

Arboricultural Assessment Report

Charles Evans Reserve

27 October 2023

Tree Logic Ref. 013175

Prepared for Daniel Perrone - City of Yarra

Prepared by Greg Pollard – Tree Logic Pty. Ltd

1 Introduction

- 1.1 Tree Logic was engaged to undertake an assessment and prepare a preliminary arboricultural report for trees growing at Charles Evans Reserve, Cremorne.
- 1.2 The requirements of the arboricultural report include;
 - To provide information on trees within the study area, including their species, origin, age category, dimensions, health and structure
 - To assign the trees an arboricultural rating reflecting their retention value
 - Determine the Tree Protection Zones (TPZ) and Structural Root Zones (SRZ) for trees, compliant with AS4970 'Protection of trees on development sites'
 - To provide any appropriate tree management recommendations including suitability for retention in light of potential redevelopment of the reserve.

2 Method

- 2.1 Site inspection was carried out on 25 October, 2023. Trees located within Charles Evans Reserve as well as two adjacent trees in the road reserve were inspected.
- 2.2 Trees were assessed to determine their species, type, age category and condition. Tree dimensions were recorded with overall tree height and average crown width estimated and trunk diameter measured with a diameter tape nominally at 1.4 metres above ground level.
- 2.3 Trees details are provided in Appendix 1 and a tree location plan at Appendix 2. Tree locations are based on the supplied Feature Survey with the exception of one recently planted street tree, the location of which has been approximated.
- 2.4 Each of the assessed trees was attributed an 'Arboricultural Rating' which combines 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.
- 2.5 The assessed trees have been allocated Tree Protection Zones (TPZ). The Australian Standard, AS 4970-2009, has been used in the allocation of TPZs. 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. TPZ measurements are provided in Appendix 1.
- 2.6 **Documents viewed:**
 - Existing Conditions Plan – Charles Evans Reserve Cremorne, Surfcoast Surveying and Drafting Services, Proj., 2023-175 Rev A April 2023.
 - Charles Evans Reserve Preliminary Findings Site Analysis, Andrea Proctor Landscapes, 09/10/2023.

3 Observations

- 3.1 Charles Evans Reserve is a relatively flat, triangular shaped public park covering an area of approximately 950 square metres. It is located on the western side at the southern end of Cubitt Street, Cremorne and is bounded to the south by a sound barrier along the adjacent freeway and to the north by residential properties. An east-west aligned pedestrian path in the northern section of the site is accessible from Dover Street to the west as well as the Cubitt Street frontage.
- 3.2 A playground is situated centrally in the eastern half of the park with vegetation mostly confined to the park's perimeter. Shrubs and climbing plants along the freeway barrier were of no arboricultural significance and were not individually assessed.
- 3.3 Twenty-two (22) individual trees were assessed with two being located outside of the park in the Cubitt Street road reserve. One of these, Tree 1, was a Norfolk Island Hibiscus (*Lagunaria patersonia*) which is likely to have self-sown given its location hard against fencing of the adjacent private property. This tree has developed two trunks from near ground level and appeared to be represented on the supplied survey as two trees. The second tree outside of the park, Tree 22, was a small Lemon-scented Gum (*Corymbia citriodora*) located in a road cut-out along the western edge of Cubitt Street. It is not represented on the supplied survey plan and may have been planted since the survey.
- 3.4 The tree population comprised nine different species including twelve deciduous exotics and ten Australian natives. It was dominated in number by six Callery Pear (*Pyrus calleryana* var.) and five Native Frangipani (*Hymenosporum flavum*) although the largest trees were two Lombardy Poplar (*Populus nigra* 'Italica'), being Tree Nos. 10 and 11, followed by Tree 8, a maturing Lemon-scented Gum on the south side of the playground. A third Lombardy Poplar (Tree 12) was a poor specimen which it is recommended be removed on account of extensive basal decay.
- 3.5 The trees' health and structural condition varied considerably though the majority fell within typical parameters. The Callery Pear trees were mostly attributed a 'Fair' health rating. They were downgraded on their structure as all exhibited acute branch attachments, a trait which generally leads to a greater incidence of branch failure, but one that is common for many varieties of this species. Of the more prominent trees, the two large Poplars and Lemon-scented Gum were considered typical, as was Tree 16, a European Nettle Tree (*Celtis australis*). Tree 18, a Chinese Elm (*Ulmus parvifolia*) displayed reasonable vigour, though it had a distinct crown bias to the south, largely on account of a previously limb failure.

