



ENVIRONMENT
AND RISK

WWW.ENSPEC.COM

ABN 92062909255

*AUSTRALIAN OWNED
AUSTRALIAN PROUD
AUSTRALIAN LEADER*

+613 9755-6799

+613 9755-6788

ADMIN@ENSPEC.COM

HEAD OFFICE & LABORATORY

UNIT 2 - 13 VIEWTECH PLACE
ROWVILLE. 3178

AUSTRALIA OPERATIONAL OFFICES

SOUTH AUSTRALIA
42 DUNORLAN RD
EDWARDSTOWN. 5039

QUEENSLAND
40-42 SOUTH PINE RD
BRENDALE. 4500

NEW SOUTH WALES
15/198 YOUNG ST
WATERLOO. 2017

TASMANIA
3/110 MORNINGTON RD
MORNINGTON. 7018

NORTHERN TERRITORY
PO Box 1194
HUMPTY DOO 0836

PICUS SONIC TOMOGRAPH TEST (ST) SUMMARY REPORT.

COMPLETED FOR: MARIBYRNONG CITY COUNCIL

LOCATION: BUNBURY STREET, FOOTSCRAY

DATE: 20TH APRIL 2022

A BASIC KEY TO ANALYSING PICUS SONIC TOMOGRAPH REPORTS

The following points will assist when you visually assess the test results against the tree.

- a) Sensor one is always located to the northern side of the tree unless specified. This may vary slightly depending on where sensor point one is located on the trunk.
- b) The test height is always measured at sensor one unless specified.
- c) The red line in the photograph of the tree demonstrates the approximate height at which the test was conducted.
- d) The red ring in the test result (2-dimensional picture) when included is the t/R ratio. The t/R ratio red line is set at 15 percent unless otherwise stated.
- e) In some test results the degree measurement may be included; this could be the open section of a wound or hollow, or it may be an area of active fungus. These areas are always identified with blue lines.
- f) In some test results other measurements may be mentioned; this will be an approximate measurement of the depth of decay or fungus. This is shown with a red arrow.
- g) In some cases, depending on the genus and species of the fungus, the active fungus wood area may not be visible to human eyes if sectionalised.
- h) In most cases, depending on the genus and species of the fungus, the incipient wood affected area will not be visible to human eyes if sectionalised.
- i) The PiCUS Sonic Tomograph is mostly accurate with the colour coding produced; at times the test image produced may vary to what will be visually observed when the test area is exposed. It is important that only trained professionals make comments and recommendations regarding any test result cross examinations.
- j) In some test results there will be an overlay of lines from sensor to sensor; where the lines actually cross one and other is the accurate point of the test result, and the colour reading should be taken from this point.
- k) The rating system for the tree's condition at the test point is based on sound wood percentages in the test result:

Excellent	Very Good	Good	Average	Further Management
Above 90%	60 - 89%	40 - 59%	20 - 39%	<20%

The PiCUS Sonic Tomograph test was conducted by:

Name of Arborist
Qualifications

Stephen Daniel

Dip. App. Sci. (Hort. [Arb.])

Diploma Arboriculture

Diploma Ecology

Cert III Ecology

Adv. Cert. Horticulture

QTRA - Registered User No 4991

TRAQ Qualified

Australian Arborist Industry Licence

Tier One Professional Registered Consulting Arborist Number
AL1778

Contact phone number

+61 418 727 152

E-mail Address

stephen.daniel@enspec.com

Tree Locations

The aerial map below shows the locations and ID numbers of the trees tested with Sonic Tomograph along Bunbury Street, Footscray.



Tree Location Details

Tree Number

Botanical Name

Common Name

Test Height

Tree Circumference

The Sonic Tomograph test result indicates 67% of the test area is sound (high density) wood. There is 4% of incipient wood (wood being altered by the fungus). The remaining 29% is active fungus and decayed (low density) wood.

The tree has been pollarded in the past above the test height at approximately 2.5 metres above ground level. The primary unions of the pollard heads intersects with the outer trunk at sensors 3, 4-5, 8 and 11-12. Decay was observed in some of the old pruning wounds at the old pollarding points. It is likely that the decay causing pathogen has spread into the trunk from the old pollarding points resulting the incipient and dysfunctional wood shown in the test result. Additionally, a linear wound was observed between sensor 11 and sensor 12 (see red arrow in photograph in yellow box).

