

ARBORICULTURAL REPORT

1494 – 1496 NORTH ROAD, CLAYTON

April 2020

Revised July 2020

ADVERTISED COPY

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1 Introduction

- 1.1 John Patrick, consulting arborists, have been engaged by North Road Project Pty Ltd to prepare an arboricultural report for 1494 – 1496 North Road, Clayton to accompany planning application documents for the site.
- 1.2 This revised report (20156AR Rev1) is in response to the required removal of Tree 2. Changes to the original report are restricted to the plan at page 10 which now indicates this tree as being removed.

2 Objectives

- 2.1 The intent of this report is to:
- Assess the condition of trees within the subject site and those neighbouring that may be impacted by the proposed development and estimate the extent of any impact.
 - Identify any trees worthy of retention and provide preliminary arboricultural advice to assist in their protection and retention.
- 2.2 The report will include the following;
- Botanic / Common names
 - Tree Location
 - Canopy width and height
 - DBH (trunk diameter)
 - Tree health & structure condition
 - Useful Life Expectancy (ULE)
 - Tree Protection Zones (TPZ's) in accordance with AS-4970
 - Arboricultural value
 - Other tree characteristics of consideration.

3 Methodology

- 3.1 The site was visited on the 26 March 2020 and a visual assessment of the subject trees was undertaken from ground level. Each tree was assigned an identification number for reference purposes, denoted on the

attached Tree Location Plan (Section 5) which is based on the Boundary Re-establishment, Feature and Level Survey prepared for the site by Veris, Sheet 1 of 1, Job Number 301701, 02/10/2019 and the architectural plans for the site.

- 3.2 Trees identified with a DBH of 150mm or less were not assessed in this report unless rare or of unusual attributes.
- 3.3 No aerial or diagnostic testing was undertaken as part of this assessment.
- 3.4 The DBH of trees was measured using a diameter tape measure at 1.4m above ground level in accordance with AS-4970.
- 3.5 Heights and widths of canopies were measured using a laser range finder.
- 3.6 Where access directly to the trees was not possible DBH, heights and widths were estimated.

4 Observations

EXISTING CONDITIONS

- 4.1 The subject site is located on the southern side of North Road. Currently it exists as a disused church site with single storey brick buildings and associated annexes. The existing garden consists of garden beds containing small shrubs and ground covers in the front setback with the rear of the site comprised mainly of an expanse of lawn with two low amenity trees located towards the rear of the eastern boundary.

VEGETATION CONTROLS

- 4.2 An internet search of VicPlan (mapshare.vic.gov.au/vicplan/) reveals that the site is not covered by any overlays pertaining to tree control of the City of Monash Planning Scheme.
- 4.3 A search of the City of Monash website reveals no tree protection Local Laws.
- 4.4 ****Note: It is recommended that vegetation controls be confirmed with the local authority prior to any tree removal.***

TREE INFORMATION

A total of 14 trees or tree groups were assessed including 2 trees within the subject site, 4 trees within the neighbouring property to the south, 2 trees within the neighbouring property to the east and 6 street trees within the North Road road reserve to the north. Information on these trees can be found in the following table.

