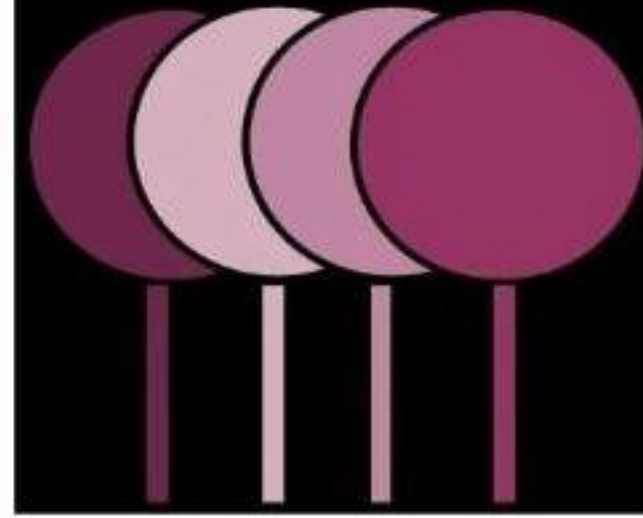


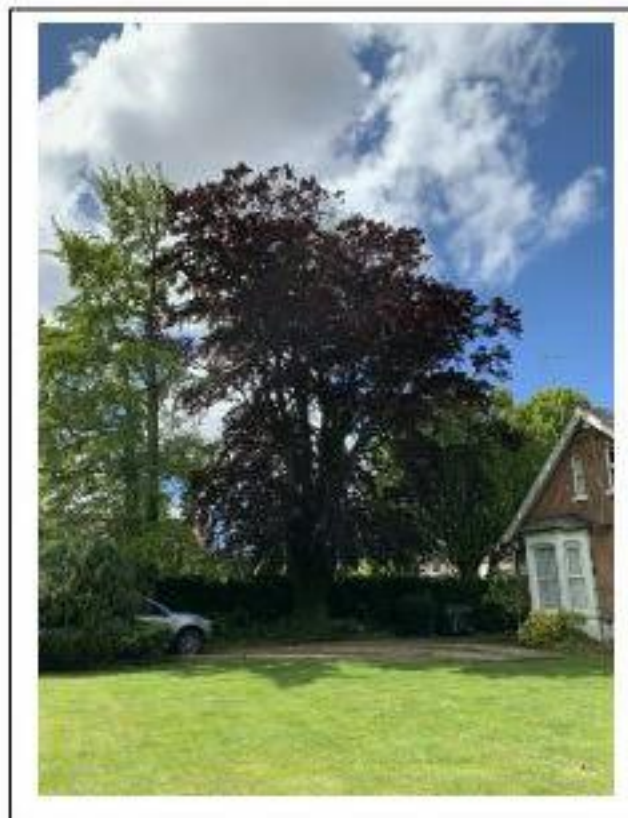


Nicholas Jones Consultants Limited

Independent Professional Arboricultural Consultancy

Tree Inspection Report

Site: 162 Stakes Hill Road
Waterlooville
Hampshire
PO7 7BS



Completed by Nicholas Jones BSc. (Hons). MSc. M Arbor A

On behalf of: M A Wright & Co.

Date: 11th June 2019

Ref: NJCL 444

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1. Introduction

- 1.1 Formal details – My name is Nicholas Jones I am the Principal Arboricultural Consultant for Nicholas Jones Consultants Limited. I have 29 years' experience in the arboricultural industry with the past 19 years acting as a consultant. I hold a BSc (Hons) in Arboriculture and an MSc in Arboriculture and Urban Forestry awarded by the University of Central Lancashire. I hold professional memberships of The Arboricultural Association, The International Society of Arboriculture and the Consulting Arborist Society. I am a Lantra accredited Professional Tree Inspector giving advice to clients on a wide range of arboricultural issues.
- 1.2 I am instructed by M A Wright & Co. to undertake an inspection and decay evaluation of a single copper beech located at 162 Stakes Hill Road, Waterlooville, Hampshire, PO7 7BS, and to make appropriate recommendations for its management.
- 1.3 I am advised by M A Wright & Co. that the tree is subject to a Tree Preservation Order administered by Havant Borough Council. Prior to completing the recommendations contained within this report the status of the Tree Preservation Order should be checked with Havant Borough Council and all necessary permissions obtained.

