



Arboricultural Assessment and Report

67 Simpson Street, Kyneton

9 January 2020
Tree Logic Ref. 010439

Prepared for Embracia Pty. Ltd.
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1 Summary

Reason for Assessment

Tree Logic was engaged by Embracia to undertake an arboricultural assessment and prepare a report for trees that may be impacted by a proposed development of 67 Simpson Street, Kyneton. The requirements of the arboricultural report include:

- To provide a preliminary arboricultural assessment and report to inform potential future development.
- To provide information on the species, origin, dimensions, health and structure of the trees and their appropriateness for retention
- Determine the Tree Protection Zones (TPZ) for trees compliant with AS4970 'Protection of trees on development sites'.
- To offer recommendations regarding the management of the trees, including any tree protection measures for retained trees.

Overview

Forty-three (43) trees and four (4) tree groups were growing within the study area. The highest rated trees were exotic deciduous species including ash and oak that had been planted around the hospital grounds and also as street trees along Wedge and Mill Street. The site also had a relatively high number of trees and shrubs that had naturally self-sown. Some of these were exotics with a weedy habit, while two groups of trees were comprised of indigenous species. Tree removals may trigger permit requirement under the Environmental Significance Overlay and under Clause 52.17, native vegetation.

2 Method

- 2.1 A site inspection was carried out on Tuesday 31 December, 2019. The trees were inspected from the ground and observations were made of the growing environment and surrounding area. The trees were not climbed and no samples of the tree or soil were taken.
- 2.2 Observations were made of the assessed trees to determine the species, age category, and condition with measurements taken to establish tree crown height (measured with a height meter) and crown width (paced) and trunk dimensions (measured 1.4 metres above ground level with a diameter tape unless otherwise stated). Descriptors used in the assessment can be seen in Appendix 3.
- 2.3 Assessment details of individual trees are listed in Appendix 1 and a copy of the tree location plan can be seen in Appendix 2.
- 2.4 Some photographs of the trees and the environs were taken for further reference and inclusion in the report.
- 2.5 Only trees were assessed and data collected. A tree is generally a plant with a height greater than 5 metres on a single trunk with a single trunk (stem) diameter (DBH) being greater than 150 mm at a height of 1.4 metres above ground level.
- 2.6 Each of the assessed trees was attributed an 'Arboricultural Rating'. The arboricultural rating correlates the combination of tree condition factors (health and structure) with tree amenity value. It should be noted that the arboricultural rating is different to the conservation/ecological values placed on trees by other professions. Definitions of arboricultural ratings can be seen in Appendix 3.
- 2.7 The assessed trees have been allocated tree protection zones (TPZ). The Australian Standard, AS 4970-2009, has been used as a guide in the allocation of TPZs for the assessed trees. This method provides a TPZ that addresses both the stability and growing requirements of a tree. TPZ distances are measured as a radius, from the centre of the trunk at (or near) ground level. All TPZ measurements for retained trees are provided in Appendix 1.

3 Observations

- 3.1 The tree study area comprised the grounds of the old Kyneton hospital as well as any trees growing close to the property boundary. Most of the site was cleared of vegetation, aside from an avenue of ash on the northern side of Simpson Street and a few scattered exotic deciduous trees around the hospital, most of which were presumably planted when the hospital was operational. Some of the maturing trees, particularly the pair of elms, were suckering profusely, with numerous saplings in their close vicinity. Most of the other vegetation within the subject site appeared to have self-sown more recently. Some of these trees and shrubs were exotics, some of which were weed species, although two patches of indigenous acacias were also identified. The land generally descended to the north, south and west from the hospital building, which was perched atop a hill at the centre of the site. The subject site was bordered to the south by public parkland along the northern bank of Campaspe River, to the north by public housing, to the east by Wedge Street and to the west by Mill Street.



Figure 1. Subject site given by red continuous line.

3.2 Forty-three (43) individually assessed trees and four (4) tree groups comprising approximately eighty-eight (88) small trees and shrubs were growing within the study area. Of these:

- Twenty-three (23) trees and four (4) tree groups were growing within the subject site.
- Ten (10) were growing on neighbouring land.
- Ten (10) were council owned street trees.

3.2.1 See the tree assessment table attached as Appendix 1 for details of each tree feature. See Appendix 2 for tree numbers and locations.

3.3 Based on the spatial arrangement, age class and the site history, it was determined that several trees and saplings had self-sown naturally. Most of these were exotic species that were forming a weedy habit (e.g. *Malus* spp. and *Salix* spp.), although two groups of trees comprised *Acacia melanoxylon*, which is native to the area. One (1) eucalypt (*Eucalyptus ovata*) growing on neighbouring land north of the subject site was also indigenous and may have been naturally occurring.

3.4 The assessed tree population comprised nineteen (19) different species. They are listed in Table 1 below.

Table 1. Tree species and origin

Species (Common name)	Origin	No. of trees
<i>Fraxinus</i> 'Raywood' (Claret Ash)	Exotic deciduous	11
<i>Quercus robur</i> (English Oak)	Exotic deciduous	5
<i>Fraxinus excelsior</i> (European Ash)	Exotic deciduous	5
<i>Eucalyptus nicholii</i> (Narrow-leaved Black Peppermint)	Australian native	3
<i>Eucalyptus viminalis</i> (Manna Gum)	Victorian native	2
<i>Malus</i> sp. (Apple)	Exotic deciduous	2 + 1 group (6 trees)
<i>Eucalyptus botryoides</i> (Southern Mahogany)	Victorian native	2
<i>Ulmus procera</i> (English Elm)	Exotic deciduous	2
<i>Thuja orientalis</i> 'Aurea Nana' (Golden Biota)	Exotic conifer	1
<i>Quercus canariensis</i> (Algerian Oak)	Exotic deciduous	1
<i>Betula pendula</i> 'Dalecarlica' (Cut Leaf Birch)	Exotic deciduous	1
<i>Salix cinerea</i> (Grey Sallow)	Exotic deciduous	1
<i>Cupressus sempervirens</i> 'Swanes Golden' (Swane's Golden Pencil Pine)	Exotic conifer	1
<i>Ulmus glabra</i> 'Pendula' (Weeping Wych Elm)	Exotic deciduous	1
<i>Prunus cerasifera</i> 'Nigra' (Purple Leaf Cherry Plum)	Exotic deciduous	1
aff. <i>Eucalyptus ovata</i> (Swamp Gum)	Indigenous	1
<i>Liliodendron tulipifera</i> (Tulip Tree)	Exotic deciduous	1
<i>Acacia melanoxylon</i> (Blackwood)	Indigenous	2 groups (49 trees)
<i>Crataegus</i> sp. (Hawthorn)	Exotic deciduous	1 group (12 trees)

3.5 Tree health was assessed based on foliage colour, size and density as well as shoot initiation and elongation.

- The majority of individually assessed trees (42 trees) were displaying characteristics considered to be typical or better of the species growing in this environment under current conditions.
- Three (3) trees had Fair to poor health with tip dieback and/or reduced foliage density.
- Two (2) trees had Poor health with significant amounts of crown decline.

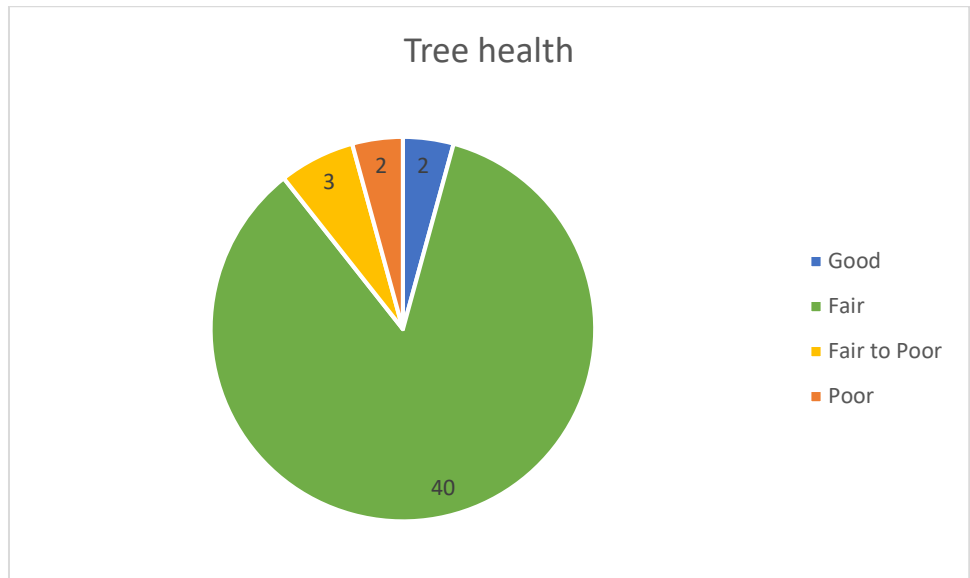


Figure 2. Tree health summary of individually assessed trees.

3.6 Tree structure was assessed for structural defects and deficiencies, likelihood of failures and risk to potential targets.

- Thirty-five (35) trees displayed Fair structure in terms of primary branching arrangement and architecture.
- Ten (10) trees had Fair to poor structure with minor deficiencies, wounds, past failures and crown asymmetry. Some of the deficiencies may be manageable with arboricultural input.
- Two (2) trees had Poor structure with significant past failures, trunk wounds, decay and insect damage.

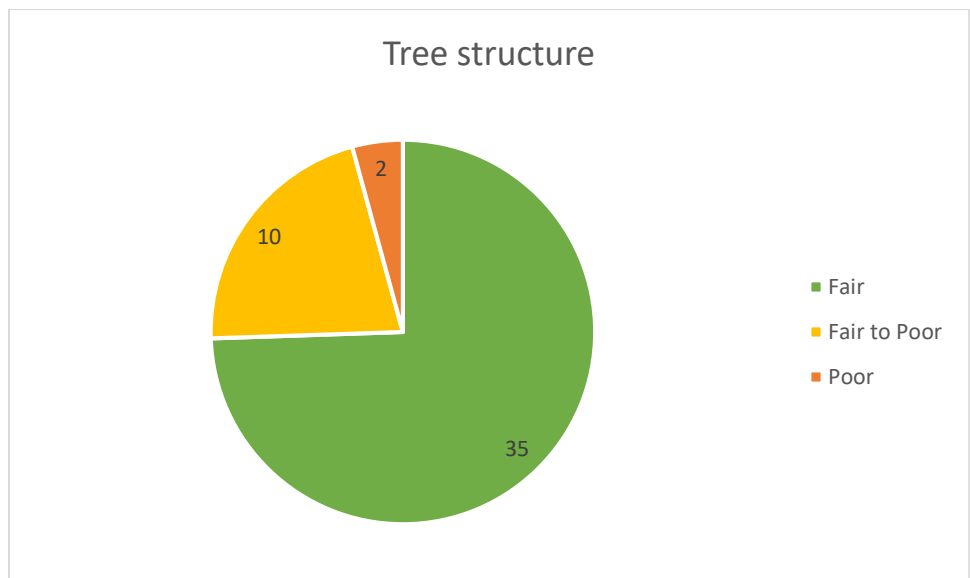


Figure 3. Tree structure summary of individually assessed trees.