3.6 **Arboricultural Rating**

The assessed trees were attributed with an arboricultural rating. This rating reflects a combination of tree health and structure (arboricultural merit) and also conveys an amenity value. Amenity relates to the trees' functional and aesthetic characteristics within an urban landscape context.

The potential arboricultural ratings range from 'High' through three categories of 'Moderate' value (Mod. A, B or C) down to Low or Very Low value trees. 'Moderate A' rated trees were the previously noted Lemon-scented Gum (Tree 8) and European Nettle Tree (Tree 16) with seven trees including Lombardy Poplars (Trees 10, 11), Native Frangipani (Trees 3, 4 and 5) and Callery Pear (Trees 13 and 14) attributed a Moderate B rating. Figure 1 provides a breakdown of the tree population by arboricultural rating.

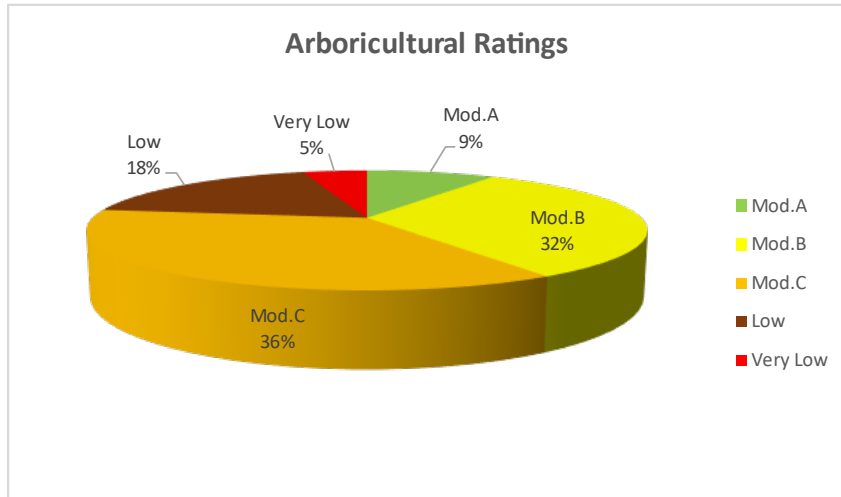


Figure 1: Breakdown of Arboricultural Ratings

4 Photos



Image 1: Trees 3 and 4 the largest of the five Native Frangipani along the Cubitt St frontage.



Image 2: A view to the south of the Lemon-scented Gum (Tree 8), one of the higher quality trees at the site.



Image 3: Tree 16 - Celtis australis



Image 4: Looking eastwards along the south boundary with Lombardy Poplar (Tree 11) adjacent to the playground.



Image 5: Trunk decay at base of Tree 12.

