INSPECTION REPORT

Work Order Number: 0024669	**Site address of Tree:** 3459 Warburton Highway WARBURTON VIC 3799	
Date of inspection: ~~19th January 2022~~ I have confirmed with the manager of Enspec that the above date is wrong and that the correct date is 19th January 2023. Paul Mechelen 23-03-2023	**Melway:** 290 C4	
Name:	**Address:**	**Phone:**

Recommended action:

#1- Remove tree

Reasons for recommended action:

#1- The tree has co-dominant trunks with health and vigour that is typical for the species. The tree is stable in the ground with no evidence of any root plate instability. The tree is located in a gravel and asphalt carpark, and it is likely that ongoing minor compaction is affecting the root plate; however, no obvious deterioration to the health and vigour of the tree was noticed in the canopy at the time of the inspection.

The primary union of the co-dominant trunks has split in the past on the north-western side from the top of the union (at approximately 1.7 metres) down to the basal area of the tree. Probing the split indicated substantial decay in the primary union and lower trunk of the tree. A small split in the primary union was also observed on the south-eastern side of the primary union. Two Sonic Tomographs were conducted on the primary union at 1 metre above ground and 1.5 metres above the ground to determine the structural integrity of the primary union. The two test results showed extensive decay and dysfunctional wood with minimal structural wood at the two test heights. It is interpreted that at the time of the inspection, the two cables previously installed between the co-dominant trunks are the providing the structural support for the primary union.

A large torsional split was observed in the lower section of the western co-dominant trunk extending up the trunk from approximately 2.5 metres above the ground to 7 metres. A hollow opening was observed in the eastern trunk at approximately 5 metres above the ground. This hollow has developed from a past branch breakage point and is likely providing habitat for local fauna.

Generally, the scaffold branches displayed good taper and well-formed branch unions. Previous branch breakages were observed in the canopy, but none of the remaining branches were assessed to have a high likelihood for failure. Deadwood in the canopy was minimal at the time of the inspection.

Due to the significant amount of degradation to the structural integrity of the trunk and primary union, and the limited structural wood at the two test heights, it is recommended that the tree is removed.

Risk & works priority:	**Site conditions & equipment required:**
#1- Moderate	40m EWP, chipper, traffic control for carpark

Map:

Age: **#1**- Mature	**Common name:** **#1**- Mountain Grey Gum	**Botanical name:** **#1**- *Eucalyptus cypellocarpa*

No.	**Height (m)**	**Spread (m)**	**DBH (cm)**
1.	30+	30	270

Roots condition: **#1**- Compaction	**Trunk condition:** **#1**- Poor (split co-dominant trunks primary union and extensive decay in the lower trunk and primary union, torsional split in western trunk)
Limbs condition: **#1**- Fair (past branch breakages)	**Foliage condition:** **#1**- Good
Amenity value: **#1**- High	**Habitat:** **Part of habitat corridor:** No **Hollow bearing:** No **Native Fauna Use:** Yes

Distance to building (m):	**Do branches overhang buildings?**	**Targets**
30	No	Carpark, LV, service wires, footpath, road

Company:	**Name:**	**Date report written up:**
ENSPEC Pty Ltd		~~19th January 2022~~ I have confirmed with the manager of Enspec that the above date is wrong and that the correct date is 19th January 2023. Paul Mechelen 23-03-2023

Tree Location Details **Carpark**
Tree Number **1**
Test Number & Location **1 of 2 – Middle of primary union**
Botanical Name ***Eucalyptus cypellocarpa***
Common Name **Mountain Grey Gum**
Test Height **1000mm above ground level at sensor one**
Tree Circumference **8630mm at test height**

The Sonic Tomograph test result indicates the percentage of the test area that is sound (high density) wood, incipient wood (wood being altered by the fungus) or active fungus and decayed (low density) wood. The tree was previously tested at approximately the same height in June 2016 and the results of that test, and the recent test are:

