Ajarboriculture

Arboricultural Appraisal

7 Ryrie Street, Healesville

ADVERTISED

September 2023

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Client: Simon & Jess Terpstra

Appraisal Prepared by: David Balsamo - Principal Consultant

1. Summary

The subject site has a medium tree density cover that is comprised primarily of planted exotic vegetation. Statutory planning provisions applicable to this site protects approximately 40% of the vegetation identified in this appraisal.

2. Objectives

In this appraisal, the following objectives have been identified.

2.1. Inspect the tree(s) located within and adjacent to the subject site as requested by the client and determined by the assessor during the site inspection. A tree is defined in this appraisal as a perennial plant that is greater than 3 metres in height. Perennial plants smaller than 3 metres in height are shrubs or small and/or young trees that may be included in this appraisal contingent on landscape contribution.

2.2. Collect and report details concerning the identified tree(s) in accordance with the Australian Standard AS 4970 - 2009 'Protection of trees on development sites', subsequent amendments, applicable local laws, statutory requirements and other relevant documents.

2.3. Provide an unbiased arboricultural perspective within the aforementioned frameworks that clearly informs the client and associated stakeholders of the tree populations merit, protection and management requirements.

3. Method

The following methods were employed to inform the contents of this appraisal.

3.1. The site inspection was undertaken on Thursday, 14 September 2023.

3.2. Individual Trees identified in this appraisal have been located and numbered in Appendix 1 - 'Site Plan'. Definitions for the data catalogued in Appendix 2 - 'Site Data' are contained in Appendix 3 - 'Tree Feature Descriptions'. Observations including relevant photographs have been incorporated in the appraisal where appropriate. All trees were visually assessed from the ground. Where access to a tree was limited, dimensional characteristics were estimated and some observational features may have been overlooked.

3.3. Tree Protection Zones (TPZ) including variations, Structural Root Zones (SRZ) and tree protection measures identified in this appraisal have been determined in accordance with AS4970 and current industry best practice. Please refer to Section 6.4 for a concise description of TPZ and SRZ calculations.

4. Documents and Literature

The following documents were reviewed in the preparation of this appraisal.

4.1. Planning Property Report from https://mapshare.vic.gov.au/vicplan/ accessed on the Monday, 25 September 2023 for 7 Ryrie Street, Healesville.

4.2. 42.03 Significant Landscape Overlay (SLO) and the associated Schedule SLO22 from the Yarra Ranges Planning Scheme.

4.3. Job No. 2023-0513 Re-establishment and Existing Conditions Survey for 7 Ryrie Street, Healesville as prepared by Smith Land Surveyors and dated 10 May 2023.

4.4. Project No. 23-016 Alterations and Additions for 7 Ryrie Street, Healesville, Sheets SK00 - SK05 as prepared by Meenks Ink, Design and dated July 2023.

4.5. Environmental Weeds in the Yarra Ranges 2019.

5. Observations

The ensuing observations were made during the site inspection and have been included to summarise data, inform discussion, opinions and recommendations contained in this appraisal.

5.1. Thirty-one (31) Individual Trees as defined in this appraisal were identified during the site inspection. One (1) tree was located in the Ryrie Street road reserve to the east of the subject site. The remaining thirty (30) trees were located within the subject site.

5.2. One (1) tree received a High Retention Values and ten (10) received Moderate Retention Values as defined in this appraisal. The remaining twenty (20) trees received Low Retention Values.

5.3. Twelve (12) trees are considered Protected Trees under the SLO identified in Section 4.2 and discussed in Section 6.2. The remaining nineteen (19) trees did not meet the minimum dimensional characteristics identified in the SLO, are considered weed species in the document listed in Section 4.5 or are located within 2 metres of an existing building.

5.4. Additional shrubs and small and/or young trees were noted during the site assessment but have not been included in this appraisal as they do not provide any particular landscape significance or make a contribution to local amenity. Trees in adjoining properties where drip lines did not extend into the subject site were also observed during the site assessment but have not been included in this appraisal as they will not be affected by any proposed development within the subject site.

6. Discussion

6.1. In this appraisal and as required under AS4970; the relative environmental, social and economic virtues of a tree are expressed in its ***Retention Value***. The benefits of tree retention within an evolving urban landscape are significant and quantifiable.

Social Benefits - tree stature and longevity provide a sense of 'place' and a direct link with a sites past. They are living structures that instill serenity, soften vistas and provide cover from the harsh planes of surrounding concrete, glass, brick and asphalt.

Environmental Benefits - Trees contribute to privacy, emphasise views, reduce glare, moderate climate, improve air quality, conserve water and harbour wildlife.

Economic Benefits - Trees provide direct economic benefit through increased property values and reduced energy costs.

Trees that receive a ***High*** or ***Moderate*** value express one or more of these qualities and can with adequate design consideration and protection during construction, continue to contribute as landscape elements. Trees that receive a ***Low*** value add little to the site; may not respond well to changes in their environment, become hazardous or create an amenity nuisance in a transforming landscape. These trees should be excluded from retention considerations.