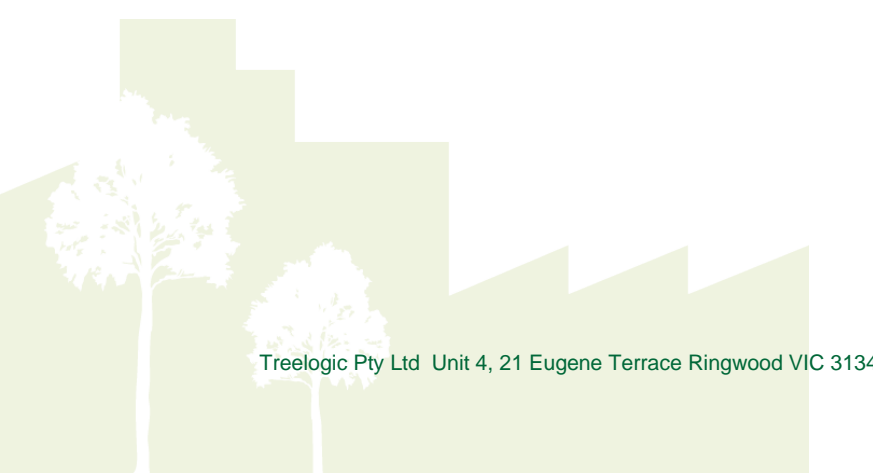
3.7 Each of the assessed trees was attributed an 'Arboricultural Rating'. The arboricultural rating correlates the combination of tree condition factors (health, structure & form) with tree amenity value. Amenity relates to the trees biological, functional and aesthetic characteristics within an urban landscape context and its ability to continue to provide these qualities into the medium to long term future. The arboricultural rating in combination with other factors can assist the project team and planners in nominating trees suitable for retention. It should be noted that the arboricultural rating is different to the conservation/ecological values placed on trees by other professions. Definitions of arboricultural ratings can be seen in Appendix 3.

Trees may be considered significant to the landscape because of their size, dominance within the site, presence within outlooks and general amenity in terms of shade, screen, foliage and flowers and historic, cultural or horticultural characteristics. The key to successful tree retention is to identify the trees that represent the best opportunity for retention and implement tree protection and design amendments before any site works commence.

Table 2 indicates the arboricultural ratings attributed to the assessed trees.

Table 2. *Arboricultural Ratings*

Rating		Total	Individual tree numbers
High		4	40, 41, 42, 43
Moderate	A	1	20
	B	19	1, 14, 15, 16, 17, 18, 21, 22, 23, 24, 25, 27, 28, 29, 30, 31, 32, 37, 38
	C	6	4, 5, 12, 13, 33, 36
Low		11 + 4 Groups	6, 7, 9, 10, 11, 19, 26, 34, 35, 39
Very low		2	2, 8



4 Photos



Image 1 (above) View looking southwest showing the hospital building relative to Tree 1, a Mod-B rated Weeping Wych Elm (left) and Tree 40, a High rated English Oak (right).

Image 2 (right top) View looking south showing Tree 2, a Low rated Tulip Tree.



Image 3 (above) View looking southwest showing Trees 43-40 (right to left), all High-rated English Oaks growing along Wedge Street.

Image 4 (right middle) View looking southeast showing Trees 14-18, all Mod-B rated European Ash, growing along Mill Street.



Image 5 (right bottom) View looking west showing the semi-mature Blackwoods growing in Group 4. The trees were indigenous to the area and were naturally occurring so would trigger permit requirement under 52.17, should they be removed.





Image 6 View looking southeast showing, relative to the hospital, the row of Ash Trees (Trees 22-32), the two oaks (Trees 20 and 21), and the two elms (Trees 6 and 7).



Image 7 View looking southwest showing Tree 9 (left), a Low rated *Malus* sp., and Group 1 (right), comprised of Low rated indigenous Blackwoods.



Image 8 View looking southeast showing Tree 20 (right) a Mod-A rated Algerian Oak and Tree 21 (left) a Mod-B rated English Oak.



Image 9 (above) View looking west showing some of the planted eucalypts growing on neighbouring land south of the property.



Image 10 (right) View looking south showing Tree 10, a Low-rated Narrow-leaved Black Peppermint growing on neighbouring land.

5 Tree protection zones

- 5.1 The Tree protection zones (TPZs) provided for each tree in the Tree Assessment Table in Appendix 1 and referred to in this statement, are calculated using the formula provided in the Australian Standard AS4970 where the Radial TPZ = Trunk diameter (DBH) measured at 1.4m above grade and multiplied by 12. TPZ distances are measured as a radius from the centre of the trunk at (or near) ground level. A TPZ should not be less than 2m nor greater than 15m. The method for calculating, applying and managing the tree protection zone is described in Appendix 4.
- 5.2 The TPZ forms an area around a tree or group of trees that addresses both the stability and growing requirements of a tree. Construction and worksite activities within the TPZ need to be determined to assess their impacts in order to preserve tree condition.
- 5.3 Minor encroachment, up to 10% of the TPZ area, is generally permissible provided encroachment is compensated for by recruitment of an equal area contiguous with the TPZ. Encroachment greater than 10% is considered major encroachment under AS4970 and is only permissible if it can be demonstrated that after such encroachment the tree would remain viable.
- 5.4 The structural root zone (SRZ) provided for each tree has been calculated using the method provided in AS4970. The SRZ is the area in which the larger woody roots required for tree stability are found close to the trunk and which then generally taper rapidly. This is the minimum area recommended to maintain tree stability but does not reflect the area required to sustain tree health. No works should occur within the SRZ radius as tree stability could be compromised.
- 5.5 See Appendix 4 for TPZ establishment and types of encroachment.

6 Tree permit requirements

- 6.1 The site falls within the Macedon Ranges Shire and is covered by Schedule 10 to the Neighbourhood Residential Zone (NRZ10). Within the schedule objectives is an encouragement to have landscaped front and rear gardens with mature vegetation, including canopy trees as well as retention of mature street trees.
- 6.2 The site is also covered by Schedule 4 to the Environmental Significance Overlay (ESO4).
- 6.2.1 Within the ESO is a permit requirement to remove destroy or lop any vegetation, including dead vegetation.
- All twenty-three (23) trees growing within the subject site would trigger permit requirement under this definition, although Tree 39, the Low-rated *Salix cinerea* is probably exempted as it is classified as a noxious weed in the state of Victoria. Additional exemptions may apply under fire protection.
- 6.2.2 One of the application requirements of ESO4 is to provide a plan indicating the location of native vegetation on site.

- Tree groups 1 and 3 both contained native Blackwoods (*Acacia melanoxylon*). Refer to Appendix 2 for a map indicating their location.
- 6.3 Clause 52.17 also applies to all indigenous trees within the study area. Tree Groups 1 and 3 both comprised mainly naturally occurring Blackwoods and would trigger permit requirement on this basis.
- 6.4 Two heritage overlays apply to or land adjacent to the site, HO220 and HO235.
- 6.4.1 HO220 applies directly to the subject site being the Kyneton District Hospital. No tree controls apply under this overlay.
- 6.4.2 HO235 applies to the street trees along Wedge Street (Trees 40-43 within this report).

7 Tree retention and general design comments

- 7.1 The pre-development arboricultural inspection report provides planners and designers with information on whether trees are worthy or unworthy of being a constraint on the site as well as providing tree protection requirements for retained trees. At the time of preparing this report, no plans were available for review.
- 7.2 In the absence of specific site design plans, it is not appropriate to speculate on which trees are most appropriate for retention, beyond the general guide provided by the arboricultural ratings attributed to each tree feature. Retention suitability will be dependent on the proposed landscape setting in which trees are intended to be retained. The following recommendations are provided for consideration in the design:
- 7.2.1 Moderate-rated trees are better candidates for retention with Moderate A trees offering the greatest benefits in terms of size and landscape amenity, while Moderate-C are generally of the lowest quality or size of the three Moderate categories. The condition of Moderate rated trees is such that, provided they are afforded appropriate space, protection and maintenance, they have the capacity to remain viable for many years.
- The row of Claret Ash (Trees 22-32), the two oaks (Trees 20 and 21), and the Weeping Wych Elm (Tree 1), presented the best, established tree resources for retention within the site.
- 7.2.2 Low and Very Low-rated trees were either small and could be replaced relatively easily, or they were in relatively poor condition and, therefore, they should not be a constraint on site development.
- 7.2.3 Any proposed removal of street trees must be negotiated with council. Any proposed works outside the subject site, including driveway crossovers, and footpaths, need to be negotiated with council to determine tree impacts and removal requirements. It should be noted that maturing street trees attain special mentioned with NRZ10, so there is expected to be reluctance from council to allow removal of any street tree, especially the High-rated oaks along Wedge Street, which are also protected under HO235.

- 7.2.4 All trees that are to be retained will require Tree Protection Zones to be established prior to commencing any works onsite including demolition, bulk earthworks, construction, landscaping activity, delivery and storage of materials or placement of site sheds. This also applies where TPZs of neighbouring trees extend into the subject site and may apply to street trees where in the vicinity of work activities. Tree protection guidelines are attached as Appendix 4.
- 7.2.5 The TPZ forms an area around a tree that addresses both the stability and growing requirements of the tree and is best preserved free of any impacts. Should any construction or works be proposed within the TPZs of trees to be retained, including trees on adjoining land, they need to be carefully assessed to determine if the trees could tolerate the impacts being proposed and remain viable.
- 7.2.6 The structural root zone (SRZ) provided for each tree has been calculated using the method provided in AS4970. The SRZ is the area in which the larger woody roots required for tree stability are found close to the trunk and which then generally taper rapidly. This is the minimum area recommended to maintain tree stability but does not reflect the area required to sustain tree health. No works should occur within the SRZ radius as tree stability could be compromised.

