# Arboricultural Report

## Picus Decay Investigation Report

32 Elliot Square
London
NW3 3SU

140902-PT-02

22nd September 2014

TIM MOYA ASSOCIATES

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| Project | TMA 140902 – 32 Elliot Square |
| Report Type | Assessment of internal decay in a Hornbeam tree |
| Checked by | TC |
| Date Checked | 23/09/2014 |

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# 1 SUMMARY REPORT

1.1 This report has been commissioned to provide information as to the level of internal decay and wood dysfunction within a Hornbeam tree located at 32 Elliot Square, Swiss Cottage, to help make a balanced decision in relation to its future retention and management.

1.2 This report includes:

- An assessment of the degree of decay within the tree and the ratio of sound timber remaining.
- Recommendations for future management of the tree;

1.3 My conclusions are that the PiCUS tomogram confirms the presence of a significant degree of decay around the circumference of trunk, and that the tree should therefore be removed and replaced, for safety reasons.

# 2 INTRODUCTION

## Instructions

2.1 My name is James Chambers; I am an arboricultural consultant dealing with trees in relation to all forms of human activity. I have some 15yrs experience in Arboriculture, including 12 years as a local authority tree manager and I hold the National Diploma in Arboriculture, and I am a qualified professional tree inspector (LANTRA) and Technician Member of the Arboricultural Association.

2.2 This report has been commissioned by Steve Venables from Principle Trees.

## Scope and limitations

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2.4 The result of the test only gives an indication of the level of internal decay within a tree which can help make an assessment for a tree's potential for failure, however it must be remembered that due to the light weight construction principles of nature there is a natural failure rate even amongst healthy trees with no internal decay.

## Background details

2.5 The PiCUS test was undertaken on Thursday 18th September 2014 and the weather conditions were dry and calm at the time of the test.

2.6 The test was commissioned due to the presence of *Ganoderma* fungal fruit bodies at the base of the tree to the south.

# 3 OBSERVATIONS

## Tree and test details

3.1 The tree is approximately 11m tall, with a crown spread of approximately 8m and a trunk diameter of 55cm at 1.5m from ground level. The crown appears relatively healthy from a distance, however there is some small diameter (<2cm) deadwood throughout the crown and one larger diameter (approx. 8cm) broken, decayed branch in the middle of the crown at an old reduction point.

3.2 The tree has had significant crown reduction works in the past, and appears to have been most recently reduced within the last five to ten years. There is some epicormic growth throughout the crown indicating that the tree has been stressed, which is likely to be associated with the previous crown reduction work.

## Target evaluation

3.3 The tree is within a small rear garden, with the trunk just under 10m from the building, by the rear fence. The crown extends over a public footpath and highway, with car parking bays also within the crown spread.

## Tree benefit evaluation

3.4 The tree provides visual amenity value as well as habitat and wildlife value to the surrounding area. There are trees in adjacent gardens, including a similar sized hornbeam in the neighbouring garden, and in the street to the rear of the property.