6.2. In Victoria, tree protection is afforded through local planning, laws, policy and other legal instruments. Protection provisions relevant to the subject site are listed in Section 3 of this appraisal. Vegetation located within the subject site and on adjoining land that may be impacted by proposed development and are subject to protection provisions must be managed in accordance with AS4970 and local policy where it exists. In this appraisal, these trees are designated as ***Protected Trees***.

Trees on adjoining property that are exempt from protection provisions and could potentially be impacted by proposed development should be managed in accordance with AS4970. Local government does not enforce the common law tort of negligence where an act or omission leads to damage, loss or injury to a tree. However, failure to apply appropriate protection measures to a tree on adjoining land could result in project delays, unnecessary disputes, undermine good neighbourly relationships or gives rise to needless legal action.

The primary objectives of 42.03 Significant Landscape Overlay (SLO) and the associated Schedule SLO22 is to maintain vegetation as a dominant element of the landscape and encourage retention and regeneration of native vegetation in the foothills and rural townships of the municipality. To that end, SLO22 requires the applicant to obtain a permit for works that results in the removal, destruction or lopping of indigenous vegetation that occurs naturally in the Shire of Yarra Ranges or substantial trees that have a DBH greater than 0.16 metres.

6.3. Acknowledging the value of trees and adopting a balanced perspective between a trees ***Retention Value*** and ***Protected Tree*** status is an important design consideration in ensuring a successful outcome.

There are just as many reasons to remove a tree as there are to retain the very same. What an existing tree will bring to a renewing landscape is at the discretion of the imagination but at the very least, should be a representative symbol of a living and dynamic location where people, structures and trees can coexist in harmony.

6.4. The TPZ as defined under the AS4970 is an area (nominally cylindrical) above and below ground, at a given distance from the trunk center, set aside for the viability of a tree where it is potentially subject to damage by change. The SRZ is the area within the root plate where roots and soil cohesion are necessary to maintain tree stability.

Defining the area and extent of the TPZ and SRZ is determined by the diameter of the trunk, the projection of the crown and the presence of obstacles to root and crown growth. Please refer to Diagram 1 for detail.

The calculated radial distances contained in Appendix 2 - Site Data are designed to provide architects and planners with guidance to the extent of the obscured root plate. Modified zones determined by the arborist are diagrammatically represented in Appendix 1 - Site Plan.

An encroachment of up to 10% into the area on one side of a TPZ is generally tolerated. However; incursions greater than 10%, on multiple sides of the TPZ or into the SRZ are considered unacceptable and is only permissible if it can be demonstrated that after such an incursion the tree will remain a viable landscape element.

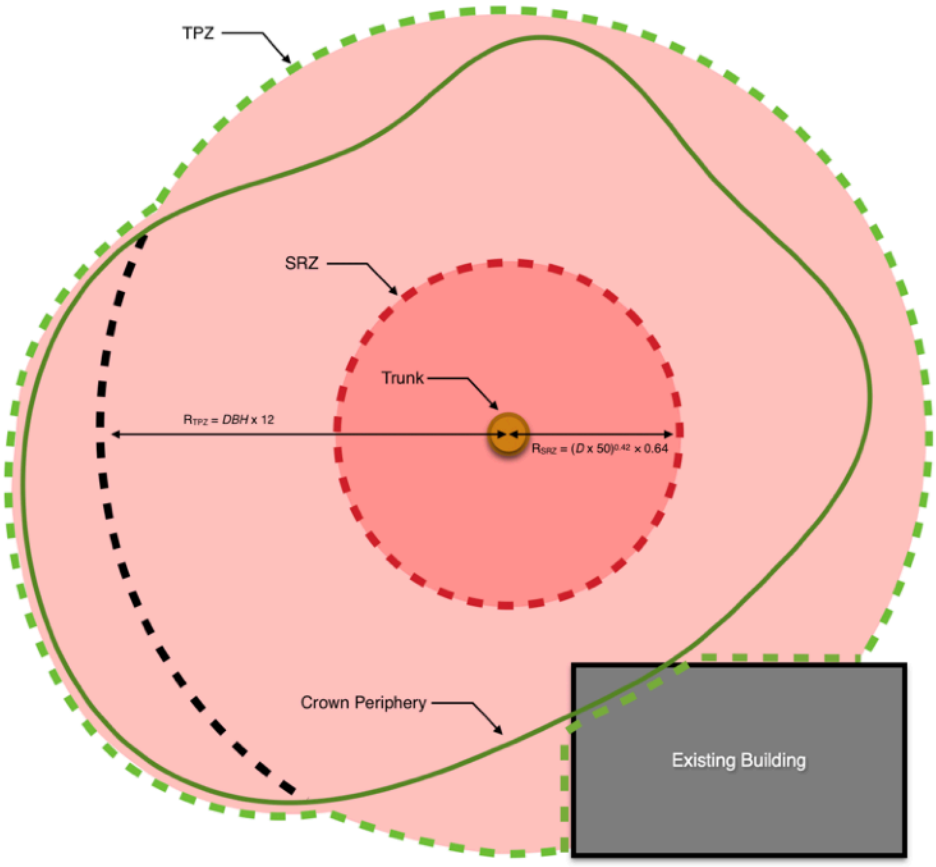


Diagram 1 - Nominal extent of the Tree Protection Zone (TPZ) and Structural Root Zone (SRZ) for a tree with an asymmetrical crown.

