

**Report on Horse Chestnut tree in NE corner of Churchyard****TREE REPORT**

Date: 18.5.2011

Site: Saint Andrew's Churchyard, 32 Main Street, Carlton.

Client: Carlton Parish Council

Inspector: Julian Simpson

**Tree details**

Species: 1no. Horse chestnut

Location: NE corner of church yard adjacent to Main Street and 34 Main Street.

Age class: Mature

Approximate height: 16m.

Crown spread: 14m. (4m. over the highway.)

Crown clearance: 2m. over churchyard, 5m. over road, 4m. over adjacent drive.

Trunk diameter at 1.5m. above ground level: 108cm

Basal circumference: 320cm

**Tree physiology**

- Crown shape is asymmetric with bias to north and west. I understand this is due to the tree previously growing at the end of a row, with other trees having now been felled. There are no bark folds or shear cracks to suggest imminent failure due to progressive lean.
- The main stem is forked at 2m. and this fork contains compost and grass weed growth. The north-west side of the fork is well formed with a stable seam of connecting bark extending downwards to 0.8m. above ground level. A wound of dysfunctional tissue on the south side of the stem extends from the fork to ground level with some adjacent wood degradation. Use of a steel probe indicates that soft decay extends to a depth of 30cm into the trunk at ground level and this is likely to be associated with root death on the south side. Bacterial wetwood is present at this point.
- One very minor black encrustation on the stem is most likely to be caused by Chestnut bleeding canker (*Pseudomonas syringae*) but it is not serious or responsible for the decay.
- There are other dysfunctional strips of wood on the west and north-east sides of the lower stem with loose bark divided by columns of sound reaction wood.
- Higher branch forks appear to be well formed and stable.
- Four pruning wounds exist on the north-west side of the canopy to a height of 7m. where the crown has been raised to reduce weight on the leaning side and improve highway clearance. Wound wood growth around the cuts indicates normal vigour.
- One pruning wound at 5m. is positioned critically at a low fork but the adjacent branch appears to be stable at present.
- Foliage and flowers are normal with only very light foliage scorching in one part of the upper crown. Dieback that would be associated with Chestnut bleeding canker is not evident.
- Some minor dead branches < 40mm diameter are visible in the central canopy. These are due to natural shading and pose minimal risk but could be pruned out.
- Surface root growth under the adjacent tarmac drive at 34 Main Street is apparent, with cracks visible in the drive surface. However, from discussion with the resident this does not appear to be of concern and they are not serious enough to pose a trip hazard.
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- Soil levels have been raised over the years and this could mean that other defects in the lower stem are hidden.
- Fungal fruiting bodies were found at ground level on the north-west side of the stem. The fungus is not a serious decay pathogen and appears to be a saprophyte living on dead tissue. (*Panaeolus sp.*)

**Initial tree surgery recommendations**

To further reduce crown weight extending towards the highway but retaining natural appearance:

- Shorten branch spread over the road by approximately 1.5m.
- Raise the crown by the removal of lower branches to 5m. above ground level adjacent to the Corsican pine, 5m. over the adjacent drive and 3m. over the churchyard for an even appearance.
- Dead branches to be pruned out.

All work to be carried out in accordance with BS3998:2010 Tree Work Recommendations.

**Further recommendations**

As a proportion of the 320cm basal stem circumference, 110cm consists of dysfunctional or decaying wood (35%.) A large proportion of the decay being on the south side. A tree can safely exist with up to 2/3 of stem diameter decayed but an assessment of the extent of decay in this tree from visual inspection alone is of limited benefit.

Due to the tree's location and lean it would therefore be prudent to assess the extent of internal decay at ground level and this would most accurately be carried out by a specialist Arboricultural Consultant using a Sonic Tomograph.

It would also be prudent to carefully remove turf and top soil down to the original level, to provide approx. 300mm clearance around the trunk, thus allowing for closer inspection of the suspect areas.

I trust the above information is of assistance but if you require further help or a quotation for undertaking tree surgery work please let me know.

Julian Simpson Dip.Arb.(R.F.S.) C.Env. M.Arbor.A.  
Tree Officer  
Hinckley and Bosworth Borough Council