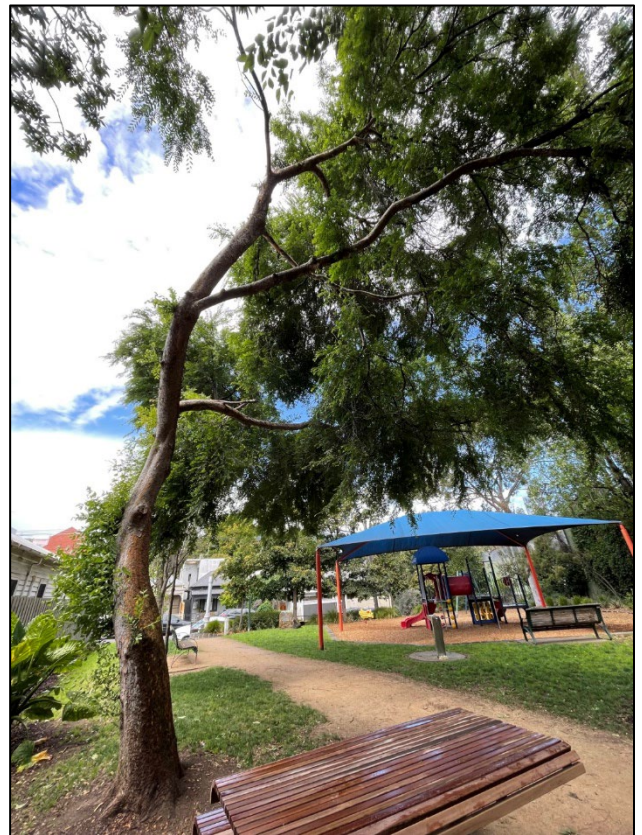


Image 6: Lopsided crown of Chinese Elm (Tree 18).

5 Tree Protection Zones

- 5.1 The Tree Protection Zones (TPZs) provided in Appendix 1 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.
- 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. Where changes to a site are proposed, construction and other activities should be excluded from the TPZ, or at least minimised and controlled if trees selected for retention are to be given the best prospects for longer term viability.
- 5.3 Minor encroachment, up to 10% of the TPZ area, is generally well tolerated by healthy trees. Encroachment greater than 10% is considered major encroachment under AS4970 and is only permissible if it can be demonstrated that the tree would remain viable.

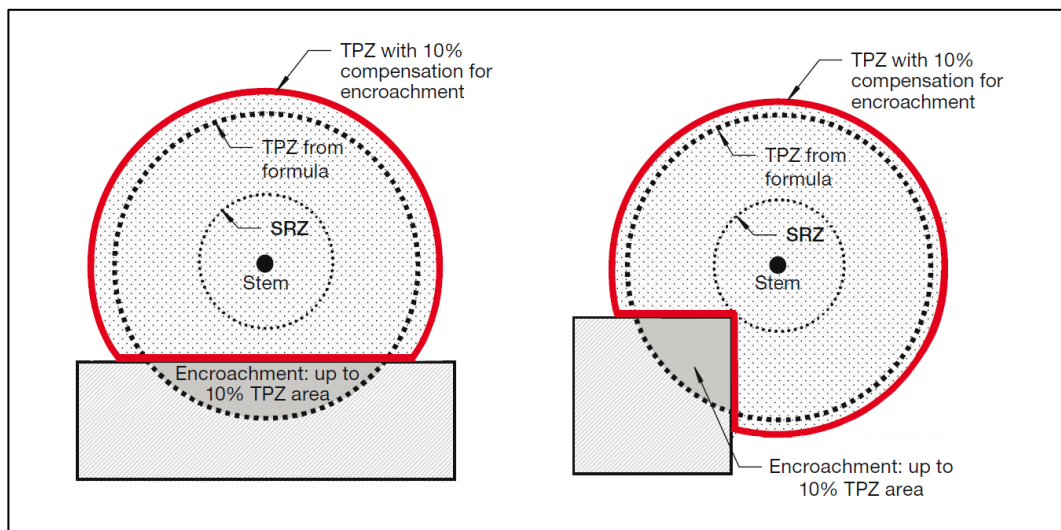


Figure 1: Examples of minor encroachment into a TPZ. (Extract from: AS4970-2009).

- 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 close to the trunk in which the larger woody roots required for tree stability are found. These roots generally taper rapidly. The SRZ is the minimum area recommended to maintain tree stability but it does not reflect the area required to sustain tree health. In most instances, to avoid compromising tree stability, works will need to be excluded entirely from within the SRZ of trees being retained.

6 Tree Management Recommendations

- 6.1 Aside from Tree 12, the Lombardy Poplar with trunk decay, the remaining trees would likely continue growing and offering a varying degree of amenity to the local area for the foreseeable future. In the context of potential redevelopment of the park, however, some trees would be preferable to retain over others.