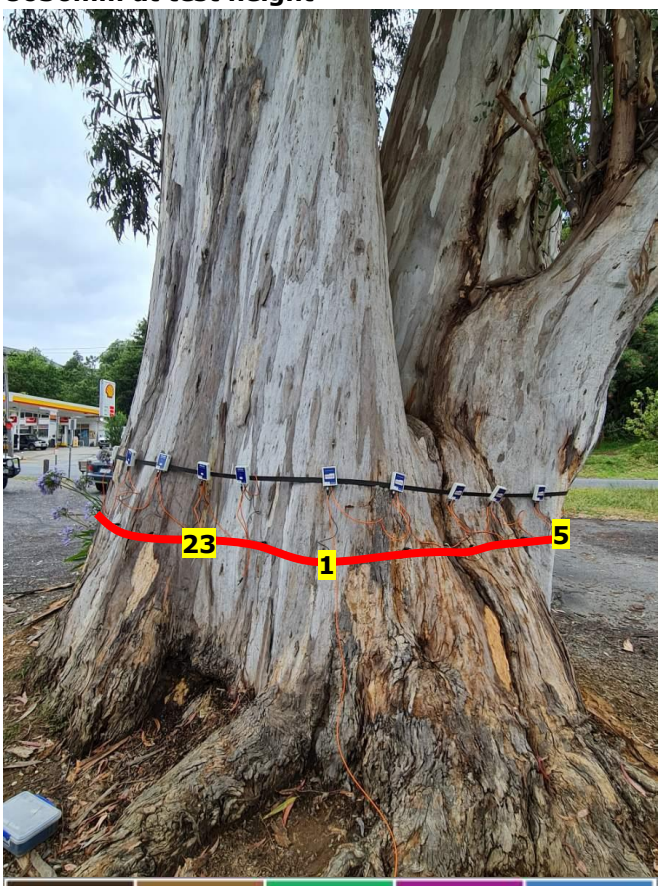
	2016	2023
Sound wood	22%	12%
Incipient wood	9%	5%
Active fungus & decayed wood	69%	83%

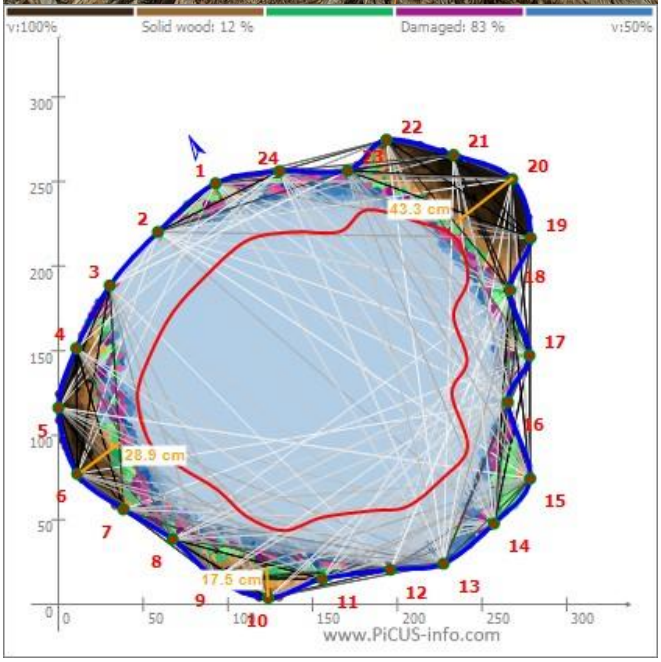
The circumference of the trunk at the test height has increased by approximately 43 cm since the 2016 test, and it is acknowledged erosion of the soil at the base of the tree has lowered the ground level in the years between tests. Therefore, the current test height is lower on the trunk than the 2016 test.

Notwithstanding the change in test heights, comparing the two test results shows that the percentage of sound wood has decreased, and the percentage of active fungus and decayed wood has increased over the 6½ years since the last test in 2016.