TREE DATA

Table 1: Tree Data												
Tree No.	Botanic Name	Common Name	Origin	Size (m)	DBH (cm)	TPZ (m)	Age	Health	Structure	ULE (Yrs.)	Arb. Value	Comments
1	<i>Eucalyptus scoparia</i>	Wallangarra White Gum	Aust. Native	11 x 13	45	5.4	Mature	Good	Fair	10-20	Medium	Street tree valley pruned for High & Low Voltage electrical wires.
2	<i>Eucalyptus scoparia</i>	Wallangarra White Gum	Aust. Native	13 x 16	50/34	7.3	Mature	Good	Fair	10-20	Medium	Street tree valley pruned for High & Low Voltage electrical wires.
3	<i>Eucalyptus scoparia</i>	Wallangarra White Gum	Aust. Native	7 x 5	29	3.5	Semi mature	Fair	Poor	0-5	Low	Street tree valley pruned for High & Low Voltage electrical wires. 20cm main leader lopped at 3m.
4	<i>Eucalyptus scoparia</i>	Wallangarra White Gum	Aust. Native	7 x 8	28	3.4	Semi mature	Fair	Fair	0-5	Low	Street tree valley pruned for High & Low Voltage electrical wires. 20cm main leader lopped at 3m.
5	<i>Eucalyptus scoparia</i>	Wallangarra White Gum	Aust. Native	9 x 13	40	4.8	Mature	Good	Fair	10-20	Medium	Street tree valley pruned for High & Low Voltage electrical wires.
6	<i>Eucalyptus scoparia</i>	Wallangarra White Gum	Aust. Native	7 x 8	28	3.4	Semi mature	Good	Poor	0-5	Low	Supressed by Tree 5. Growing in 45 degree lean towards road.
7	<i>Prunus persica</i>	Nectarine	Exotic	3 x 3	15	2.0	Semi mature	Good	Fair	5-10	Low	
8	<i>Ficus carica</i>	Edible Fig	Exotic	3 x 3	20	2.4	Semi mature	Good	Fair	5-10	Low	
9	<i>Lauris noblis</i>	Bay Tree	Exotic	4 x 2	10	2.0	Semi mature	Good	Fair	5-10	Low	
10	<i>Ficus carica</i>	Edible Fig	Exotic	3 x 5	15	2.0	Semi mature	Good	Fair	5-10	Low	
11	<i>Nerium oleander</i>	Oleander	Exotic	4 x 6	Multi 4	2.2	Mature	Good	Fair	5-10	Low	
12	<i>Pittosporum undulatum</i>	Sweet Pittosporum	Vic. Native	8 x 6	23/22	3.8	Mature	Good	Fair	0	Low	Self-germinated weed
13	<i>Corymbia maculata</i>	Spotted Gum	Vic. Native	15 x 10	36/25/15/20	6.0	Mature	Good	Poor	5-10	Medium	
14	<i>Melaleuca linariifolia</i>	Narrow Leaved Paperbark	Aust. Native	5 x 6	50	6.0	Mature	Fair	Fair	5-10	Medium	

TREE IMAGES



Figure 1: Front of site showing Trees 1 – 6 (right to left)



Figure 2: Rear of the site showing Trees 7 – 10 in the neighbouring property to the south and site trees Tree 11 and 12



Figure 3: Trees 13 (left) and 14 in the neighbouring property to the east.

5 Discussion

- 5.1 A multi-storey student accommodation building is proposed for the site. The following plans have been reviewed and form the basis of this impact assessment:

1494 – 1496 North Road, Clayton

Basement Plan, TP-06

Ground Floor Plan, TP-07

Prepared by Alta Architecture, 27-03-2020

- 5.2 This report assumes that the levels, dimensions and drawings provided by the surveyors and architects named within this report are correct as these have been used as the basis for this impact assessment.
- 5.3 Trees 7, 8, 9, 10, 13 and 14 were not shown on the survey provided, their location on the Tree Location Plan and Impact Assessment Plan is therefore based on a visual estimation of their location. Any comments regarding the impact on these trees are approximate only.

SITE TREES

- 5.4 The two site trees, Trees 11, an Oleander and Tree 12, a weedy Sweet Pittosporum, are of low arboricultural value with neither of them worthy of retention. Both trees are proposed to be removed.