- 6.2 Shrubs and smaller trees are relatively easy to replace and, therefore, where broader improvements are to occur, they should not hamper design intent regardless of their current condition. Trees such as the recently planted street tree (No. 22) and other smaller trees within the park would fit this category.
- 6.3 Medium and larger trees generally offer greater environmental and aesthetic benefits which would take considerably longer to replicate with replacement planting. Where they are in reasonable condition and suited to their location, they are worthy of consideration through any planning and design process and should be retained, if possible. In some instances, there is an overall benefit to a project in removing selected larger trees, however, such benefits should be clearly demonstrated before this occurs. Table 1 categorises the assessed trees' retention value from an arboricultural perspective in the context of park redevelopment.

Table 1: Tree retention value with park redevelopment

Retention category	Tree Nos.
Retention recommended	8, 10, 11, 16
Retain if possible	3, 4, 5, 13, 14
Remove or retain	1, 2, 6, 7, 9, 15, 17, 18, 19, 20, 21, 22,
Removal recommended	12

7 Conclusions

- 7.1 Tree Logic was engaged to assess the condition and retention value of trees in light of potential redevelopment of Charles Evans Reserve, Cremorne. Twenty-two trees were assessed with characteristics provided at Appendix 1 and locations at Appendix 2.
- 7.2 If their growing conditions remained unchanged, the majority of assessed trees could be expected to continue growing for the foreseeable future. In the context of upgrading the park, Table 1 provides a guide as to the trees' relative retention value from an arboricultural perspective.
- 7.3 The trees have been assigned Tree Protection Zones (TPZs) to indicate the area around them likely to require a level of protection if their viability is to be assured along with changes at the site. More specific assessment of intended works and their impacts may be required as detailed design progresses.
- 7.4 If not already done on a routine basis, any medium and large trees that are retained in conjunction with redevelopment works should be assessed for pruning requirements.



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Appendix 1 - Tree Assessment Data: Charles Evans Reserve - Cubitt Street, Cremorne

Key: **DBH** = Diameter at breast height, 1.4m above ground level, unless otherwise indicated. **Basal** dimensions is trunk diameter at base immediately above root buttress. **ARB rating** = arboricultural rating. **TPZ** = Tree protection zone in radial metres. **SRZ** = Structural root zone in radial metres. **ULE**= Useful Life-expectancy. Definition of the descriptor categories used in the assessment can be seen in Appendix 3.