8 Conclusions

- 8.1 Forty-three (43) trees and four (4) tree groups were growing within the study area.
- 8.2 The trees within the subject site were mostly exotic deciduous trees that were either planted around the hospital grounds for amenity purposes or had self-sown naturally. Two groups of self-sown trees were indigenous to the area, while a large number were self-sown exotics, some of which were forming a weedy habit.
- 8.3 The trees on adjoining land were mostly natives that had been planted for amenity purposes, while the street trees were exotic deciduous avenue trees compromising maturing oaks and ash.
- 8.4 All trees were attributed an arboricultural rating that reflects their individual retention value.
- Four (4) oak street trees, growing on Wedge Street, were High rated and were all outstanding tree features.
 - Thirteen (13) trees within the subject site were either Mod.A or Mod.B rated. These included two maturing oaks (Trees 20 and 21), a Weeping Elm (Tree 1), and ten (10) early-mature to mature Claret Ash growing in a windrow centrally within the site. These trees present the best, established tree resources for retention within the site.
 - Two (2) trees within the subject site (Trees 4 and 5) were Mod.C rated. These were both small trees with limited amenity value, although they were in reasonable condition and could be retained as established tree features if desired.

- Ten (10) trees and four (4) tree groups within the subject site were Low rated, while two (2) trees were Very low rated. These trees were either small and relatively easy to replace or were in poor condition. Those Low-rated due to size (e.g. Trees 3, 9 and 35) could be retained if desired, while those in poor condition, such as the two maturing elms (Trees 6 and 7), are recommended for removal within a site redevelopment.

8.4.1 Refer to Table 2 in Section 3 and Appendix 1 for individual tree numbers.

8.5 The site is covered by an ESO within the shire of Macedon Ranges. Under the ESO, permit requirement is triggered for removal of any vegetation although exemptions may apply to some trees under fire protection or noxious weed categories (e.g. Tree 39). The native trees growing in Tree Groups 1 & 3 also trigger permit requirement under 52.17.

8.6 To successfully retain any trees, tree protection measures must be incorporated into the design and implemented prior to undertaking works on site and maintained for the duration of the development works. Recommended TPZ distances are provided in Appendix 1.

- All conditions of the tree protection guidelines attached as Appendix 4 are to be used for guidance and application during the site redevelopment.
- Existing soil grades must remain unaltered within any tree protection zone adopted on site. Trenching for installation of services or the placement of soil fill greater than 100mm must not occur within the recommended TPZ of any retained trees.
- All underground services including power, telecommunication, gas, water, drainage must be designed to avoid the nominal TPZ of any retained trees.
- Any encroachment greater than 10% of the recommended TPZ area is only permissible if it can be demonstrated that after such encroachment the tree would remain viable. This may require a non-destructive root investigation or similar.

I am available to answer any questions arising from this report.

No part of this report is to be reproduced unless in full.

Signed



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Appendix 1: Tree Assessment Table: Arb Report. 67 Simpson Street, Kyneton

Key: DBH = Diameter at breast height, 1.4m up trunk, unless otherwise indicated. ARB rating = arboricultural rating. Mod. = Moderate. TPZ = Tree protection zone radius in metres. SRZ = Structural root zone radius in metres. Definition of the descriptor categories used in the assessment can be seen in Appendix 3.

Tree ID	Species (Common name)	Type	Age	DBH (cm)	HxW (m)	Health	Structure	Arb. rating	ULE (years)	Comment	TPZ (m radius)	SRZ (m radius)
1	<i>Ulmus glabra</i> 'Pendula' (Weeping Wych Elm)	Maturing	Exotic deciduous	40	6x7	Fair	Fair	Mod.B	21-40 y	Elm leaf beetle	4.8	2.4
2	<i>Liliodendron tulipifera</i> (Tulip Tree)	Maturing	Exotic deciduous	50	13x9	Poor	Fair to Poor	Very Low	1-5 y	In irreversible decline; ivy on trunk; Main leader dead	6	2.7
3	<i>Thuja orientalis</i> 'Aurea Nana' (Golden Biota)	Maturing	Exotic conifer	25	3x2	Fair	Fair	Low	11-20 y	shrub	3	1.8
4	<i>Betula pendula</i> 'Dalecarlica' (Cut Leaf Birch)	Maturing	Exotic deciduous	17	4x5	Fair	Fair to Poor	Mod.C	11-20 y	lopped form	2	1.8
5	<i>Cupressus sempervirens</i> 'Swanes Golden' (Swane's Golden Pencil Pine)	Maturing	Exotic conifer	30	7x2	Fair	Fair	Mod.C	11-20 y	trunk obscured	3.6	2.1
6	<i>Ulmus procera</i> (English Elm)	Over-mature	Exotic deciduous	120	16x16	Fair to Poor	Fair to Poor	Low	6-10 y	Co-dominant stems; Crossing branches; Deadwood >50mm; Declining; suckering profusely. secondary leaders dead. Elm leaf beetle.	14.4	3.7
7	<i>Ulmus procera</i> (English Elm)	Over-mature	Exotic deciduous	98	16x14	Fair to Poor	Fair to Poor	Low	6-10 y	Declining; Previous failures; suckering profusely. codependent crowns. Elm leaf beetle.	11.8	3.4
8	Unknown evergreen shrub (Unknown)	Maturing	Unknown evergreen	2,2,2, 2,2	2x2	Fair	Fair	Very Low	6-10 y	shrub	2	1.5
9	<i>Malus sp.</i> (Apple)	Maturing	Exotic deciduous	6,6.5, 5,4	4x5	Fair	Fair	Low	11-20 y		2	1.8

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Tree ID	Species (Common name)	Type	Age	DBH (cm)	HxW (m)	Health	Structure	Arb. rating	ULE (years)	Comment	TPZ (m radius)	SRZ (m radius)
10	<i>Eucalyptus nicholii</i> (Narrow-leaved Black Peppermint)	Semi-mature	Australian native	25,23	7x5	Fair	Poor	Low	11-20 y	Neighbours tree. Included bark forks; crown overhanging subject site by 2m	4.1	2.1
11	<i>Eucalyptus</i> sp. (Gum Tree)	Semi-mature	Australian native	13	6x3	Fair to Poor	Fair to Poor	Low	6-10 y	Neighbours tree	2	1.6
12	<i>Eucalyptus viminalis</i> (Manna Gum)	Semi-mature	Planted Indigenous	21	6x5	Fair	Fair	Mod.C	21-40 y	Acute forks. Neighbours tree	2.5	1.8
13	<i>Eucalyptus viminalis</i> (Manna Gum)	Semi-mature	Planted Indigenous	12,12	7x5	Fair	Fair	Mod.C	21-40 y	Neighbours tree	2	1.8
14	<i>Fraxinus excelsior</i> (European Ash)	Maturing	Exotic deciduous	42	9x11	Fair	Fair	Mod.B	11-20 y	Past powerline clearance. Street tree	5	2.5
15	<i>Fraxinus excelsior</i> (European Ash)	Maturing	Exotic deciduous	43	8x11	Fair	Fair	Mod.B	11-20 y	Past powerline clearance. Street tree	5.2	2.4
16	<i>Fraxinus excelsior</i> (European Ash)	Maturing	Exotic deciduous	40	8x11	Fair	Fair	Mod.B	11-20 y	Street tree	4.8	2.4
17	<i>Fraxinus excelsior</i> (European Ash)	Maturing	Exotic deciduous	44	9x12	Fair	Fair	Mod.B	11-20 y	Street tree	5.3	2.5
18	<i>Fraxinus excelsior</i> (European Ash)	Maturing	Exotic deciduous	38	9x12	Fair	Fair	Mod.B	11-20 y	Street tree	4.6	2.3
19	<i>Prunus cerasifera</i> 'Nigra' (Purple Leaf Cherry Plum)	Maturing	Exotic deciduous	6,6,6,6,6	5x6	Fair	Fair	Low	11-20 y	Street tree	2	2.1
20	<i>Quercus canariensis</i> (Algerian Oak)	Maturing	Exotic deciduous	59	13x12	Fair	Fair	Mod.A	21-40 y	Suckering	7.1	2.8

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Tree ID	Species (Common name)	Type	Age	DBH (cm)	HxW (m)	Health	Structure	Arb. rating	ULE (years)	Comment	TPZ (m radius)	SRZ (m radius)
21	<i>Quercus robur</i> (English Oak)	Maturing	Exotic deciduous	62	13x16	Fair	Fair to Poor	Mod.B	11-20 y	Past powerline clearance; Suckering; crown disfigured by powerline clearance.	7.4	2.8
22	<i>Fraxinus</i> 'Raywood' (Claret Ash)	Maturing	Exotic deciduous	49	10x13	Fair	Fair	Mod.B	11-20 y	Deadwood; basal shoots	5.9	2.6
23	<i>Fraxinus</i> 'Raywood' (Claret Ash)	Maturing	Exotic deciduous	58	11x13	Fair	Fair	Mod.B	11-20 y		7	2.8
24	<i>Fraxinus</i> 'Raywood' (Claret Ash)	Maturing	Exotic deciduous	67	11x14	Fair	Fair	Mod.B	11-20 y		8	3
25	<i>Fraxinus</i> 'Raywood' (Claret Ash)	Maturing	Exotic deciduous	61	11x13	Fair	Fair	Mod.B	11-20 y		7.3	2.8
26	<i>Fraxinus</i> 'Raywood' (Claret Ash)	Maturing	Exotic deciduous	74	12x14	Poor	Fair	Low	6-10 y	Deadwood >50mm; Declining	8.9	3.1
27	<i>Fraxinus</i> 'Raywood' (Claret Ash)	Maturing	Exotic deciduous	75	12x14	Fair	Fair to Poor	Mod.B	11-20 y	Previous failures; Suckering	9	3.1
28	<i>Fraxinus</i> 'Raywood' (Claret Ash)	Early-mature	Exotic deciduous	25	8x8	Fair	Fair	Mod.B	21-40 y	Past stem failure	3	2.1
29	<i>Fraxinus</i> 'Raywood' (Claret Ash)	Early-mature	Exotic deciduous	38	8x8	Fair	Fair	Mod.B	21-40 y		4.6	2.4
30	<i>Fraxinus</i> 'Raywood' (Claret Ash)	Early-mature	Exotic deciduous	42	8x8	Fair	Fair	Mod.B	21-40 y		5	2.5