The test result shows that the incipient and dysfunctional wood is contained to the north-eastern sector of the test point and is impacting the northern and eastern pollard heads. The pathogen has caused significant degradation to the compression wood of the pollard heads but there is still sound structural wood providing support for the northern and eastern pollard heads. Also, the northern side of the canopy has limited lateral load because of routine service wires clearance pruning. Furthermore, the test result indicates that the tree is developing reactive zones to slow the progression of the fungus. This can be seen in the test result by the low percentage of incipient wood.

It is observed that new wood growth increments are occurring at sensors 2, 5, 6, 7 and 8.

The timeframe allowed before the tree is unsafe and removal is the only option will be determined by the rate of spread of the fungus.

CONCLUSION

The tree displays health and vigour that is typical for the species and the test result provides evidence that the tree is structurally sound at the test height.

The tree has an estimated life expectancy of greater approximately 20 years at the test point. It is recommended that the tree is retested in 3 years to assess the progression of the pathogen and to re-evaluate the structural integrity of the trunk at the test height. It is also recommended that routine pruning of the northern side of the canopy is undertaken to limit lateral load on the unions of the northern and eastern pollard heads.

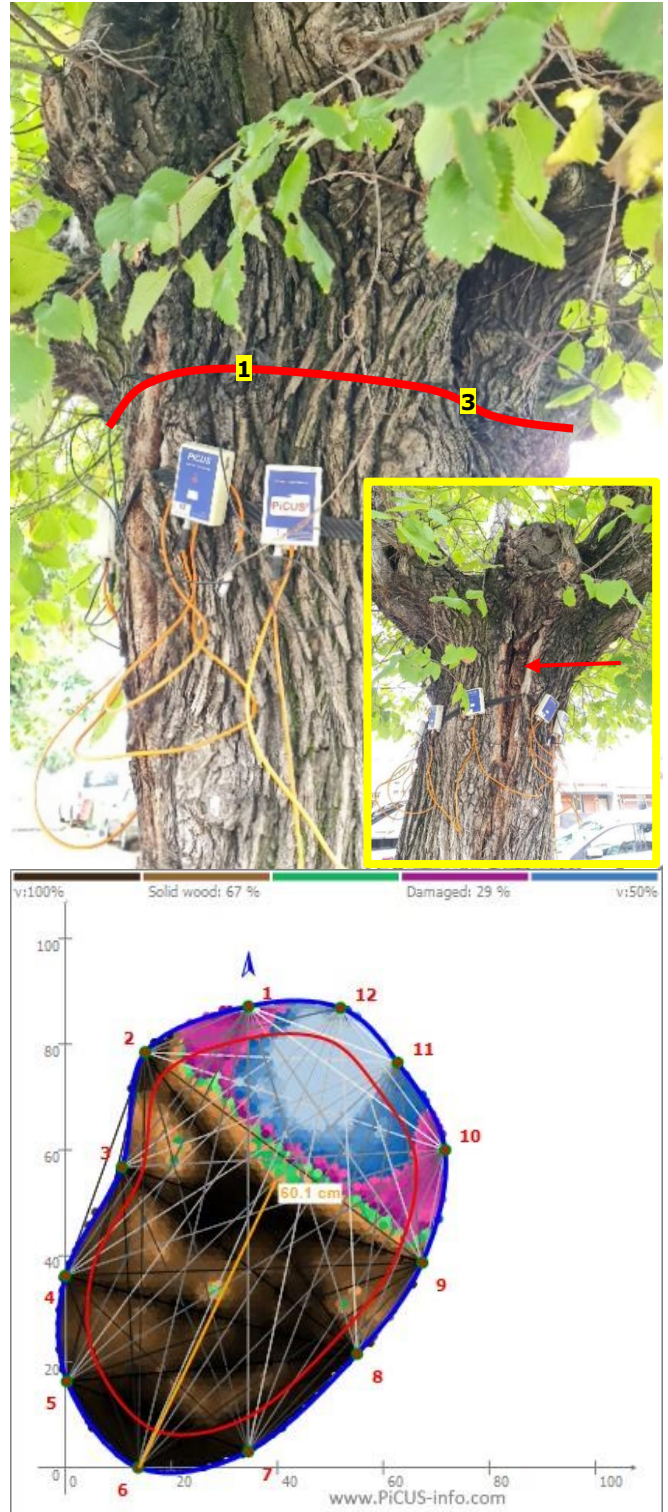
**Roadside reserve – 36 Bunbury Street
13**