NEIGHBOURING TREES

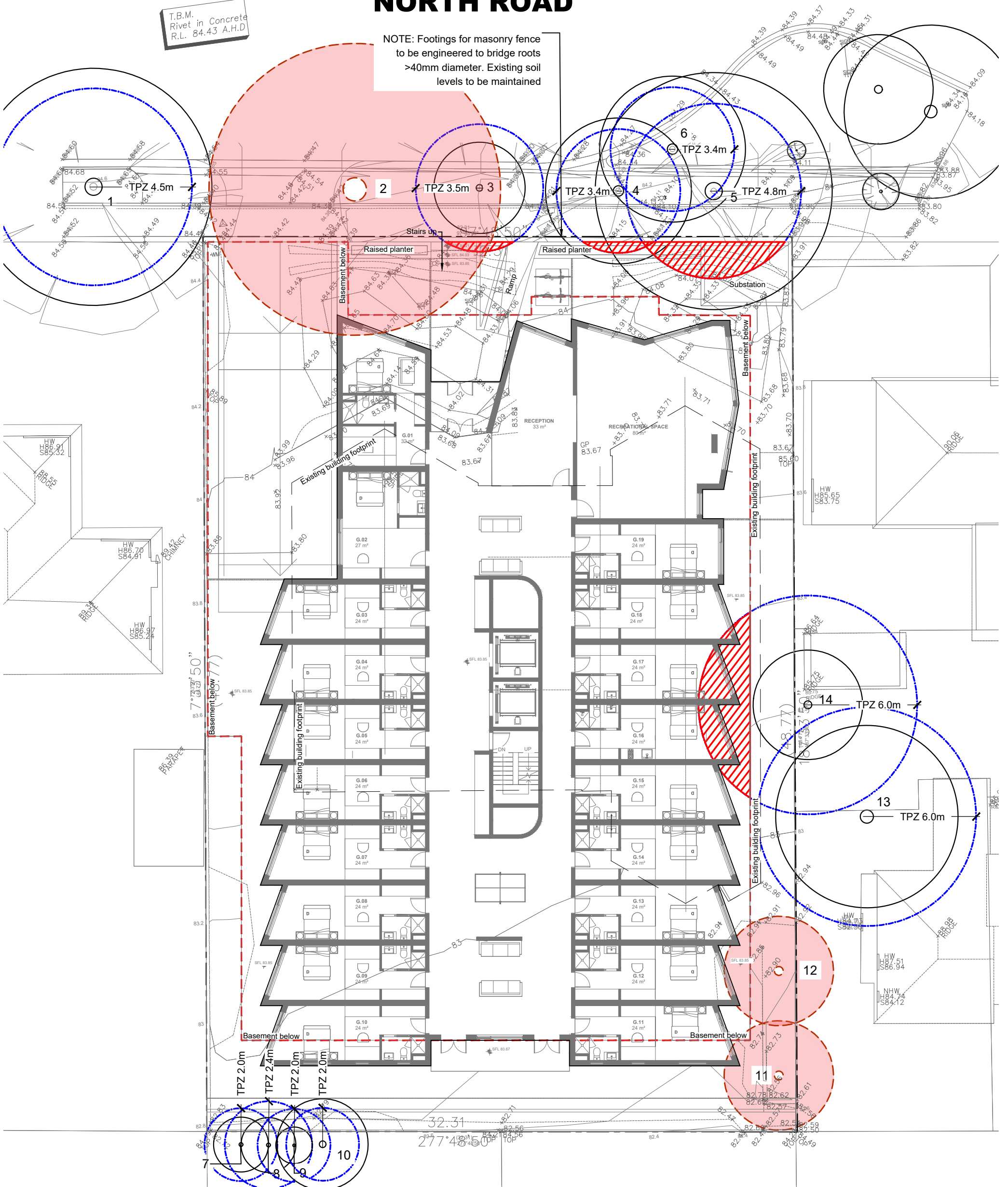
- 5.5 The TPZ of Tree 1 does not enter the site. This tree is therefore unlikely to be impacted by the proposed development.
- 5.6 It is proposed to widen the existing crossover resulting in it being located approximately less than 500mm from the base of Tree 2, a large Wallangarra White Gum street tree. This is likely to necessitate removal of the tree. This will need to be negotiated with the Responsible Authority. Given the presence of street trees within the road reserve adjacent to the site, it is unlikely that a crossover of this width could be accommodated without the removal of at least one tree.
- 5.7 To retain the tree, a non-destructive root investigation would be required, not only to determine how close the proposed crossover could come to the tree without impacting major roots, but also to determine the impact that the ramp, pedestrian path, masonry fence, booster cupboard and likely landscape works will have on the tree. Current plans indicate that the total encroachment of all these elements is in the vicinity of approximately 25.4% including 10% by the basement ramp, 0.6% by the building and the 2.9% by the pedestrian entry path.
- 5.8 Approximately 3.5% of the TPZ of Tree 3 and 4.3% of the TPZ of Tree 4 enter the subject site. It is therefore unlikely that the proposed development will negatively impact these trees. Gas and water meters are proposed within the TPZs and service lines to these meters will need to be installed either using hydro-excavation or by boring under the root plates.