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Tree ID	Species (Common name)	Type	Age	DBH (cm)	HxW (m)	Health	Structure	Arb. rating	ULE (years)	Comment	TPZ (m radius)	SRZ (m radius)
31	<i>Fraxinus</i> 'Raywood' (Claret Ash)	Early-mature	Exotic deciduous	29,18	8x8	Fair	Fair	Mod.B	21-40 y		4.1	2.1
32	<i>Fraxinus</i> 'Raywood' (Claret Ash)	Early-mature	Exotic deciduous	36	8x8	Fair	Fair	Mod.B	21-40 y		4.3	2.3
33	<i>Eucalyptus botryoides</i> (Southern Mahogany)	Maturing	Victorian native	38,38, 29,25, 25	11x13	Good	Fair to Poor	Mod.C	11-20 y	Neighbours tree. Previous failures; crown overhanging subject site by 5m. Low crown height 5m	8.5	3.4
34	<i>Eucalyptus botryoides</i> (Southern Mahogany)	Semi-mature	Victorian native	17.7	6x5	Fair	Poor	Low	6-10 y	Neighbours tree. stump resprout	2	3.1
35	<i>Malus</i> sp. (Apple)	Maturing	Exotic deciduous	14	5x6	Good	Fair	Low	11-20 y	self sown. stem within property.	2	1.6
36	<i>Eucalyptus nicholii</i> (Narrow-leaved Black Peppermint)	Maturing	Australian native	43,27, 27	14x13	Fair	Fair to Poor	Mod.C	11-20 y	Neighbours tree. Congested primary union; Past stem failure; crown overhanging subject site 5m. Low crown height 1m.	6.9	3.1
37	aff. <i>Eucalyptus ovata</i> (Swamp Gum)	Maturing	Indigenous	65	15x15	Fair	Fair	Mod.B	11-20 y	Neighbours tree. Bracket fungi; Trunk wounds	7.8	3.2
38	<i>Eucalyptus nicholii</i> (Narrow-leaved Black Peppermint)	Maturing	Australian native	40	12x8	Fair	Fair	Mod.B	21-40 y	Neighbour's tree. 1.2m to fenceline	4.8	2.5
39	<i>Salix cinerea</i> (Grey Sallow)	Maturing	Exotic deciduous	15,14, 12,12, 10	5x10	Fair	Fair	Low	11-20 y	Neighbour's tree. Weed species.	3.4	2.5

Appendix 1: Tree Assessment Table: Arb Report. 67 Simpson Street, Kyneton

Key: DBH = Diameter at breast height, 1.4m up trunk, unless otherwise indicated. ARB rating = arboricultural rating. Mod. = Moderate. TPZ = Tree protection zone radius in metres. SRZ = Structural root zone radius in metres. Definition of the descriptor categories used in the assessment can be seen in Appendix 3.

Tree ID	Species (Common name)	Type	Age	DBH (cm)	HxW (m)	Health	Structure	Arb. rating	ULE (years)	Comment	TPZ (m radius)	SRZ (m radius)
40	<i>Quercus robur</i> (English Oak)	Maturing	Exotic deciduous	80	12x16	Fair	Fair	High	21-40 y	Street tree	9.6	3.2
41	<i>Quercus robur</i> (English Oak)	Maturing	Exotic deciduous	82	13x18	Fair	Fair	High	21-40 y	Street tree	9.8	3.3
42	<i>Quercus robur</i> (English Oak)	Maturing	Exotic deciduous	84	14x19	Fair	Fair	High	21-40 y	Street tree	10.1	3.3
43	<i>Quercus robur</i> (English Oak)	Maturing	Exotic deciduous	84	12x19	Fair	Fair	High	21-40 y	Street tree	10.1	3.3
Tree group 1	<i>Acacia melanoxylon</i> (Blackwood)	Semi-mature	Indigenous	AVG: 7	AVG: 5x2	Fair	Fair	Low	11-20 y	40 stems	2	1.5
Tree group 2	<i>Crataegus</i> sp. (Hawthorn)	Maturing	Exotic deciduous	AVG: 6,6,6,6,6	AVG: 4x4	Fair	Fair	Low	11-20 y	12 stems	2	1.5
Tree group 3	<i>Acacia melanoxylon</i> (Blackwood)	Semi-mature	Indigenous	AVG: 4,4,4,4,4	AVG: 4x3	Fair	Fair to Poor	Low	11-20 y	9 stems	2	1.5
Tree group 4	<i>Malus</i> sp. (Apple)	Early-mature	Exotic deciduous	AVG: 4,4,4,4,4	AVG: 3x4	Fair	Fair	Low	11-20 y	6 stems	2	1.5



- LEGEND**
- Trees
- High
 - Mod-A
 - Mod-B
 - Mod-C
 - Low
 - Very Low
- TPZs
- TPZ
- Tree Groups
- Low
- Survey plan
- Surveyed tree
 - Property boundary

APPENDIX 2
TREE LOCATIONS
AND PROTECTION
ZONES

PROJECT
 67 Simpson Street, Kyneton

TL REF. 010439
 MAP NO. 1/1
 CLIENT Embradia
 DATE 2020-01-06

DATA SOURCES
 Survey undertaken by Hellier
 McFarland, Ref No. 120745/1, dated
 23.10.2019

COORDINATE REFERENCE SYSTEM
 EPSG:28355 | GDA 94 MGA Zone 55



TREELOGIC PTY LTD 4/21 Eugene Terrace
 Ringwood, VIC
 TEL: 1300 666 826



Appendix 3 - Arboricultural Descriptors (February 2019)

Note that not all of the described tree descriptors may be used in a tree assessment and report. The assessment is undertaken with regard to contemporary arboricultural practices and consists of a visual inspection of external and above-ground tree parts.

1. Tree Condition

The assessment of tree condition evaluates factors of health and structure. The descriptors of health and structure attributed to a tree evaluate the individual specimen to what could be considered typical for that species growing in its location under current climatic conditions. For example, some species can display inherently poor branching architecture, such as multiple acute branch attachments with included bark. Whilst these structural defects may technically be considered arboriculturally poor, they are typical for the species and may not constitute an increased risk of failure. These trees may be assigned a structural rating of fair-poor (rather than poor) at the discretion of the assessor.

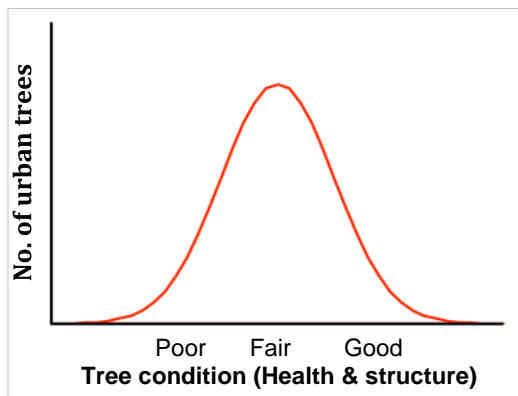


Diagram 1: Indicative normal distribution curve for tree condition

Diagram 1, provides an indicative distribution curve for tree condition to illustrate that within a normal tree population the majority of specimens are centrally located within the condition range (normal distribution curve). Furthermore, that those individual trees with an assessed condition approaching the outer ends of the spectrum occur less often.

2. Tree Name

Provides botanical name, (genus, species, variety and cultivar) according to accepted international code of taxonomic classification, and common name.

3. Tree Type

Describes the general geographic origin of the species and its type e.g. deciduous or evergreen.

Category	Description
Indigenous	Occurs naturally in the area or region of the subject site. Remnant.
Victorian native	Occurs naturally within some part of the State of Victoria (not exclusively) but is not indigenous (component of EVC benchmark). Could be planted indigenous trees.
Australian native	Occurs naturally within Australia but is not a Victorian native or indigenous
Exotic deciduous	Occurs outside of Australia and typically sheds its leaves during winter
Exotic evergreen	Occurs outside of Australia and typically holds its leaves all year round
Exotic conifer	Occurs outside of Australia and is classified as a gymnosperm
Native conifer	Occurs naturally within Australia and is classified as a gymnosperm
Native Palm	Occurs naturally within Australia. Woody monocotyledon
Exotic Palm	Occurs outside of Australia. Woody monocotyledon

4. Height and Width

Indicates height and width of the individual tree; dimensions are expressed in metres. Crown heights are measured with a height meter where possible. Due to the topography of some sites and/or the density of vegetation it may not be possible to do this for every tree. Tree heights may be estimated in line with previous height meter readings in conjunction with assessor's experience. Crown widths are generally paced (estimated) at the widest axis or can be measured on two axes and averaged. In some instances the crown width can be measured on the four cardinal direction points (North, South, East and West).

Crown height, crown spread are generally recorded to the nearest half metre (crown spread would be rounded up) for dimensions up to 10 m and the nearest whole metre for dimensions over 10 m. Estimated dimensions (e.g. for off-site or otherwise inaccessible trees where accurate data cannot be recovered) shall be clearly identified in the assessment data.

5. Trunk diameters

The position where trunk diameters are captured may vary dependent on the requirements of the specific assessment and an individual trees specific characteristics. DBH is the typical trunk diameter captured as it relates to the allocation of tree protection distances. The basal trunk diameter assists in the allocation of a structural root zone. Some municipalities require trunk diameters be captured at different heights, with 1.0 m above grade being a common requirement. The specific planning schemes will be checked to ascertain requirements.

Stem diameters shall be recorded in centimetres, rounded to the nearest 1 cm (0.01 m).

Diameter at Breast Height (DBH)

Indicates the trunk diameter (expressed in centimetres) of an individual tree measured at 1.4m above the existing ground level or where otherwise indicated, multiple leaders are measured individually. Plants with multiple leader habit may be measured at the base. The range of methods to suit particular trunk shapes, configurations and site conditions can be seen in Appendix A of Australian Standard AS 4970-2009 *Protection of trees on development sites*. Measurements undertaken using foresters tape or builders tape.

Basal trunk diameter

The basal dimension is the trunk diameter measured at the base of the trunk or main stem(s) immediately above the root buttress. Used to ascertain the Structural Root Zone (SRZ) as outlined in AS4970.

6. Health

Assesses various attributes to describe the overall health and vitality of the tree.

Category	Vitality, Extension growth	Decline symptoms, Deadwood, Dieback	Foliage density, colour, size, intactness	Pests and or disease
Good	Above typical. Excellent. Full canopy density	Negligible	Better than typical	Negligible
Fair	Typical vitality. >80% canopy density	Minor or expected. Little or no dead wood	Typical. Minor deficiencies or defects could be present.	Minor, within damage thresholds
Fair to Poor	Below typical - low vitality	More than typical. Small sub-branch dieback	Exhibiting deficiencies. Could be thinning, or smaller	Exceeds damage thresholds
Poor	Minimal - declining	Excessive, large and/or prominent amount & size of dead wood. Significant dieback	Exhibiting severe deficiencies. Thinning foliage, generally smaller or deformed	Extreme and contributing to decline
Dead	N/A	N/A	N/A	N/A

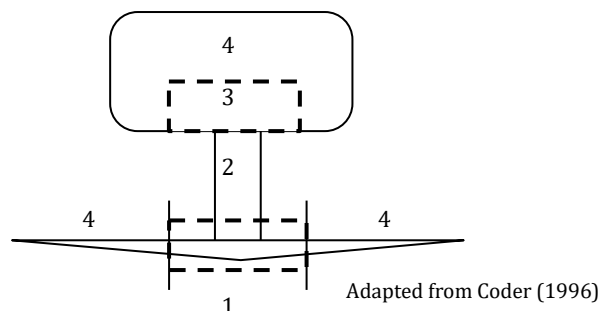
7. Structure

Assesses principal components of tree structure (Diagram 2).