Ulmus x hollandica

Dutch Elm

2150mm above ground level at sensor one

2480mm at test height



Tree Location Details

Tree Number

Botanical Name

Common Name

Test Height

Tree Circumference

The Sonic Tomograph test result indicates 22% of the test area is sound (high density) wood. There is 11% of incipient wood (wood being altered by the fungus). The remaining 67% is active fungus and decayed (low density) wood.

The tree has been pollarded in the past above the test height at approximately 3 metres above ground level. Decay was observed in some of the old pruning wounds at the old pollarding points (see red arrows in photograph in yellow box). It is likely that the decay causing pathogen has spread into the trunk from the old pollarding points resulting in the incipient and dysfunctional wood shown in the test result.

The primary union of the pollard heads intersects with the outer trunk at sensors 4 and 12. The test result shows that the pathogen has caused significant degradation to the structural integrity of the primary union.

Additionally, the test result shows that the dysfunctional wood has encroached into the t/R ratio (set at 15%). The t/R ratio is only used as a guide to evaluate the sound wood/dysfunctional wood ratio and should not be used as an index of trunk failure potential. However, there is very limited structural wood, particularly on the western and eastern sides of the test point, with a very high percentage of the trunk area assessed as non-functional wood.

Although the test result shows new wood growth increments are occurring at sensors 1, 2, 5, 9, 11 and 13, the extent of the dysfunctional wood at the test height was assessed as a structural defect in the trunk.

CONCLUSION

The test result provides evidence that the structural integrity of the trunk at the test height has been substantially compromised by the spread of the pathogen from the old pollard heads pruning points.

The tree is recommended for removal because of its poor canopy management history and reduced life expectancy due to the extent of trunk decay.

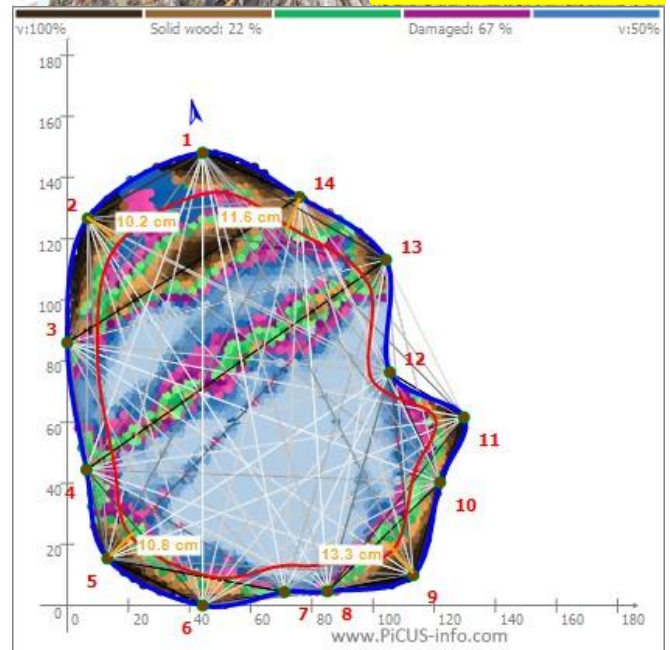
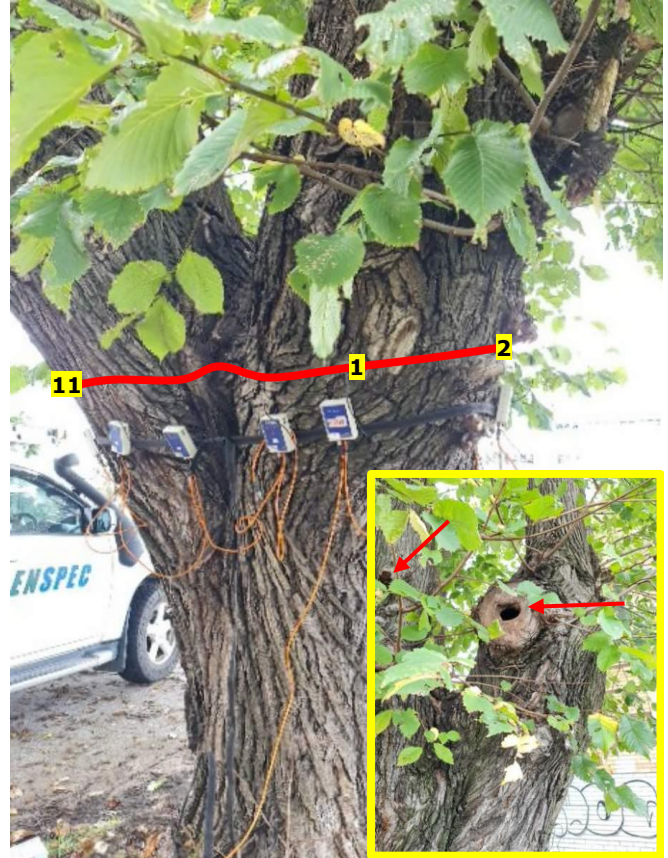
Roadside reserve – on Bunbury Street frontage at corner of Whitehall Street & Moreland Street 22

