

From: Horton, Colin <Colin.Horton@e-lindsey.gov.uk>

Sent: 11 May 2022 12:29

To: Udy, Peter <Peter.Udy@boston.gov.uk>

Cc: Dennis, Emma <Emma.Dennis@boston.gov.uk>

Subject: RE: B/22/0174

Hi Peter & Emma,

It's a Horse Chestnut tree which appears in good physiological and structural condition. It exhibits some symptoms of Bleeding canker of Horse Chestnut, caused by the bacterial pathogen, *Pseudomonas syringae pv aesculi*, but infection does not appear to be chronic or extensive. Symptoms are minor and localised, with lesions appearing to have been present for many years, with evidence of vigorous occlusion and good secondary growth in response to infection. Research suggests larger trees (such as this) have the capacity to be more resistant and are less likely to succumb to the pathogen, with some recovering and showing very little, if any, significant long term adverse impact.

Additionally, like nearly all Horse Chestnut trees in the UK, it will also have been colonised by Horse Chestnut leaf miner, although given the time of year this won't be evident yet. The symptomatic brown necrotic patches on leaves become more evident as summer progresses. However, this does not significantly impair the trees' overall health, and the effect is mostly aesthetic. Research has shown that the leaf miner can attack up to 75% of the total leaf area on a tree, but that the loss of subsequent photosynthetic leaf tissue only reduces the total carbon assimilation by, at most, an estimated 30-40 per cent over the growing season. The reduction is much less than the total leaf area affected, because the majority of damage caused occurs late in the season, after the tree has completed most of its photosynthesis for the year. As such, the general tree condition and stem radial growth are not affected, even over repeated annual attacks.

It would be my opinion that the best form of management is to do nothing to the tree. It needs leaf area to photosynthesise and produce energy, and its branches for stored energy. Pruning removes these resources which help it fight diseases and stresses, and their loss would/could cause a deterioration in health and longevity.

I should add a caveat that it's always difficult to diagnose and give management recommendations from photographs, but in this case they seem pretty good at conveying the trees condition. I hope this helps and I am, of course, happy to discuss this with you should you have any queries. The best number to reach me on is my mobile – 07717 734019.

Kind regards,

Colin

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