Descriptor	Zone 1 - Root plate & lower stem	Zone 2 - Trunk	Zone 3 - Primary branch support	Zone 4 - Outer crown and roots
Good	No obvious damage, disease or decay; obvious basal flare / stable in ground	No obvious damage, disease or decay; well tapered	Well formed, attached, spaced and tapered. No history of failure.	No obvious damage, disease, decay or structural defect. No history of failure.
Fair	Minor damage or decay. Basal flare present.	Minor damage or decay	Generally, well attached, spaced and tapered branches. Minor structural deficiencies may be present or developing. No history of branch failure.	Minor damage, disease or decay; minor branch end-weight or over-extension. No history of branch failure.
Fair to Poor	Moderate damage or decay; minimal basal flare.	Moderate damage or decay; approaching recognised thresholds	Weak, decayed or with acute branch attachments; previous branch failure evidence.	Moderate damage, disease or decay; moderate branch end-weight or over-extension. Minor branch failure evident.
Poor	Major damage, disease or decay; fungal fruiting bodies present. Excessive lean placing pressure on root plate	Major damage, disease or decay; exceeds recognised thresholds; fungal fruiting bodies present. Acute lean. Stump re-sprout	Decayed, cavities or has acute branch attachments with included bark; excessive compression flaring; failure likely. Evidence of major branch failure.	Major damage, disease or decay; fungal fruiting bodies present; major branch end-weight or over-extension. Branch failure evident.
Very Poor	Excessive damage, disease or decay; unstable / loose in ground; altered exposure; failure probable	Excessive damage, disease or decay; cavities. Excessive lean. Stump re-sprout	Decayed, cavities or branch attachments with active split; failure imminent. History of major branch failure.	Excessive damage, disease or decay; excessive branch end-weight or over-extension. History of branch failure.

Diagram 2: Tree structure zones

1. Root plate & lower stem
2. Trunk
3. Primary branch support
4. Outer crown & roots



Structure ratings will also take into account general branching architecture, stem taper, live crown ratio, crown symmetry (bias or lean) and crown position such as tree being suppressed amongst more dominant trees.

The lowest or worst descriptor assigned to the tree in any column could generally be the overall rating assigned to the tree. The assessment for structure is limited to observations of external and above ground tree parts. It does not include any exploratory assessment of underground or internal tree parts unless this is requested as part of the investigation. Trees are assessed and then given a rating for a point in time. Generally, trees with a poor or very poor structure are beyond the benefit of practical arboricultural treatments.

The management of trees in the urban environment requires appropriate arboricultural input and consideration of risk. Risk potential will consider the combination of likelihood of failure and impact, including the perceived importance of the target(s).

8. Age class

Relates to the physiological stage of the tree's life cycle.

Category	Description
Young	Sapling tree and/or recently planted. Approximately 5 or less years in location.

Category	Description
Semi-mature	Tree increasing in size and yet to achieve expected size in situation. Primary developmental stage.
Early-mature	Tree established, generally growing vigorously. > 50% of attainable age/size.
Mature	Specimen approaching expected size in situation, with reduced incremental growth.
Over-mature	Mature full-size with a retrenching crown. Tree is senescent and in decline. Significant decay generally present.

9. Useful life expectancy

Assessment of useful life expectancy provides an indication of health and tree appropriateness and involves an estimate of how long a tree is likely to remain in the landscape based on species, stage of life (cycle), health, amenity, environmental services contribution, conflicts with adjacent infrastructure and risk to the community. It would enable tree managers to develop long-term plans for the eventual removal and replacement of existing trees in the public realm. It is not a measure of the biological life of the tree within the natural range of the species. It is more a measure of the health status and the trees positive contribution to the urban landscape.

Within an urban landscape context, particularly in relation to street trees, it could be considered a point where the costs to maintain the asset (tree) outweigh the benefits the tree is returning.

The assessment is based on the site conditions not being significantly altered and that any prescribed maintenance works are carried out (site conditions are presumed to remain relatively constant and the tree would be maintained under scheduled maintenance programs).

Useful Life Expectancy	Typical characteristics
<1 year (No remaining ULE)	Tree may be dead or mostly dead. Tree may exhibit major structural faults. Tree may be an imminent failure hazard. Excessive infrastructure damage with high risk potential that cannot be remedied.
1-5 years (Transitory, Brief)	Tree is exhibiting severe chronic decline. Crown is likely to be less than 50% typical density. Crown may be mostly epicormic growth. Dieback of large limbs is common (large deadwood may have been pruned out). Major structural defects that cannot be remedied. Tree may be over-mature and senescing. Infrastructure conflicts with heightened risk potential. Tree has outgrown site constraints.
6-10 years (Short)	Tree is exhibiting chronic decline. Crown density will be less than typical and epicormic growth is likely to present. The crown may still be mostly entire, but some dieback is likely to be evident. Dieback may include large limbs. Structural defects present that influence the tree's risk rating, amenity or vitality. Over-mature and senescing or early decline symptoms in short-lived species. Early infrastructure conflicts with potential to increase regardless of management inputs.
11-20 years (Moderate)	Tree not showing symptoms of chronic decline, but growth characteristics are likely to be reduced (bud development, extension growth etc.). Developing structural defects that reduce viability with limited scope for management. Tree may be over-mature and beginning to senesce. Potential for infrastructure conflicts regardless of management inputs.
21-40 years (Moderately long)	Trees displaying normal growth characteristics, but vitality is likely to be reduced (bud development, extension growth etc.). Structural issues relatively minor and manageable with arboricultural input. Tree may be growing in restricted environment (e.g. streetscapes) or may be in late maturity. Semi-mature and mature trees exhibiting normal growth characteristics. Juvenile trees in streetscapes.
>40 years (Long)	Generally juvenile and semi-mature trees exhibiting normal growth characteristics within adequate spaces to sustain growth, such as in parks or open space. Could also pertain to maturing, long-lived trees. No observable major structural defects. Tree well suited to the site with negligible potential for infrastructure conflicts.

Note that ULE may change for a tree dependent on the prevailing climatic conditions, sudden changes to a tree's growing environment creating an acute stress or impact by pathogens.

The ULE may not be applicable for trees that are manipulated, such as topiary, or grown for specific horticultural purposes, such as fruit trees.

There may be instances where remedial tree maintenance could extend a tree's ULE.

10. Arboricultural Rating

Relates to the combination of assigned tree condition factors, including health and structure (arboricultural merit) and ULE, and conveys an amenity value (An amenity tree can occupy a site that complements its surroundings in a useful manner which culminates in the aid, protection, comfort and emotional response of humans. Adapted from Coder, 2004). Amenity relates to the trees biological, functional and aesthetic characteristics (Hitchmough, 1994) within an urban landscape context. The presence of any serious disease or tree-related hazards that would impact risk potential are considered.

The arboricultural rating can be used by applying only the main category high, moderate, low or very low without using the sub categories. The sub-categories can assist in differentiating a trees value and/or characteristic in more detail within the specific tree assessment context, such as a development site.

Arboricultural rating			
<i>Category</i>	<i>Description</i>		
High	Exemplary specimen due to multiple factors which could include; good condition and vitality, large size/canopy and prominence in the landscape. Likely to be a very long-term component in the landscape with a long ULE. Other factors that could contribute to a high rating: <ul style="list-style-type: none"> • Particularly good example of the species; rare or uncommon. • Tree has visual importance as a landscape feature; provides substantial contribution to landscape character. • Tree may have significant ecological or conservation value. • *Tree has historical, commemorative or other distinct social/cultural significance. Trees in this category must be considered for retention and/or incorporated within design proposals.		
<i>Category</i>	<i>Description</i>	<i>Sub category</i>	<i>Description</i>
Moderate	Tree of moderate quality, in fair or typical condition. Tree may have a condition, and or structural problem that will respond to arboricultural treatment. These trees have the potential to be moderate- to long-term components of the landscape (moderate to long ULE) if managed appropriately. The sub-categories relate predominately to age, size and amenity. Trees in this category should be considered for retention and/or incorporated within design proposals.	A	Moderate to large, maturing tree. Suited to the site & contributes to the landscape character. Tree may have conservation or other cultural/social value.
		B	Moderate sized, established tree, > 50% of attainable age/size. Suited to the site & contributes to the landscape character (other attributes covered under 'Moderate' description)
		C	<ul style="list-style-type: none"> • Young to semi-mature, generally a smaller tree, established, >15 cm DBH, >5 years in the location. Not a dominant canopy. No significant qualities currently but has the potential to become a higher value tree & long-term component of the landscape. Replacement of tree is likely to take up to 6 - 10 years to attain similar attributes. • Semi- to mature tree with accumulating deficiencies and reducing ULE, trending towards Low arboricultural value.
<i>Category</i>	<i>Description</i>		
Low	Unremarkable tree of low quality or little amenity value. Tree in either poor health and/or with poor structure. Short to transitory useful life expectancy (<10 years). <ul style="list-style-type: none"> • Tree is not prominent in the landscape due to its size or age, such as young trees with a stem diameter below 15 cm. Tree < 5 years in location. These trees are easily replaceable or capable of being transplanted. • Tree (species) is functionally inappropriate to the specific location. Is causing excessive damage/nuisance to adjacent infrastructure or would be expected to be problematic if retained (i.e. palm tree under power lines). 		

