

# Tree Surveys

BS5837 – Pre Planning – Mortgage – Risk Management & Prediction

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## APPENDIX 3

4 January 2020

Mr G Claydon-Bone  
City Tree Officer  
Tree Team  
City Services  
Southampton City Council

Ref: SN/VTA-20/20/01.10

Dear Mr Claydon-Bone

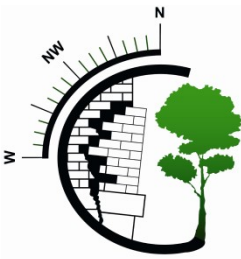
### Re: Oak tree behind 19 Hill Cottage Gardens

Thank you for your enquiry relating to the tree located behind 19 Cottage Hill Gardens. Please find set out below my response in reply to your request for further clarification on the decision-making process.

As you rightly point out decay was detected around the base of the tree and from the micro drilling results is confined to the northern side, with the tension side of the base mostly unaffected. However, it is important to note that fungal mycelium was observed throughout the wood within the failed stem union at approximately 5 metres above ground level (AGL) on the south west side of the stem, see Figure 1 attached to this letter. In our opinion this fungal mycelium is similar to that of *Ganoderma sp.* and is most probably the primary factor in the failure of the scaffold stem.

We considered the tree to be typical of a woodland grown specimen as it exhibits a well-formed slender stem and a high canopy. Trees with such features are prone to high levels of biomechanical stress (leverage). The extent to which the stem is wind loaded will have been significantly altered following the shedding of a large scaffold stem in September 2020. The lateral limb you refer to was a significant canopy component and in excess of 600 millimetres in diameter, see Figure 2.

Prior to making our recommendations we considered the trees landscape character, biodiversity and amenity value, proximity to the target area and risk should it fail. We then consulted the British Standard (BS) 3998:2010, Tree work – Recommendations, and arboricultural best practice guidance.



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We first considered pruning (crown reduction) however, the extent to which the canopy would have to be reduced to lower the bio-mechanical loading on the stem would exceed arboricultural best practice guidance. Furthermore, such a reduction would result in a substantial loss of photosynthetic area (leaves), and having already lost a major part of the canopy there will be a significant loss in the trees ability to photosynthesise. Reduced levels of photosynthesis will result in a loss of vitality and this may also speed up the rate of fungal decay and will result in stress, a combination of factors that can speed up the trees decline. The risk of uprooting due to a combination of decay and waterlogging (a lack of soil cohesion) remains high.

Pollarding was another management option considered, to leave the tree as a monolith. Pollarding is not recommended for mature oak trees that have not been subjected to a regular regime of pollarding. The extensive loss of photosynthetic area (leaves) will result in a sudden loss of vitality and rapid decline. As the tree is not considered a veteran (this term is not precisely defined), it has a low level of biological, cultural and historical features and does not warrant retention as it poses a significant risk to third parties should it fail.

When considering the management options, we consider the loss of the scaffold stem to have significantly altered the wind loading characteristics of this tree. Excess wind loading and the loss off a significant counterbalance increases the potential for premature failure at, or close to ground level. This is further compounded by the topography, culvert and wet nature of the area that the tree is located within. The wound created by the scaffold stem failure has created an opportunity for further opportunistic decay pathogens to colonise the main stem at 5 metres AGL and this added complication was considered when making my recommendations.

An annual inspection, to monitor the decay may have provide an opportunity to prolong the trees lifespan however, in my opinion, the potential for failure over time becomes significantly more likely and therefore outweighs its retention.

In summary:

- The retention of the tree without taking remedial action is not realistic.
- The reduction of the tree to reduce the biomechanical loading on the base is not a practical solution and an ongoing inspection regime is outweighed by the high-risk nature and, therefore, it is recommended that the tree is felled to ground level. A suitable replacement(s) must be considered in the woodland management plan.

I trust that my response and recommendations are of reassurance and assistance to you. Should you have any queries or concerns please do not hesitate to contact me.

Yours sincerely

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