People often like to reduce trees to be seen to be doing "something", but without really understanding whether they have really reduced the risk. My hunch is that the tree probably does have sufficient reserves, but this is not based on anything and shouldn't be the basis of any decision. If we can reduce the tree so that it wouldn't fall in the road if it failed then that would definitely reduce the risk by a sufficient degree to allow it to be retained. The tree is around 10 m from the road I think, so that would mean basically cutting it in half (see approximation below). Obviously if you did reduce it, it creates a management issue, the tree may not respond and would probably need to be removed in another 10 years or so anyway. But it might buy you some time to plant some replacements. There is plenty of space, and probably a good time to think about planting eventual replacements for all the oak here.



Another option, having spoken to my more experienced colleague, would be to do a pull test in one direction only (so avoiding the traffic management issues), as that would not give full information but enough to make a better management decision and would provide more justification to present to the residents.

The principles outlined above apply to the ash at Pensclose, except that it has a lower theoretical safety factor because it's a tall and slender tree – it's only 4 times stronger than it would need to be for the wind event, so it has much lower margins. Again, it's about 10 metres from the road, so to avoid the main target would mean basically taking the whole crown off and leaving a monolith. It may well not respond, and wouldn't be much of a tree. Again, lots of room to replant here.



We could also test this in just one direction to get some information. We could do both trees in one day (in a month or so's time when we have ore daylight) for the price of one, if you felt you wanted to and cost was the issue in pursuing this option originally.

I hope this helps – give me a call if you need to.

Claire Harbinson
Principal Arboricultural Consultant

Treework Environmental Practice