	<ul style="list-style-type: none"> • Unremarkable tree of no material landscape, conservation or other cultural value. Not visible from surrounding landscapes. • Tree infected with pathogens that could lead to its decline. • Tree has potential to be an environmental woody weed (may be dependent on location of tree in an urban landscape). • Tree impacting or suppressing trees of better quality. <p>Retention of such trees may be considered if not requiring a disproportionate expenditure of resources for a tree in its condition and location.</p>
<i>Category</i>	<i>Description</i>
Very low	<p>Trees of low quality with a brief to no remaining ULE (<5 years).</p> <ul style="list-style-type: none"> • Tree has either a severe structural defect or health problem or combination that cannot be sustained with practical arboricultural techniques and the loss of the tree or tree part would be expected in the short term. • Tree whose retention would not be viable after the removal of adjacent trees, such as trees that have developed in close spaced groups and would not be expected to adapt to severe and sudden alterations to environmental & site conditions, e.g. removal of adjacent shelter trees. • Small or young tree, <5m in height, <10cm DBH. Easily replaced in short-term or capable of being transplanted. • Acknowledged environmental woody weed species. Tree has a detrimental effect on the environment, for example, the tree has weed potential and is likely to spread into waterways or natural areas if nearby. • Tree infected with pathogens that will lead to decline and has potential to spread to adjacent trees. • Tree is dead (dead tree may offer habitat values) or is showing signs of significant, immediate, and irreversible overall decline. <p>Tree cannot realistically be retained and should be considered for removal.</p>

Other considerations - Even though a tree may be declining or dead, a tree could be retained for other purposes such as habitat or soil stabilisation. These trees would still need to be managed appropriately to reduce risk.

*A tree may have (attract) a high value by the community for historical, commemorative or other distinct social/cultural significance factors, albeit the tree may not be in good condition. In the context of an assessment, for multiple reasons, but more so for development, if it is a noted 'significant' tree it should receive higher consideration during the planning process.

Trees have many values, not all of which are considered when an arboricultural assessment is undertaken. However, individual trees or tree group features may be considered important community resources because of unique or noteworthy characteristics or values other than their age, dimensions, health or structural condition. Recognition of one or more of the following criteria is designed to highlight other considerations that may influence the future management of such trees.

Significance	Description
Horticultural Value/ Rarity	Outstanding horticultural or genetic value; could be an important source of propagating stock, including specimens that are particularly resistant to disease or exposure. Any tree of a species or variety that is rare.
Historic, Aboriginal Cultural or Heritage Value	<p>Tree could have value as a remnant of a particular important historical period or a remnant of a site or activity no longer in action. Tree has a recognised association with historic aboriginal activities, including scar trees.</p> <p>Tree commemorates a particular occasion, including plantings by notable people, or having associations with an important event in local history.</p>
Ecological Value	<p>Tree could have value as habitat for indigenous wildlife, including providing breeding, foraging or roosting habitat, or is a component of a wildlife reserve.</p> <p>Remnant Indigenous vegetation that contribute to biological diversity</p>

Bibliography:

Coder, K D. (1996) Construction damage assessments: trees and sites, University of Georgia, USA

Coder, K. D. (2004). Amenity trees: Defining Concepts in Use. University of Georgia. Warnell School of Forest Resources, Publication SFR04-4. May 2004

Hitchmough, J.D. (1994) Urban landscape management, Inkata Press, Australia

Gooding, R.F., Ingram, J.B., Urban, J.R., Bloch, L.B., Steigerwaldt, W.M, Harris, R.W. and Allen, E.N. (2000) Guide for plant appraisal, 9th edition, International society of Arboriculture, USA

Pollard, A. H. (1974) Introductory statistics: a service course, Pergamon Press Australia, Australia.

Standards Australia (2009) Australian Standard AS 4970-2009 Protection of trees on development sites.

Appendix 4: Tree protection zones

Introduction

In order to sustain trees on a development site consideration must be given to the establishment of tree protection zones.

The physical dimensions of tree protection zones can sometimes be difficult to define. The projection of a tree's crown can provide a guide but is by no means the definitive measure. The unpredictable nature of roots and their growth, differences between species and their tolerances, and observable and hidden changes to the trees growing environment, as a result of development, are variables that must be considered.

Most vigorous, broad canopied trees survive well if the area within the drip-line of the canopy is protected. Fine root density is usually greater beneath the canopy than beyond (Gilman, 1997). If few to no roots over 3cm in diameter are encountered and severed during excavation the tree will probably tolerate the impact and root loss. A healthy tree can sustain a loss of between 30% and 50% of absorbing roots (Harris, Clark, Matheny, 1999), however encroachment into the structural root system of a tree may be problematic.

The structural root system of a tree is responsible for ensuring the stability of the entire tree structure in the ground. A tree could not sustain loss of structural root system and be expected to survive let alone stand up to average annual wind loads upon the crown.

Allocation of tree protection zone (TPZ)

The method of allocating a TPZ to a particular tree will be influenced by site factors, the tree species, its age and developed form.

Once it has been established, through an arboricultural assessment, which trees and tree groups are to be retained, the next step will require careful management through the development process to minimise any impacts on the designated trees. The successful retention of trees on any particular site will require the commitment and understanding of all parties involved in the development process. The most important activity, after determining the trees that will be retained is the implementation of a TPZ.

The intention of tree protection zones is to:

- mitigate tree hazards;
- provide adequate root space to sustain the health and aesthetics of the tree into the future;
- minimise changes to the trees growing environment, which is particularly important for mature specimens;
- minimise physical damage to the root system, canopy and trunk; and
- define the physical alignment of the tree protection fencing

Tree protection

The most important consideration for the successful retention of trees is to allow appropriate above and below ground space for the trees to continue to grow. This requires the allocation of tree protection zones for retained trees.

The Australian Standard AS 4970-2009 Protection of trees on development sites has been used as a guide in the allocation of TPZs for the assessed trees. The TPZ for individual trees is calculated based on trunk (stem) diameter (DBH), measured at 1.4 metres up from ground level. The radius of

the TPZ is calculated by multiplying the trees DBH by 12. The method provides a TPZ that addresses both the stability and growing requirements of a tree. TPZ distances are measured as a radius from the centre of the trunk at (or near) ground level. The minimum TPZ should be no less than 2m and the maximum no more than 15m radius. The TPZ of palms should be not less than 1.0m outside the crown projection.

Encroachment into the TPZ is permissible under certain circumstances though is dependent on both site conditions and tree characteristics. Minor encroachment, up to 10% of the TPZ, is generally permissible provided encroachment is compensated for by recruitment of an equal area contiguous with the TPZ. Examples are provided in Diagram 1. Encroachment greater than 10% is considered major encroachment under AS4970-2009 and is only permissible if it can be demonstrated that after such encroachment the tree would remain viable.

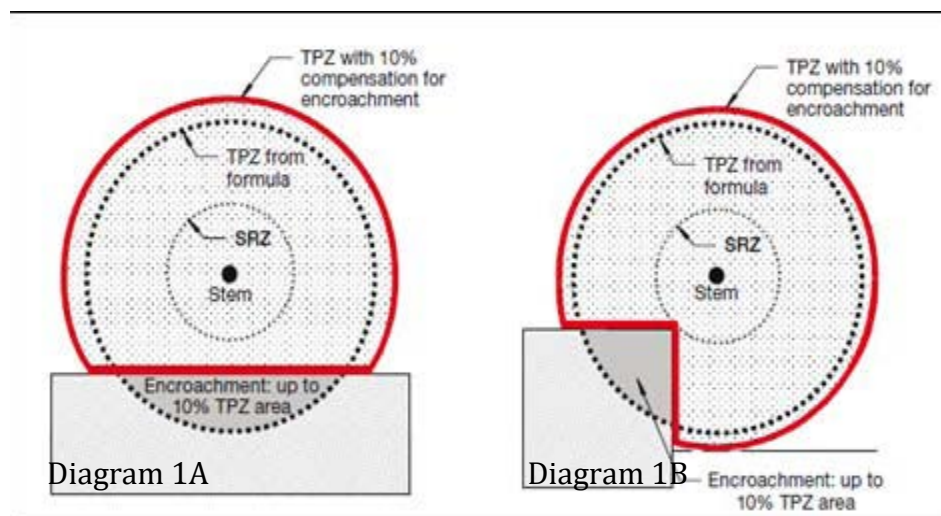


Diagram 1: Examples of minor encroachment into a TPZ.
(Extract from: AS4970-2009, Appendix D, p30 of 32)

The 10% encroachment on one side equates to approximately $\frac{1}{3}$ radial distance. Tree root growth is opportunistic and occurs where the essentials to life (primarily air and water) are present. Heterogeneous soil conditions, existing barriers, hard surfaces and buildings may have inhibited the development of a symmetrically radiating root system.

Existing infrastructure around some trees may be within the TPZ or root plate radius. The roots of some trees may have grown in response to the site conditions and therefore if existing hard surfaces and building alignments are utilised in new designs the impacts on the trees should be minimal. The most reliable way to estimate root disturbance is to find out where the roots are in relation to the demolition, excavation or construction works that will take place (Matheny & Clark, 1998). Exploratory excavation prior to commencement of construction can help establish the extent of the root system and where it may be appropriate to excavate or build.

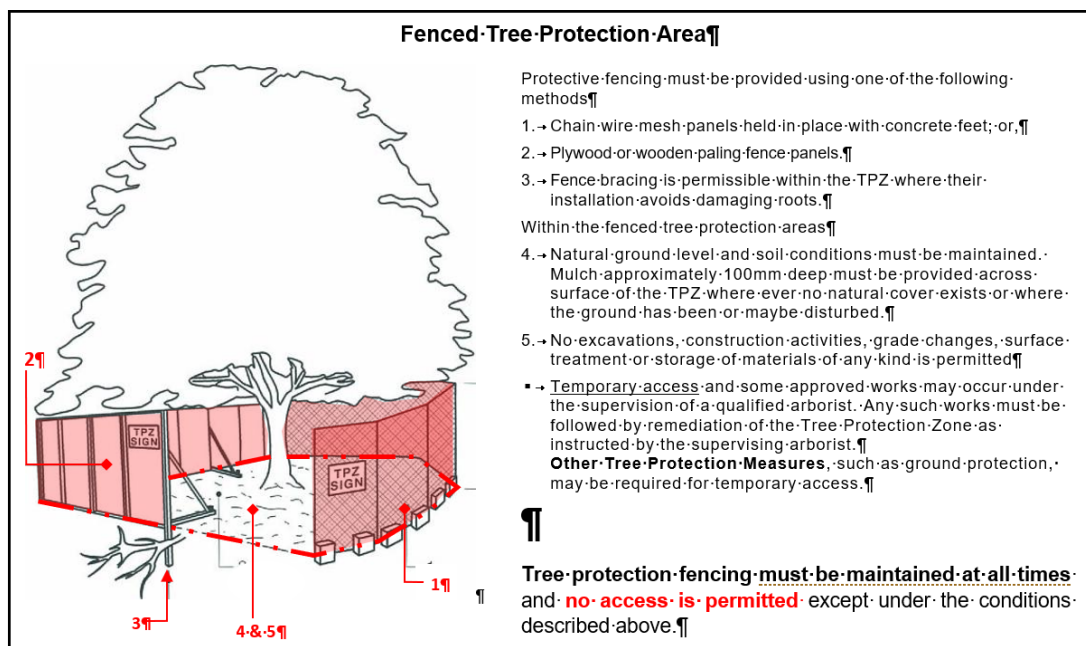
The TPZ should also give consideration to the canopy and overall form of the tree. If the canopy requires severe pruning in order to accommodate a building and in the process the form of the tree is diminished it may be worthwhile considering altering the design or removing the tree.