Ulmus x hollandica

Dutch Elm

1650mm above ground level at sensor one

4525mm at test height



DISCLOSURE STATEMENT

ENSPEC Pty Ltd and their employees are specialists who use their knowledge, training, and education (qualifications), infield learning experiences, personal experiences research, diagnostic tools, scientific equipment to examine trees, recommend measures to enhance the beauty, health, and preservation of trees, to reduce the risk of living near trees.

Trees are living organisms that can be affected by pests, diseases, and natural events outside of ENSPEC control. ENSPEC and their employees cannot detect every condition that affects a trees health, condition, and structural integrity. Conditions are often hidden within trees and below ground where humans cannot naturally see. Unless otherwise stated, ENSPEC's employee's observations have been visually made from ground level.

In the event that ENSPEC recommends retesting or inspection of trees at stated intervals, or ENSPEC recommends the installation engineering solutions, ENSPEC must inspect the engineering solution at intervals of not greater than 12 months, unless otherwise specified in writing. It is the client's responsibility to make arrangements with ENSPEC to conduct re-inspections.

Intervention treatments of trees may involve considerations beyond the scope of ENSPEC's service, such as property boundaries and ownership, disputes between neighbours, sight lines, landlord-tenant matters and other related incidents. ENSPEC cannot take such issues into account unless complete and accurate information is given prior or at the time of the site inspection. Likewise, ENSPEC Pty Ltd cannot accept responsibility for the authorisation or non-authorisation of any recommended treatment or remedial measures undertaken.

ENSPEC Pty Ltd cannot guarantee that a tree will be healthy or safe under all circumstances or for a specified period of time after our initial inspection and recommendations.

If this written report is to be used in a court of law, or any other legal situation, or by other parties ENSPEC must be advised in writing prior to the written report being presented in any form to any other party. All written reports must be read in their entirety. At no time shall part of the written assessment be referred to unless taken in full context with the whole written report.

Clients may choose to accept or disregard the recommendations of the assessment and written report.

Notwithstanding anything in the report, express or implied, the client is not entitled to recover from ENSPEC Pty Ltd, its employees, agents and/or subcontractors any damages for business interruption or loss of actual or anticipated revenue, income, or profits or any consequential, special, contingent or penal damage, whatsoever, and the client releases ENSPEC Pty Ltd from any such liability. Without limitation of the foregoing, a party shall at all times be limited (to the extent permitted by law) damages in the amount paid by the Client to ENSPEC Pty Ltd for ENSPEC Pty Ltd services. The limitation applies whether the claim is based on warranty, contract, statute, tort (including negligence) or otherwise.