- 5.9 Approximately 15.1% of the TPZ of Tree 5 enters the subject site. Masonry fences and a substation are located within this area. The proposed substation encroaches approximately 9.4% into the TPZ. Provided footings for the masonry fences are engineered to bridge any roots greater than 40mm revealed through exploratory digging and landscape areas within the TPZ are maintained at existing soil levels (unless exploratory digging reveals no roots greater than 40mm will be impacted), the impact of encroachment will be restricted to that of the substation. This complies with AS4970-2009.
- 5.10 All service lines leading into the substation must be installed using either hydro-excavation or by boring under the root plate of the tree.
- 5.11 There are no proposed works within the TPZs of Trees 7, 8, 9 or 10 located in the neighbouring property to the south, or Tree 13 in the neighbouring property to the east. Provided landscape areas within the TPZs are maintained at existing levels, these trees are not expected to be negatively impacted.
- 5.12 The basement encroaches into the TPZ of Tree 14, located in the neighbouring property to the east, approximately 18.5%. The existing brick building is currently located within this area and it is expected that the footings of this will have limited root growth from extending into the footprint. Given that the basement is proposed behind the alignment of the existing building, I do not expect it to negatively impact the long-term healthy retention of this tree.
- 5.13 If boundary fences are to be replaced, it is recommended that any section of the new fences that pass through the TPZ of trees to be retained be of light-weight construction with post holes hand dug and relocated if necessary to avoid major roots. It is also recommended that all landscape areas within the TPZ of trees to be retained be maintained at existing grades.

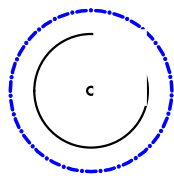
NORTH ROAD

T.B.M.
Rivet in Concrete
R.L. 84.43 A.H.D

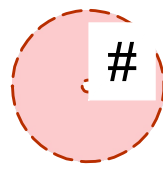
NOTE: Footings for masonry fence to be engineered to bridge roots >40mm diameter. Existing soil levels to be maintained



LEGEND



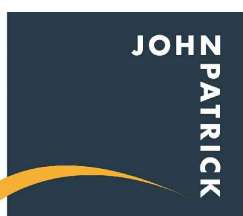
Existing Tree
Blue denotes TPZ



Existing Tree To Be Removed



TPZ Encroachment



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PROJECT
**Proposed Student
Housing**

ADDRESS
**1494-1496 North Road,
Clayton**

DRAWING
Tree Management Plan



SCALE 1:200 @A3
DATE APRIL 2020
DRAWN CN
CHECKED KM
JOB NO 20-156TMP
DWG NO TLP01

6 Conclusion

- 6.1 A total of 14 trees were assessed, comprising 2 within the subject site and 12 within the road reserve or neighbouring properties.
- 6.2 Both site trees are of low arboricultural value and not worthy of retention.
- 6.3 Current plans indicate the removal of a street tree to accommodate the widening of the crossover. This will need to be negotiated with the Responsible Authority. Changes to the proposed crossover and a root investigation will be required if the tree is to be retained.
- 6.4 The proposed works are not expected to negatively impact any other neighbouring trees provided landscape areas are maintained at existing soil levels, footings for the masonry fence are engineered to bridge any roots greater than 40mm diameter and all other fences are of light-weight construction with post holes hand dug and relocated if necessary to avoid roots greater than 400mm diameter.