General tree protection guidelines

The most important factors are:

- Prior to construction works the trees nominated for tree works should be pruned to remove larger dead wood. Pruning works may also identify other tree hazards that require remedial works.

- Installation of tree protection fencing. Once the tree protection zones have been determined the next step is to mulch the zone with woodchip and erect tree protection fencing. This must be completed prior to any materials being brought on-site, erection of temporary site facilities or demolition/earth works. The protection fencing must be sturdy and withstand winds and construction impacts. The protection fence should only be moved with approval of the site supervisor. Other root zone protection methods can be incorporated if the TPZ area needs to be traversed.
- Appropriate signage is to be fixed to the fencing to alert people as to importance of the tree protection zone.
- The importance of tree preservation must be communicated to all relevant parties involved with the site.
- Inspection of trees during excavation works.



Exploratory excavation

The most reliable way to estimate root disturbance is to find out where the roots are in relation to the demolition, excavation or construction works that will take place (Matheny & Clark, 1998).

Exploratory excavation prior to commencement of construction can help establish the extent of the root system and where it may be appropriate to excavate or build. This also allows management decisions to be made and allows time for redesign works if required.

Any exploratory excavation within the allocated TPZ is to be undertaken with due care of the roots. Minor exploration is possible with hand tools. More extensive exploration may require the use of high pressure water or air excavation techniques. Either hydraulic or pneumatic excavation techniques will safely expose tree roots; both have specific benefits dependent on the situation and soil type. An arborist is to be consulted on which system is best suited for the site conditions.

Substantial roots are to be exposed and left intact.

Once roots are exposed decisions can be made regarding the management of the tree. Decisions will be dependent on the tree species, its condition, its age, its relative tolerance to root loss, and the amount of root system exposed and requiring pruning. Other alternative measures to encroaching the TPZ may include boring or tunnelling.

How to determine the diameter of a substantial root

The size of a substantial root will vary according to the distance of the exposed root to the trunk of the tree. The further away from the trunk of a tree that a root is, the less significant the root is likely to be to the tree's health and stability.

The determination of what is a substantial root is often difficult because the form, depth and spread of roots will vary between species and sites. However, because smaller roots are connected to larger roots in a framework, there can be no doubt that if larger roots are severed, the smaller roots attached to them will die. Therefore, the larger the root, the more significant it may be.

Gilman (1997) suggests that trees may contain 4-11 major lateral roots and that the five largest lateral roots account (act as a conduit) for 75% of the total root system. These large lateral roots quickly taper within a distance to the tree, this distance is identified as the Structural Root Zone (SRZ). Within the SRZ distance, all roots and the soil surrounding the roots are deemed significant.

No root or soil disturbance is permitted within the SRZ.

In the area outside the SRZ the tree may tolerate the loss of one or a number of roots. The table below indicates the size of tree roots, outside the SRZ that would be deemed substantial for various tree heights. The assessment of combined root loss within the TPZ would need to be undertaken by an arborist on an individual basis because the location of the tree, its condition and environment would need to be assessed.

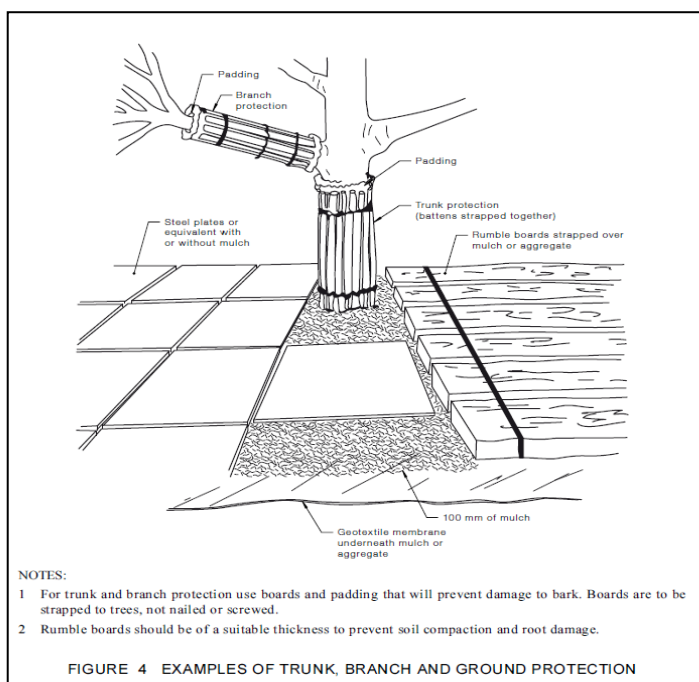
Table 1: Estimated significant root sizes outside SRZ

Height of tree	Diameter of root
Less than 5m	≥ 30mm
Between 5m - 15m	≥ 50mm
More than 15m	≥ 70mm

Ground buffering

Where works are required to be undertaken within the Tree root zone without penetration of the surface, ground buffering and trunk and limb protection must be provided to minimise the potential for soil to become compacted and avoid potential for impact wounds to occur to surface roots, trunk or limbs. Refer below.

Diagram 2: Examples of ground buffering and trunk and limb protection (Extract from: AS4970-2009, Appendix D, pg17).



Construction Guidelines

The following are guidelines that must be implemented to minimise the impact of the proposed construction works on the retained trees.

- The Tree Protection Zone (TPZ) is fenced and clearly marked at all times. The actual fence specifications should be a minimum of 1.2 - 1.5 metres of chain mesh or like fence with 1.8 meter posts (e.g. treated pine or star pickets) or like support every 3-4 metres and a top line of high visibility plastic hazard tape. The posts should be strong enough to sustain knocks from on site excavation equipment. This fence will deter the placement of building materials, entry of heavy equipment and vehicles and also the entry of workers and/or the public into the TPZ. Note: There are many different variations on the construction type and material used for TPZ fences, suffice to say that the fence should satisfy the responsible authority.
- Contractors and site workers should receive written and verbal instruction as to the importance of tree protection and preservation within the site. Successful tree preservation occurs when there is a commitment from all relevant parties involved in designing, constructing and managing a development project. Members of the project team need to interact with each other to minimise the impacts to the trees, either through design decisions or construction practices. The importance of tree preservation must be communicated to all relevant parties involved with the site.
- The consultant arborist is on-site to supervise excavation works around the existing trees where the TPZ will be encroached.
- A layer of organic mulch (woodchips) to a depth of no more than 100mm should be placed over the root systems within the TPZ of trees, which are to be retained so as to assist with moisture retention and to reduce the impact of compaction.
- No persons, vehicles or machinery to enter the TPZ without the consent of the consulting arborist or site manager.
- Where machinery is required to operate inside the TPZ it must be a small skid drive machine (i.e Dingo or similar) operating only forwards and backwards in a radial direction facing the tree trunk and not altering direction whilst inside the TPZ to avoid damaging, compacting or scuffing the roots.
- Any underground service installations within the allocated TPZ should be bored and utility authorities should common trench where possible.
- No fuel, oil dumps or chemicals shall be allowed in or stored on the TPZ and the servicing and re-fuelling of equipment and vehicles should be carried out away from the root zones.
- No storage of material, equipment or temporary building should take place over the root zone of any tree.
- Nothing whatsoever should be attached to any tree including temporary services wires, nails, screws or any other fixing device.
- Supplementary watering should be provided to all trees through any dry periods during and after the construction process. Proper watering is the most important maintenance task in terms of successfully retaining the designated trees. The areas under the canopy drip lines should be mulched with woodchip to a depth of no more than 100mm. The mulch will help maintain soil moisture levels. Testing with a soil probe in a number of locations around the tree

will help ascertain soil moisture levels and requirements to irrigate. Water needs to be applied slowly to avoid runoff. A daily watering with 5 litres of water for every 30 mm of trunk calliper may provide the most even soil moisture level for roots (Watson & Himelick, 1997), however light frequent irrigations should be avoided. Irrigation should wet the entire root zone and be allowed to dry out prior to another application.

References

- Bernatzky, A. 1978. *Tree Ecology and Preservation*. New York: Elsevier Publishing.
- British Standard 5837. 1991. *Guide for Trees in relation to construction*. British Standards Institute.
- Gilman, E. F. 1997. *Trees for Urban and Suburban Landscapes*. Delmar.
- Harris, R. W, Clark J.R. & Matheny N.P. 1999. *Arboriculture: Integrated Management of Landscape Trees, Shrubs and Vines, Third Edition*. Prentice - Hall, New Jersey.
- Helliwell, D. R. 1985. *Trees on Development Sites*. Arboricultural Association UK.
- Matheny, N. & Clark, J. R. 1998. *Trees and development – A technical guide to preservation of trees during land development*. International Society of Arboriculture, Publishers.
- Mattheck, C. & Breloer, H. 1994. *The Body Language of Trees* HMSO
- Mattheck C. 2002. *Tree Mechanics*, Forschungszentrum Karlsruhe GMBH
- Tattar, T. A. 1989. *Diseases of Shade Trees*, 2nd ed. San Diego: Academic Press.
- Watson, G. W. & Himelick, E. B. 1997. *Principals and Practices of Planting Trees and Shrubs*. International Society of Arboriculture.

RE: Arboricultural Consultancy

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7 August 2020

Matthew Chapman
HMF
Level 2/1911 Malvern Road
Malvern East, 3145

Dear Matthew,

RE: Design Review – Childcare Centre

I advise the following in relation to the tree impact assessment undertaken with regard to the proposed childcare centre in the northeast corner of the old Kyneton hospital, at 67 Simpson Street, Kyneton.

This letter is to be used in conjunction with the preliminary arboricultural assessment report prepared by Tree Logic for the site, dated 9 January 2020.

Documents viewed

- FCD_ELC_Site_1_500, Kyneton OKH_ELC_AGC, Prepared by Embracia, DWG no. TP201, REV 01, dated 06.08.2020
- FCD_ELC_Ground, Kyneton OKH_ELC_AGC, Prepared by Embracia, DWG no. TP204, REV 01, dated 06.08.2020
- FCD_ELC_Lower Ground, Kyneton OKH_ELC_AGC, Prepared by Embracia, DWG no. TP203, REV 01, dated 06.08.2020
- Landscape concept package, Old Kyneton Hospital Precinct – ELC Landscape Concept Design, Job no. 200506, prepared by Pollen Architecture, DWGs LSK-100-102, 200,300,301,302, Rev A, dated 06.08.20.