Tree ID	Species	Common Name	Age	Origin	DBH (cm)	Basal (cm)	Height x Width (m)	Health	Structure	Arb. Rating	ULE (years)	Comments	TPZ (m radius)	SRZ (m radius)
1	<i>Lagunaria patersonia</i>	Norfolk Island Hibiscus	Early-mature	Australian native	45,29	70	12x11	Fair	Poor	Low	11-20 y	Surveyed as two separate trees. South trunk leaning. Poorly located, impacting boundary fence and footpath, Ivy growing up trunk.	6.5	2.8
2	<i>Hymenosporum flavum</i>	Native Frangipani	Semi-mature	Australian native	9	12	5x3	Fair	Fair	Mod.C	21-40 y		2	1.5
3	<i>Hymenosporum flavum</i>	Native Frangipani	Semi-mature	Australian native	23	28	10x6	Fair	Fair	Mod.B	21-40 y		2.8	1.9
4	<i>Hymenosporum flavum</i>	Native Frangipani	Semi-mature	Australian native	22	28	9x5	Fair	Fair	Mod.B	21-40 y		2.6	1.9
5	<i>Hymenosporum flavum</i>	Native Frangipani	Semi-mature	Australian native	13	16	8x4	Fair	Fair	Mod.B	21-40 y		2	1.5
6	<i>Hymenosporum flavum</i>	Native Frangipani	Semi-mature	Australian native	9	11	3x3	Fair	Fair	Mod.C	21-40 y		2	1.5
7	<i>Waterhousea floribunda</i>	Weeping Lilly Pilly	Semi-mature	Australian native	7,7,5	15	4x4	Fair	Fair to Poor	Mod.C	21-40 y		2	1.5
8	<i>Corymbia citriodora</i>	Lemon-scented Gum	Early-mature	Australian native	49	59	16x16	Fair	Fair	Mod.A	21-40 y	Minor deadwood.	5.9	2.7
9	<i>Acacia implexa</i>	Lightwood	Semi-mature	Indigenous (Planted)	9,7	14	5x5	Fair	Fair to Poor	Low	11-20 y	Small tree.	2	1.5
10	<i>Populus nigra 'Italica'</i>	Lombardy Poplar	Maturing	Exotic deciduous	95	110	24x9	Fair	Fair to Poor	Mod.B	11-20 y		11.4	3.4
11	<i>Populus nigra 'Italica'</i>	Lombardy Poplar	Maturing	Exotic deciduous	95	112	26x10	Fair	Fair to Poor	Mod.B	11-20 y		11.4	3.5
12	<i>Populus nigra 'Italica'</i>	Lombardy Poplar	Semi-mature	Exotic deciduous	35	51	11x5	Fair to Poor	Very Poor	Very Low	<1 y	Basal trunk decay. Recommend removal.	4.2	2.5
13	<i>Pyrus calleryana</i>	Callery's Pear	Semi-mature	Exotic deciduous	33	36	10x8	Fair	Fair to Poor	Mod.B	11-20 y	Acute branch attachments.	4	2.2
14	<i>Pyrus calleryana</i>	Callery's Pear	Semi-mature	Exotic deciduous	25	28	9x5	Fair	Fair to Poor	Mod.B	11-20 y	Acute branch attachments.	3	1.9
15	<i>Pyrus calleryana</i>	Callery's Pear	Semi-mature	Exotic deciduous	18	21	8x5	Fair	Fair to Poor	Mod.C	11-20 y	Partially suppressed. Acute branch attachments.	2.2	1.7
16	<i>Celtis australis</i>	European Nettle Tree	Semi-mature	Exotic deciduous	38	45	9x9	Fair	Fair	Mod.A	21-40 y	Acute branch attachments.	4.6	2.4
17	<i>Celtis australis</i>	European Nettle Tree	Semi-mature	Exotic deciduous	29	35	8x8	Fair	Fair to Poor	Mod.C	11-20 y	Partly suppressed.	3.5	2.1
18	<i>Ulmus parvifolia</i>	Chinese Elm	Early-mature	Exotic deciduous	44	50	10x13	Fair	Poor	Mod.C	6-10 y	Previous limb failure from north side, crown biased towards south.	5.3	2.5
19	<i>Pyrus calleryana</i>	Callery's Pear	Semi-mature	Exotic deciduous	8	10	5x2	Fair to Poor	Fair to Poor	Low	11-20 y	Acute branch attachments.	2	1.5
20	<i>Pyrus calleryana</i>	Callery's Pear	Semi-mature	Exotic deciduous	17	20	7x5	Fair	Fair to Poor	Mod.C	21-40 y	Acute branch attachments.	2	1.7
21	<i>Pyrus calleryana</i>	Callery's Pear	Semi-mature	Exotic deciduous	17	22	7x5	Fair	Fair to Poor	Mod.C	21-40 y	Acute branch attachments.	2	1.8
22	<i>Corymbia citriodora</i>	Lemon-scented Gum	Young	Australian native	2	3	1x1	Fair	Fair	Low	40+	Small street tree recently planted in road cut-out. Location on plan approximate.	2	1.5



APPENDIX 2 — TREE LOCATIONS AND PROTECTION ZONES

PROJECT
Charles Evans Reserve, Cremorne

TL REF. 013175 **MAP NO.** 1 / 1 **DATE** 2023-10-27 **CLIENT** City of Yarra

LEGEND

- Arb. Rating**
- Mod-A
 - Mod-B
 - Mod-C
 - Low
 - Very Low
 - shrubs

- Protection Zones**
- TPZ
 - SRZ

DATA SOURCES
Existing Conditions Plan, Surfcoast Surveying, Charles Evans Reserve Rev A, April 2023.