2. Methodology

- 2.1 The site was visited on 11th June 2019 and the assessment of the tree completed.
- 2.2 Tree height was measured with a Suunto clinometer, crown spread was measured with a laser measure. Stem diameter was measured with a calibrated diameter tape.
- 2.3 The tree was initially subject to a ground-based assessment, facilitated by the use of a monocular, using the non-invasive Visual Tree Assessment methodology expounded by Mattheck & Breloer.
- 2.4 The lower stem of the tree was assessed using a Picus 3 sonic tomography unit. Sonic tomography uses the relative velocity of sound waves induced at measuring points located around the circumference of the stem to compose a colour-shift image. Dark areas correspond to higher velocities and, hence, denser wood. Decay (or hollowing) results in lower velocities and a shift to lighter colours, with maroon and blue/white indicating more significant decay.
- 2.5 Additional information about the extent of decay was gained through the use of an IML Resi-400E decay detecting drill in selected locations. The IML Resi-400E measures the drilling resistance of a 3mm diameter drill bit (to a maximum depth of 400mm). Significant drops in drilling resistance are indicative of decay.



Figure 1 – Fruit body of *Ganoderma adspersum* at the base of the tree

Results of investigation:

The Picus was set at an approximate height of 150mm above the surrounding ground level using a total of 18 measuring points, with measuring point 1 located to the north. The fungal fructification noted was located between measuring points 10 & 11. The resulting tomogram (Figure 2) indicates an area of reduced sonic velocity, indicated by the green and lighter brown areas and likely to be indicative of decay, on the southern side of the main stem at the test level, adjacent to the fungal fructification.

Two drillings were completed at the base of the tree. The first was located between measuring points 17 & 18 where an area of dysfunctional bark was identified during the visual tree assessment. The drilling at this location, at a height of approximately 75mm above ground level and to a depth of 400mm, didn't record any reduction in drilling resistance and supported the results of the tomogram (Figure 3).



Figure 3 – drilling 1 result

Figure 4 – drilling 2 result

Observations:

The fungus identified at the base of the tree, *Ganoderma adspersum*, is commonly associated with beech, and causes decay within the lower stem and root system which can lead to the mechanical failure of host trees. However, the partially decayed wood retains considerable tensile strength. As a result, it may take a great many years before the decayed zone becomes dangerously large in relation to the extent of sound wood, as trees can produce compensatory growth of extra wood due to increased flexure caused by the decay.

The included bark stem union between the two stems is a potential concern, however the anatomy displayed on the western side of the stem suggests that the union is supported.

The peripheral die back in the upper crown indicates that the tree is under stress, however I do not consider that this is as a result of root loos or dysfunction attributable to the activity of the *Ganoderma adspersum*. Other fungal activity may be involved, however in the absence of further fungal fructifications it is not possible to confirm this with any certainty. I consider that the die back in the upper crown is likely to be attributable to root compaction associated with the vehicular access to the property.

Conclusions and recommendations:

The tomogram displays reduced sonic velocity on the southern side of the main stem at the test level, indicating likely decay. This is supported by the results of the test drillings completed on the northern and southern side of the tree. I do not consider that extent of the likely decay is currently structurally significant.

Management is however required to remove the risks associated with the dead wood within the crown and the peripheral die back displayed. I therefore recommend that the following remedial pruning is completed within the next 3-6 months and the tree is re-assessed in the next 3 years.

- Removal of component dead wood
- Removal of Ivy from the tree
- Peripheral crown reduction and reshaping of approximately 1.5 – 2.0m

These works will require the written consent of the Local Planning Authority and should be completed with due regard to the principles contained in British Standard 3998:2010 Tree works – recommendations, by a competent contractor.

The Arboricultural Association's Approved Contractor Directory provides details of suitably qualified and competent contractors.

<https://www.trees.org.uk/ARB-Approved-Contractor-Directory>

Signed

Date: 11th June 2019



No. PRO 1672



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Limitations

Trees are living organisms that are subject to the stresses of climatic extremes and attack from decay fungi and injurious diseases. Therefore, the conclusions given in this survey are relevant to the day of surveying.

No assessment of the soils or woody tissue has been sent for laboratory analysis unless specifically stated. Assessments are based on professional experience and expert observations.

The extent of any protection afforded to tree(s) on the site in the form of Tree Preservation Order or Conservation Area may be subject to change. Prior to undertaking any works to the tree(s) it is strongly advised that the Local Authority is consulted regarding necessary consents.

Nicholas Jones Consultants Limited recommends that all trees should be regularly inspected by professionals as part of a defensible tree management programme. All trees should be re-inspected as specified in the report. Re-inspection schedules and recommended works should be undertaken within the timescales given, which should be treated as a maximum.

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