7 Recommendations

- 7.1 A Tree Management Plan be prepared to direct works around trees to be retained.

8 Descriptors

Tree Number:

Refers to the identification number for reference purposes, denoted on the Tree Data and Tree Survey Plan.

Botanical Name:

Botanical name of species, based on nomenclature and spelling in Spencer, R 1995, *Horticultural flora of South Eastern Australia* (vols. 1-5), University of NSW Press, Sydney. Where *Eucalyptus* spp. are not found in this source, nomenclature is based on Euclid: *Eucalypts of Australia*, 2006, Centre for Australian National Biodiversity Research (CANBR). *Eucalypt* subspecies information is also based on this source.

While accurate tree identification is attempted, and uncertainties are indicated, some inaccuracies in tree identification may still be present – especially in the case of difficult to determine genera (e.g. *Cotoneaster* and *Ulmus*), and with cultivars which can have similar characteristics.

From time to time taxonomists revise plant classification, and name changes are assigned. If it is known names have been revised post the publication of the relevant above listed source, the new nomenclature has been used.

Common Name:

Common names are based primarily on names and spelling used by Spencer in *Horticultural Flora of South Eastern Australia* (vols 1-5). The source of common names is taken in the following order:

- Single name supplied in *Horticultural Flora of South Eastern Australia*;
- First in list of names supplied in *Horticultural Flora of South Eastern Australia*, unless another name in the list is deemed more appropriate;
- Common name as per Costermans, LF 2006, *Trees of Victoria and adjoining areas*; Costermans Publishing, Victoria.
- Most widely used common name if not available in either source previously mentioned.

Common names are provided for thoroughness; the botanical name should be used when referring to the tree taxon.

Age:

Juvenile: Tree has recently been planted and is still in establishment phase. Tree currently makes little contribution to the amenity of the landscape. Trees of this age are possible candidates for relocation during development.

Semi-mature: Tree has established but has not yet developed mature habit. The tree provides some landscape contribution. Tree size would still be expected to increase considerably provided there are no significant changes to existing growing conditions.

Maturing: Tree has developed mature structural habit but has substantial potential to increase in size.

Mature: Tree has or is close to reaching full potential and expected size. Growth rate has slowed, however the tree does not exhibit any major signs of health or structural weakness due to age.

Over mature: Tree is no longer actively putting out extension growth, and is starting to show signs of decline in health due to age. Canopy may thinning and signs of die back in the canopy may be present

Height: The tree's height in metres

Width: The tree's average canopy width in meters. Variations in canopy width to that stated may be present due to canopy asymmetry.

DBH: The tree's trunk Diameter at Breast Height. Measured at 1.4m above ground level, in accordance with *AS4970 Protection of trees on development sites*, unless specified as having been measured lower. DBH may be estimated or measured, as specified in the report. In the case of multi-stemmed trees, stem diameter is either listed individually, or a measurement taken at a point lower than the point of stem divergence. In some cases, especially where trees are not considered worthy of retention or stems are too numerous the DBH may simply be listed as 'multi-stemmed'.

Health:

Good: Tree is not stressed and shows no obvious signs of pest or disease. It is free of wounding. Annual growth rate is as would be expected of a healthy specimen in the same area. There are no signs of die back and canopy is dense. Tree maybe partially suppressed by neighbouring trees.

Fair: Tree is showing signs of reduced health. It maybe drought stressed or show partial signs of pest or disease. Foliage density is less than optimal and minor die back may be present. Tree is typical of its species. Remedial works may improve tree health.

Poor: Tree exhibits signs of stress, e.g. sparse canopy and possibly stunted growth. A large number of dead branches or dieback are present. Tree is likely to be significantly affected by pests or disease. Tree often in decline. Remedial works not expected to improve long-term health.