TREE LOCATION DISCLAIMER
Tree locations based on supplied survey plan
COORDINATE REFERENCE SYSTEM
EPSG: 28355 | GDA 94 MGA Zone 55



ABN: 95 080 021 610 **TREELOGIC PTY LTD**
TEL: 1300 656 926 4 / 21 Eugene Tce
Ringwood, VIC
Australia 3134



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.

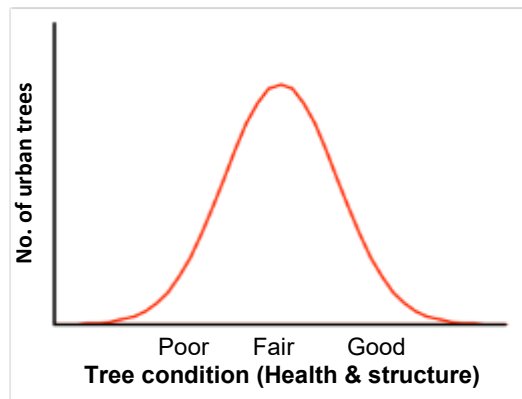


Diagram 1: Indicative normal distribution curve for tree condition

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. 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.
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.

7. Health

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

Health Category	Vigour, 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 vigour. >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 vigour	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	Exhibiting severe deficiencies. Thinning foliage, generally smaller or deformed	Extreme and contributing to decline
Dead	N/A	N/A	N/A	N/A

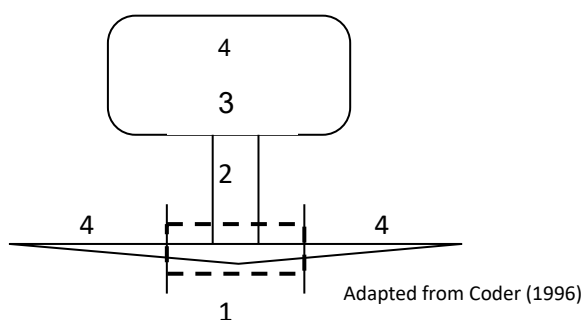
8. Structure

Assesses principal components of tree structure (Diagram 2).

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.

Diagram 2: Tree structure zones

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



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 take into account the combination of likelihood of failure and impact, including the perceived importance of the target(s). See table over page.

Structure Category	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.

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 Road 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). See table over page.

Useful Life Expectancy category	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). 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. 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.). 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 vigour is likely to be reduced (bud development, extension growth etc.). Tree may be growing in restricted environment (e.g. Roadscapes) or may be in late maturity. Semi-mature and mature trees exhibiting normal growth characteristics. Juvenile trees in Roadscapes.
>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. 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, which can either increase or decrease, or sudden changes to a tree's growing environment creating an acute stress.

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 be extend a tree's ULE.

9. Arboricultural Rating

Relates to the combination of tree condition factors, including health and structure (arboricultural merit), and also conveys an amenity value. 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 taken into account. See table over page.