3.5 The tree is also the subject of a Tree Preservation Order.


Image 1: Aerial view showing location of the tree and others

## PiCUS tomogram reading

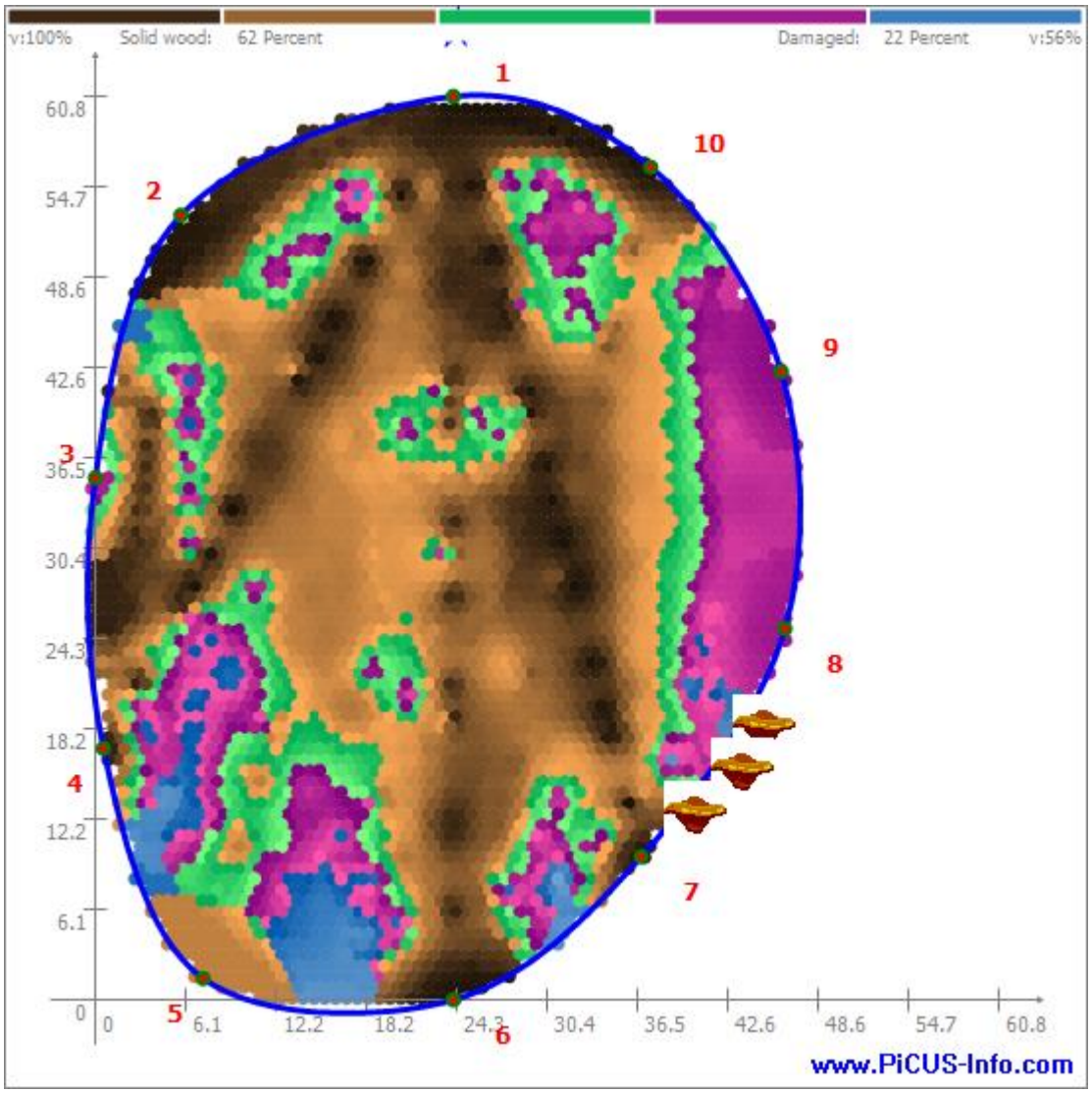


Image 2: PiCUS tomogram showing the consistency of the wood at 16cm from ground level. Sensor point one is to the North. The location of the *Ganoderma* fungal fruit bodies is indicated by the icons.

# 4 DISCUSSION

4.1 The soil level around the trunk appears to have been raised in the past, which appears consistent with the pattern of decay. This type of decay, extending from the outer edge toward the centre of the stem cannot be compensated for, as the tree is unable to produce reaction growth to adapt to the wood degradation.

4.2 There is very little buttressing at the base of the stem indicating limited response from the tree to help mitigate against the effects of decay, despite the presence of *Ganoderma* fungal fruit bodies, some of which appear to have been present for several years.

4.3 There will be decay associated with the *Ganoderma* decay fungi; however it has not been possible to assess or quantify the level of decay in the stem and base of the tree beneath the fungal fruit bodies. The extent of decay present is likely to increase with time.

4.4 For these reasons, the tree will require significant work to reduce the risk of failure to acceptable levels. While crown reduction work would be an option, the amenity value of the tree would be significantly reduced, and the tree would continue to require regular monitoring and repeated maintenance.

# 5 CONCLUSIONS

5.1 The PiCUS tomogram shows a significant degree of decay in the stem, particularly around the circumference of the trunk.

5.2 Crown reduction work could not guarantee the safety of the tree, and would further reduce the tree's ability to compensate for the decay already present. It is also likely that the decay present in the tree will increase with time, so for these reasons the removal of the tree is recommended.

5.3 The tree is the subject of a Tree Preservation Order, so the local authority must be contacted for permission prior to any works being undertaken.

# 6 RECOMMENDATIONS

6.1 Due to the overall poor condition of the tree, the decay revealed in the PiCUS tomogram, the type and pattern of decay in the stem, the tree's inability to produce reaction growth to compensate for the area affetcted by decay, the unknown levels of decay below the fungal fruit bodies, and the likelihood that the situation will contnue to deteriorate with time, it is recommended that the tree is removed and replaced.

# APPENDIX A

Image 2: T1 Hornbeam viewed from the south east

Image 3: *Ganoderma* fungal fruit bodies to the south

Image 4: PiCUS set up viewed from the north

- Feasibility Tree Surveys
- British Standard 5837 Tree Surveys
- Tree Constraints Reports & Drawings
- Appeal Statements & Proofs
- Expert Witness
- Evidence at Hearings & Public Inquiries
- Method Statements to Satisfy Planning Conditions
- Design Solutions
- Landscape Plans
- Tender Documents & Drawings
- Supervision & Inspection of Works
- Contract & Project Management
- Health & Safety Surveys
- GPS Surveys
- Computerised Tree Population Surveys
- CAD Plans & Consultancy
- Subsidence Risk Assessments
- Mortgage & Insurance Reports
- TPO Review
- Local Government Officer Contracts
- Arboricultural & Ecological Reports for Planning
- Habitat Surveys (Extended Phase 1/ Walkover/ Botanical)
- Protected Species Surveys
- Ecological Mitigation & Licencing
- BREEAM & CFSH
- Ecological Management Plans
- Hedgerow Surveys
- Landscape Analysis

**TIM MOYA ASSOCIATES**
**ARBORICULTURE • LANDSCAPE • ECOLOGY**

8 Feltimores Park, Chalk Lane, Harlow, Essex
CM17 0PF

T: 0845 094 3268
F: 0845 094 3269
W: www.tma-consultants.co.uk