Dead: Tree shows no signs of life and is not growing.

Note on Deciduous Species: Assessment of deciduous species can be problematic and results may vary depending on the time of year. Descriptor comments in relation to foliage density do not apply to deciduous trees assessed when dormant or entering or exiting dormancy. Time of leaf drop or bud burst and extent of bud swell may be considered in the health rating of these trees.

The ratings indicate that certain characteristics listed have, or have not, been observed. Inspections do not assess the entire tree in detail for each characteristic. The comments category should be referred to for further information.

Structure:

As a rule, the structure rating is based on identified faults in tree habit which reduce the structural integrity and may lead to partial or entire tree failure. It must be noted, however, that this is not a full hazard or failure assessment.

Good: Tree appears to have no obvious structural defects which would diminish the tree's structural integrity.

Fair: The tree has one or more obvious structural defects. e.g. dead branches or codominant stems, however the observed defects are unlikely to prevent retention of the tree. Judicious remedial intervention could remove structural defects and improve the structure rating.

Poor: Tree has at least one or more structural defects that remedial intervention cannot rectify without significantly reducing the retention value of the tree. These defects reduce the useful life expectancy of the tree.

Hazardous: The tree shows one or more structural faults that are prone to failure and present an immediate safety concern. Judicious intervention to remove structural faults and reduce safety risk would leave a tree not worthy of retention. These trees should be removed as a high priority.

Arboricultural Value:

The Arboricultural Values shown in the table below are based on the ULE of the tree which considers structure and health ratings and landscape contribution.

The arboricultural value assists in determining the positioning of structures and infrastructure outside the tree's identified TPZ.

ULE	Landscape Significance			
	High	Medium	Low	Very Low
20+ yrs.	High Arboricultural	Medium Arboricultural Value	Low	Very Low
10-20 yrs.	Medium Arboricultural Value			
5-10 yrs.				
0-5 yrs.	Low Arboricultural Value			
0 yrs.	No Arboricultural Value			

ULE: The Useful Life Expectancy of the tree from a health, structure, amenity and weediness viewpoint given no significant changes to the current situation occur. This category is difficult to determine, and should be taken as an estimate only. In addition, factors not observed at the time of inspection can lead to tree decline.

- 0 yrs.: Tree should be removed due advanced decline/ dead or hazardous.
- 0-5 yrs. Tree is in decline and has poor health or structural faults which cannot be resolved by intervention. Tree is often over- mature.
- 5-10yrs. Tree of fair health or structure
- 10-20. Semi-mature or mature tree of fair health and structure
- 20+ yrs. Juvenile or semi-mature, or a long lived species of good health and structure.

TPZ (Tree Protection Zone):

The Tree Protection Zone of the tree, measured as a radial distance in metres from the centre of the trunk. The TPZ is calculated using the method specified in Australian Standard *AS4970-2009 Protection of trees on development sites*. $12 \times \text{DBH} = \text{TPZ}$

Recommendation:

i.e. Further exploratory root investigation, alterations to proposed works to allow tree retention.

Comments:

Any additional comments specific to individual tree specimens.

AS4970-2009:

The recognised Australian Standard for the 'Protection of Trees on Development Sites'. It provides guidelines on tree protection and formulas for calculating Tree Protection Zones (TPZs), Structural Root Zones (SRZs) and the Diameter at Breast Height (DBH).

AS-4373-2007:

The recognised Australian Standard for the 'Pruning of Amenity Trees'. This Standard provides guidelines on tree pruning to encourage good health and structure.

Ecological Vegetation Class (EVC):

A type of native vegetation classification that is described through a combination of its floristics, life form and ecological characteristics, and through an inferred fidelity to environment attributes. Each EVC includes a collection of floristic communities (i.e. lower level in the classification that is based solely on groups in the same species) that occur across a biogeographic range, and although differing in species, have similar habitat and ecological processes operating.