Arboricultural rating Category	Description						
High	<p>Tree of high quality in good to fair condition; good vigour. Generally a prominent arboricultural/landscape feature. Particularly good example of the species; rare or uncommon. Tree may have significant conservation or other cultural value.</p> <p>These trees have the potential to be a medium- to long-term components of the landscape (moderately long to long ULE) if managed appropriately.</p> <p>Retention of these trees is highly desirable.</p>						
Moderate	<p><i>General -</i></p> <p>Tree of moderate quality, in fair or better condition. Tree may have a condition, and or structural problem that will respond to arboricultural treatment.</p> <p>These trees have the potential to be a moderate- to long-term component of the landscape (moderate to long ULE) if managed appropriately. Retention of these trees is generally desirable.</p> <p>The following sub-categories relate predominately to age and size and amenity.</p> <table border="1" data-bbox="432 705 1337 1032"> <tr> <td data-bbox="432 705 502 790">A.</td> <td data-bbox="507 705 1337 790">Moderate to large, maturing tree. Contributes to the landscape character. Tree may have conservation or other cultural value.</td> </tr> <tr> <td data-bbox="432 797 502 913">B.</td> <td data-bbox="507 797 1337 913">Moderate sized, established tree, > 50% of attainable age/size. Contributes to the landscape character. Maturing tree with amenity value but with identified deficiencies.</td> </tr> <tr> <td data-bbox="432 920 502 1032">C.</td> <td data-bbox="507 920 1337 1032">Small and/or semi-mature tree, established, >5 years in the location. May not be a dominant canopy. No special qualities. Maturing tree with accumulating deficiencies, trending towards becoming of Low arboricultural value.</td> </tr> </table>	A.	Moderate to large, maturing tree. Contributes to the landscape character. Tree may have conservation or other cultural value.	B.	Moderate sized, established tree, > 50% of attainable age/size. Contributes to the landscape character. Maturing tree with amenity value but with identified deficiencies.	C.	Small and/or semi-mature tree, established, >5 years in the location. May not be a dominant canopy. No special qualities. Maturing tree with accumulating deficiencies, trending towards becoming of Low arboricultural value.
A.	Moderate to large, maturing tree. Contributes to the landscape character. Tree may have conservation or other cultural value.						
B.	Moderate sized, established tree, > 50% of attainable age/size. Contributes to the landscape character. Maturing tree with amenity value but with identified deficiencies.						
C.	Small and/or semi-mature tree, established, >5 years in the location. May not be a dominant canopy. No special qualities. Maturing tree with accumulating deficiencies, trending towards becoming of Low arboricultural value.						
Low	<p>Unremarkable tree of low quality or little amenity value. Tree in either poor health or with poor structure or a combination. Short to transitory useful life expectancy.</p> <p>Tree is not significant because of either its size or age, such as young trees with a stem diameter below 15 cm. Trees regularly pruned to restrict size. These trees are easily replaceable.</p> <p>Tree (species) is functionally inappropriate to specific location and would be expected to be problematic if retained.</p> <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>						
None	<p>Trees of low quality with an estimated remaining life expectancy of less than 5 years. 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 would be expected in the short term.</p> <p>Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline. Tree infected with pathogens of significance to either the health or safety of the tree or other adjacent trees.</p> <p>Tree whose retention would not be viable after the removal of adjacent trees (includes trees that have developed in close spaced groups and would not be expected to acclimatise to severe alterations to surrounding environment – removal of adjacent shelter trees).</p> <p>Tree has a detrimental effect on the environment, for example, the tree is a recognised environmental woody weed with potential to spread into waterways or natural areas.</p> <p>Unremarkable tree of no material landscape, conservation or other cultural value.</p>						

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 criterion 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	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. Tree commemorates a particular occasion, including plantings by notable people, or having associations with an important event in local history.
Ecological Value	Tree could have value as habitat for indigenous wildlife, including providing breeding, foraging or roosting habitat, or is a component of a wildlife reserve. Remnant Indigenous vegetation that contribute to biological diversity

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There is no warranty or guarantee, expressed or implied by Tree Logic Pty. Ltd., that problems or deficiencies of the plants or site in question may not arise in the future. Tree condition can change quickly in response to environmental conditions or altered growing conditions.

There can be no guarantees provided for on-going tree safety. It should be noted that not all of the potential structural concerns associated with trees can be eliminated and that there will always be a residual risk following any mitigation works. Also, not all tree defects are observable and extreme weather events are unpredictable. Since trees are complex, living organisms, it is difficult to quantify and precisely measure all variables when inspecting a standing tree for hazard.

Trees should be reassessed on a regular basis; the scheduled period of reassessment will be dependent on the characteristics of the tree, the landscape context and perceived targets, and resources available to maintain them.