The active fungus progressed further through the heartwood since the 2016 test causing extensive degradation to the structural integrity of the trunk at the test point. Additionally, the test result shows that the tension wood in the split primary union of the co-dominant trunks that traverses the test height from sensors 2-3 through to sensors 13-14 is totally dysfunctional.

The test result shows that there is some structural compression wood at the test height. At the test height, the test result shows at sensor 6 there is 28 cm of sound wood; at sensor 10 there is 17 cm of sound wood; and at sensor 20 there is 43 cm of sound wood. Furthermore, it is observed that new wood growth increments are occurring in the compression wood at sensors 5, 6, 19, 20, 21 and 22.





Tree Number
Test Number & Location
Test Height
Tree Circumference

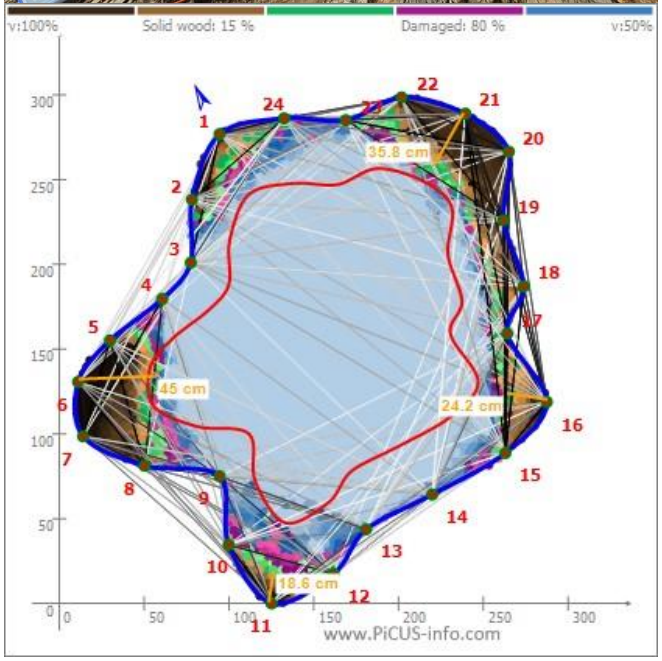
The Sonic Tomograph test result indicates 15% of the test area is sound (high density) wood. There is 5% of incipient wood (wood being altered by the fungus). The remaining 80% is active fungus and decayed (low density) wood.

The fungus in the test result is associated with the degradation seen in the lower test point. The split primary union of the co-dominant trunks traverses the test height from sensors 3-4 through to sensor 14-15.

The active fungus has spread through the heartwood reaching the outer trunk between sensors 2 and 4; between sensors 8 and 10; between sensors 12 and 15; and between sensors 23 and 24. The test result shows that the fungus has caused significant degradation to the structural integrity of the trunk and primary union of the tree.

