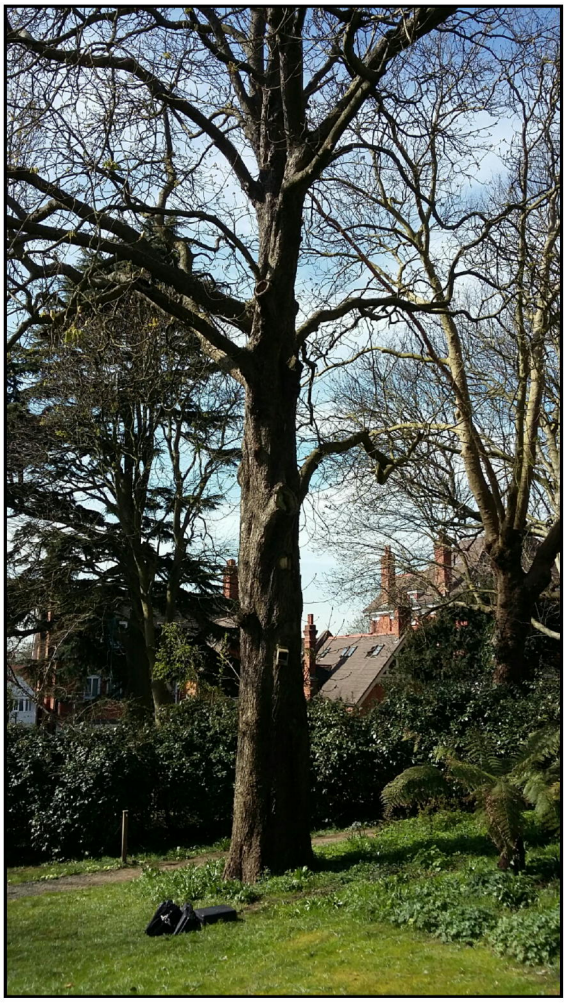
Appendix E

ATWORTH ARBORICULTURE LTD

PICUS TOMOGRAPH TEST ON A HORSE CHESTNUT AT WESTFIELD HOUSE.



Prepared for: Simon Stephens, Ian Gilbert.

Atworth Arboriculture Ltd, 189 Purlpit, Atworth, Melksham, Wiltshire, SN128HJ.

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Site Address:

Westfield House,

15, Kidderpore Avenue,

London,

NW37SG.

Client:

Simon Stephens, Ian Gilbert. Faraday Management.

Instruction:

Carry out Picus Tomograph Decay detection test on main stem of Horse Chestnut tree at the location above.

Inspection:

The Inspection was carried out on the 30th March 2021. The conditions were dry and clear. The Inspector was Kim Dear.

Tree 106.

Horse Chestnut (*Aesculus hippocastanum).* Height 21m Diameter 1050mm

General Observations:

This mature tree is situated in the communal gardens of Westfield House, with the building 50 metres to the north. The crown has new buds appearing and looks reasonably balanced. There are fungal fruiting bodies of most likely *Rigidoporus ulmarius* erupting at ground level to the north and west (Photo 2), with an area of bark necrosis and decay.

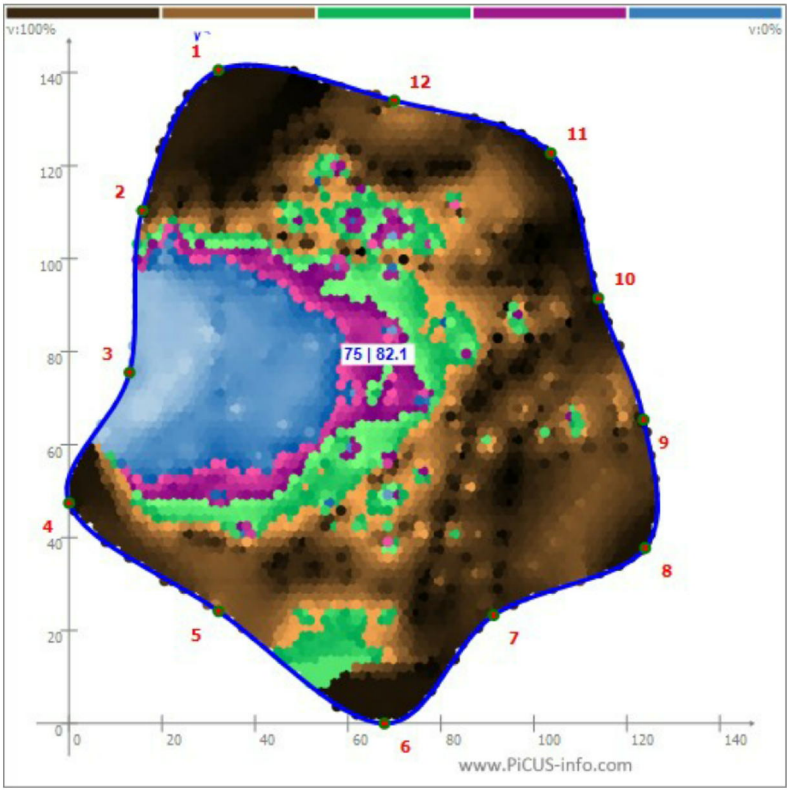
Photo 2.