Design Intent

The design proposes a new childcare centre, which will be situated in north east corner of the old Kyneton Hospital grounds. The centre comprises three joined buildings, with a smaller lower ground level. Road access is provided from two new crossovers off Wedge street, which feed into a 26-space carpark in the eastern and northern sides of the buildings. Ramped footpaths are proposed along the southern and western borders of the centre. A re-landscaped playground is proposed south of the new buildings.

The design is in the vicinity of seventeen (17) trees, nine (9) of which are in the subject site, four (4) are oak street trees on Wedge Street, and four (4) are on neighbouring land, north of the site. The intent is to retain eight out of the nine trees in the subject site (all Claret Ash) and remove the Low rated tree in the centre of the row (Tree 26).

Design review

A tree impact assessment was undertaken using the ground and lower ground plans, prepared by Embracia, and the Landscape plans, prepared by Pollen Architecture. The various designs were reviewed relative to the tree TPZs and SRZs. See the preliminary arboricultural report for TPZ and SRZ radial distances.

The impacts are discussed below in three sections, for ground floor, lower ground and landscape, respectively. Figure 1 shows TPZ impacts from the ground floor plan. TPZ incursions are summarised in Table 1.

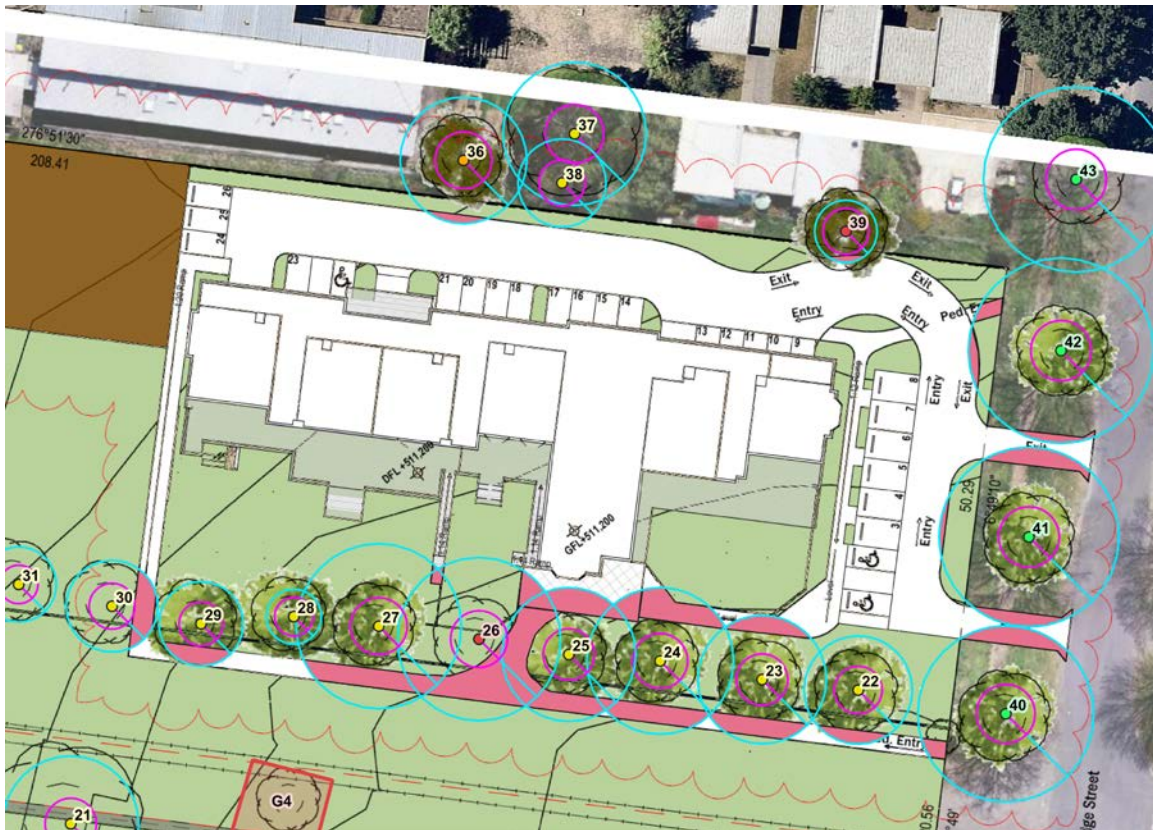


Figure 1. Edited extract of site plan (FCD_ELC_Site_1_500), showing tree locations and IDs, TPZs (light blue circles) and SRZs (magenta circles) relative to the ground floor plan. TPZ encroachment areas are shaded in pink. Incursion percentages are provided in Table 1.

Ground Floor Plan:

- The building footprint does not intersect the TPZ of any assessed tree.
- The proposed driveway, including the two crossovers off Wedge Street, results in 5-10.5% TPZ encroachment into the oak street trees (Trees 40-42) and minor TPZ encroachment (<6%) into neighbouring Trees 39 & 36.
- The footpaths, proposed south and west of the centre, intersect the TPZs of eight (8) Claret Ash, with SRZ encroachment of Trees 26 & 30.
- The prampark intersects the TPZ of three (3) trees, being Trees 24, 25 & 26.
- Combined prampark and footpath encroachments result in TPZ incursions ranging from 7.7% to 41.8%.

Table 1. Tree impact assessment from ground floor plan. Trees highlighted: orange have SRZ encroachment, yellow have TPZ encroachment >10%, green TPZ encroachment <10%. * Tree 26 is proposed for removal.

Tree ID	Arb rating	SRZ	TPZ	Impact type	Impact	Incursion m2	Incursion %
22	Mod.B	2.6	5.9	Footpath - 7.69%	TPZ	8.41	7.69
23	Mod.B	2.8	7	Footpath - 20.45%	TPZ	31.47	20.45
24	Mod.B	3	8	Footpath - 21.96%, Prampark - 4.29%	TPZ	52.76	26.25
25	Mod.B	2.8	7.3	Footpath - 28.65%, Prampark - 13.12%	TPZ	69.89	41.76
26*	Low	3.1	8.9	Footpath - 27.29%, Prampark - 3.97%, Ramp - 0.81%	SRZ	79.76	32.07
27	Mod.B	3.1	9	Footpath - 11.18%, Ramp - 0.78%	TPZ	30.41	11.96

Tree ID	Arb rating	SRZ	TPZ	Impact type	Impact	Incursion m2	Incursion %
29	Mod.B	2.4	4.6	Footpath - 17.22%	TPZ	11.44	17.22
30	Mod.B	2.5	5	Footpath - 19.43%	SRZ	15.25	19.43
36	Mod.C	3.1	6.9	Driveway - 3.09%	TPZ	4.62	3.09
39	Low	2.5	3.4	Driveway - 5.96%	TPZ	2.16	5.96
40	High	3.2	9.6	Footpath - 1.57%, Driveway - 6.01%	TPZ	21.92	7.57
41	High	3.3	9.8	Driveway - 10.44%	TPZ	31.49	10.44
42	High	3.3	10.1	Driveway - 3.46%, Footpath - 1.49%	TPZ	15.87	4.95

Lower ground plan

The lower ground plan does not impact the TPZ of any assessed tree.

Landscape plan

The only landscape element of any potential concern is the fenceline proposed immediately north of Trees 27, 28 & 29. Other aspects of the landscaping plans, such as low and feature plantings and timber mulch, are not expected to have any negative consequences on the existing trees.

Impact assessment & recommendations

- Any TPZ incursion less than 10% of total TPZ area is considered minor and is permitted under AS4970. This applies to five trees (Trees 22, 36, 39, 40 and 42).
- The TPZ encroachments within the ground floor design are associated with the driveways, paths and other accessways rather than elements of the built form. These types of hard surfaces can usually be modified using root sensitive materials and construction methods to minimise impacts on the tree root systems.
 - It is recommended that any proposed footpaths or driveways that intercept the TPZ of any retained tree should be designed using a complete permeable system, such as new dawn™ or waterpave™, or a hybrid system using geo-cells (e.g. Terram™) with a permeable surface above. These should be applied for the footpath and ramp sections adjacent to the Claret Ash trees (Trees 22-30) and the crossover sections adjacent to the oak street trees (Trees 40-42).
 - The prampark should be constructed using a discontinuous footing system, where possible, in order to elevate this part of the design above existing grade. Footings should cause minimal soil disturbance e.g. using ground screws (such as those provided by Stop Digging Australia®). If continuous excavations are required, this should be restricted to a maximum depth of 100mm.
- Regarding the landscape plan, the fenceline proposed north of Trees 26-29 needs to utilise a root-sensitive fence type and construction method so that the root zone disturbances in the SRZs are prevented, and those in the TPZs are minimised. The following is recommended for the fence:
 - The fence should be bridged above grade, when traversing the TPZ of any retained tree.
 - Fence posts must be established outside the SRZ, where possible. Any post placement within a SRZ must be hand dug. If any root >50mm Ø in diameter is uncovered during excavations the root should be left intact and the post moved 50-100mm to the east or west in order to avoid the root.

General tree protection requirements

- Tree protection zones must be implemented when constructing the various elements of the development.
- In general, tree roots are located in the top 200-500 mm of soil where essential elements of water, oxygen and nutrients are most abundant and readily available. Compaction of the tree root zone by heavy vehicles can severely limit the ability for water and oxygen to penetrate to the root zone and will induce a stress response in the tree that will be displayed as dieback and a spiral of decline symptoms.
- Tree protection zones must be established around all retained trees. Fenced areas should consist of wire mesh fencing at least 1.8 metres tall. Matured organic mulch must be applied to a depth of at least 50mm within all tree protection areas. Tree protection zones must protect as much of the designated TPZ as practical. Ground protection and/or trunk protection must be used as a substitute where fencing is impractical. Ground protection should consist of rumble boards or steel plates over geotextile membrane and organic mulch.
- No form of excavation for installation of underground services is permitted within the nominated TPZ areas for any retained trees without prior consultation with an appropriately qualified arborist, as the risk of severing roots vital to the stability and continued sustainability of the trees can occur.
- Vehicles, tools or construction equipment must not operate or be stored within the TPZ of any tree.
- Any additional proposed encroachment (not already discussed above) of a TPZ in excess of 10% must be approved by the consulting arborist/relevant authority and based on the results of non-destructive root investigation.

Yours Sincerely,



Harry Webb

Consultant Arborist

MSc.(Bot.) Grad. Cert. Arb.

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