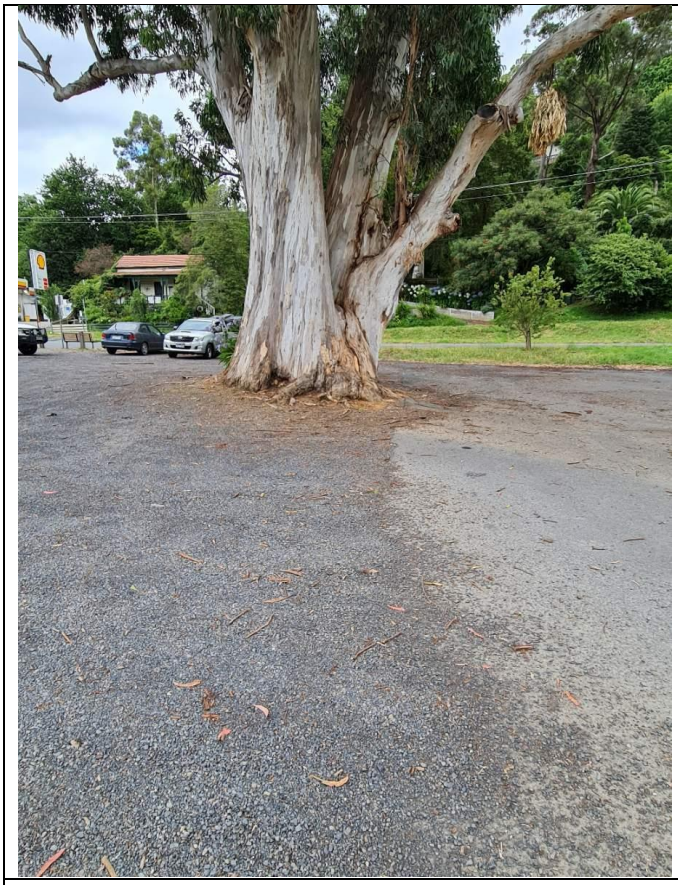
The progression of the fungus at the test point has confined the structural wood is to the compression wood of the co-dominant trunks and primary union. At the test height, the test result shows at sensor 6 there is 45 cm of sound wood; at sensor 11 there is 18 cm of sound wood; at sensor 16 there is 24 cm of sound wood; and at sensor 21 there is 35 cm of sound wood. Furthermore, it is observed that new wood growth increments are occurring in the compression wood at sensors 6, 7, 11, 20 and 21.

1
2 of 2 – top section of the primary union 1500mm above ground level at sensor one 8700mm at test height



Photographs

The tree in location

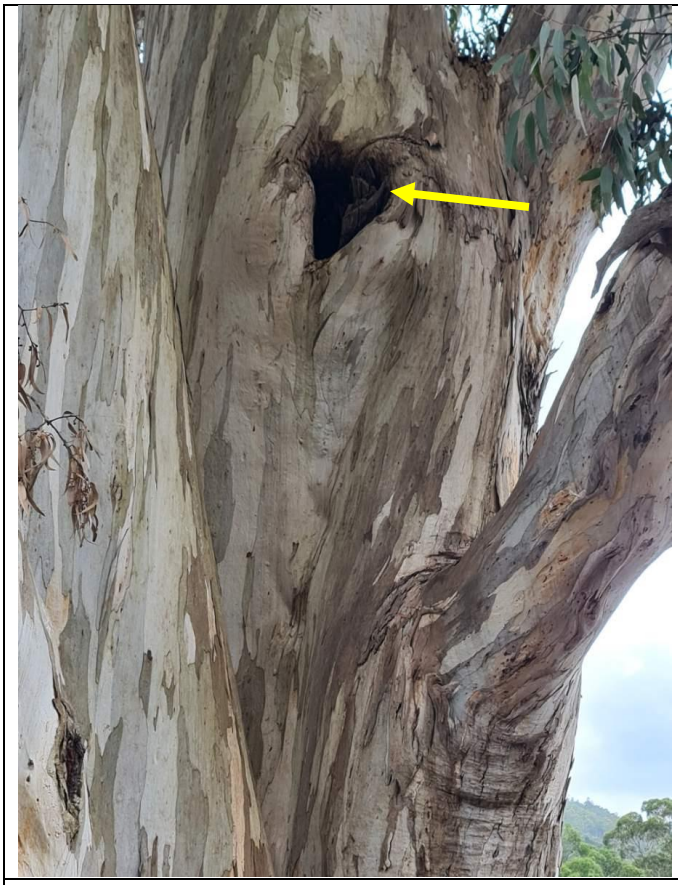


The gravel & asphalt carpark surrounding the tree

The split in the primary union on the north-western side of the union

The smaller split in the south-eastern side of the primary union

The cables previously installed between the co-dominant trunks.



The hollow opening in the eastern co-dominant trunk

The lower part of the torsional split in the western trunk

The upper part of the torsional split in the western trunk