Picus Sonic Tomography

The Picus Sonic Tomograph is made by a German company called Argus-Electronic-Gmbh. It is a specialised electronic instrument which can 'look' internally into a branch or tree trunk and display a computer generated image of its condition. It achieves this by measuring the speed that sound travels through the wood in a number of different positions and directions. Sound travels fastest through solid wood. Decayed wood will slow its path. By measuring the *speed* that sound takes to pass through a tree, an idea of its condition can be obtained.

The PICUS Sonic Tomograph consists of 8 to 14 sonic sensors. These sensors are spaced out evenly around the circumference of the trunk. They detect stress waves induced by manual impact propagated through the wood. Time-of-sound-transmissions are used to generate two-dimensional pictures that document decay and cavities.

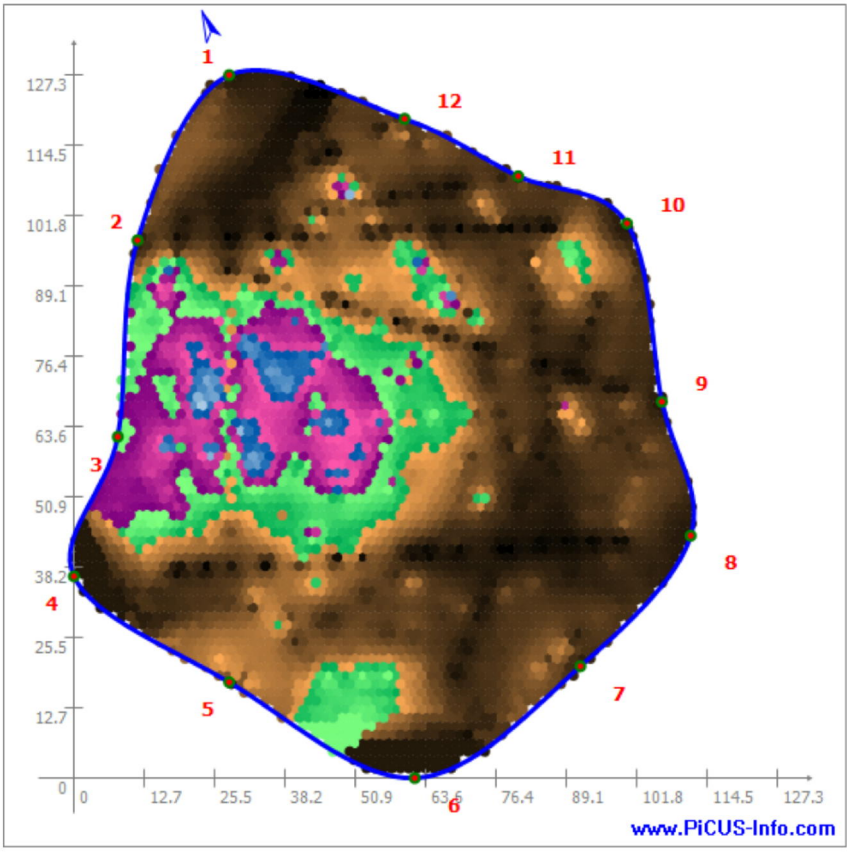
The sounds are generated manually by tapping on a number of metal nails with a hammer. Special sensors fixed around the stem read the interval the sound takes to travel through the wood. Once all nails have been tapped, and recordings taken, the computer software works out a visual image that requires professional assessment to assess decay.



Picus Tomograph result at 10cm above ground level.

Conclusion.

The area of decay to the west, with a cavity indicated by the blue colour, and further decay indicated by the purple and green colours, shows a marked increase in severity and size compared to the Picus test that was performed in 2016. (See below).



Picus tomography image 10cm in July 2016.

Recommendations:

Whilst the tree could be retained in the short term, the long term viability of the tree is questionable. The degradation of the heartwood caused by the growth of the fungus over the past 5 years, indicates that the tree could become hazardous within the next 3-5 years, if the decay advances at the same rate.

[redacted]

Vince Cainey BSc

9th April 2021.