- R_{TPZ} is the calculated radius of the TPZ measured from the trunk center and usually expressed in metres. *DBH* is the diameter of the trunk measured 1.4 metres above ground level. The TPZ can be modified to consider obstacles affecting growth, root plate and crown asymmetry.
- R_{SRZ} is the calculated radius of the SRZ measured from the trunk center and usually expressed in metres. *D* is the diameter of the trunk measured immediately above the root buttress. The SRZ can be modified to consider obstacles affecting growth and root plate asymmetry.
- TPZ and SRZ calculations do not apply to palms, ferns and cycads.

Adapted from the Australian Standard AS4970 - 2009 'Protection of trees on development sites'.

7. Opinions and Recommendations

The following opinions and recommendations have been made within the context of the existing proposal without modification.

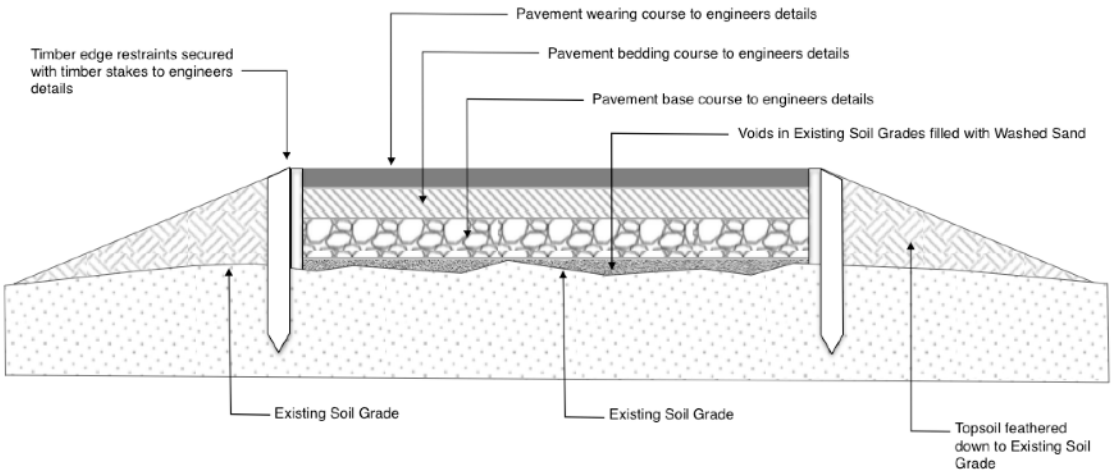
The property title for the subject site was not inspected and it is unknown if there are any specific tree protection controls under existing planning permits or Section 173 Agreements for the subject site.

7.1. The proposal listed in Section 4.4 identifies the removal of five (5) trees including #10 and #11 both identified as Camellia (*Camellia japonica*), #15 a Japanese Maple (*Acer palmatum*), #21 a Silver Birch (*Betula pendula*) and #26 a Claret Ash (*Fraxinus angustifolia subsp. Oxycarpa*). No permit should be required for the removal of these trees as they are exempt from the provisions of the SLO identified in Section 4.2. Tree numbers #10, #11, #15 and #21 do not meet the minimum dimensional characteristics identified in the SLO and #26 is considered a weed species.

7.2. The proposal will result in significant TPZ encroachment (greater than 10%) for tree numbers #12, #17, #20, #22, #25, #28, #30 and #31 all of which are considered Protected Trees.

Encroachment will be primarily associated with the proposed gravel driveway to the new dwelling. To ensure these trees remain viable landscape elements, the driveway must be a “No Dig” permeable surface where it intersects with the TPZ of a tree as detailed in Figure 1. “No Dig” pavements are primarily characterised as pavements laid above existing site grade that is sufficiently porous so as to have a saturated hydraulic conductivity greater than that of the natural soils (sub-grade) on which it is laid.

Typical ‘No Dig’ Pavement Profile Section (Not to Scale) Figure 1



7.3. Underground services to the proposed new dwelling must be routed to avoid the TPZ of retained trees or bored where they intersect a TPZ. Open trench excavation within a TPZ is generally discouraged as this results in the severance of roots however, supervised non-destructive excavation (NDD) may be permitted where it cannot be avoided.

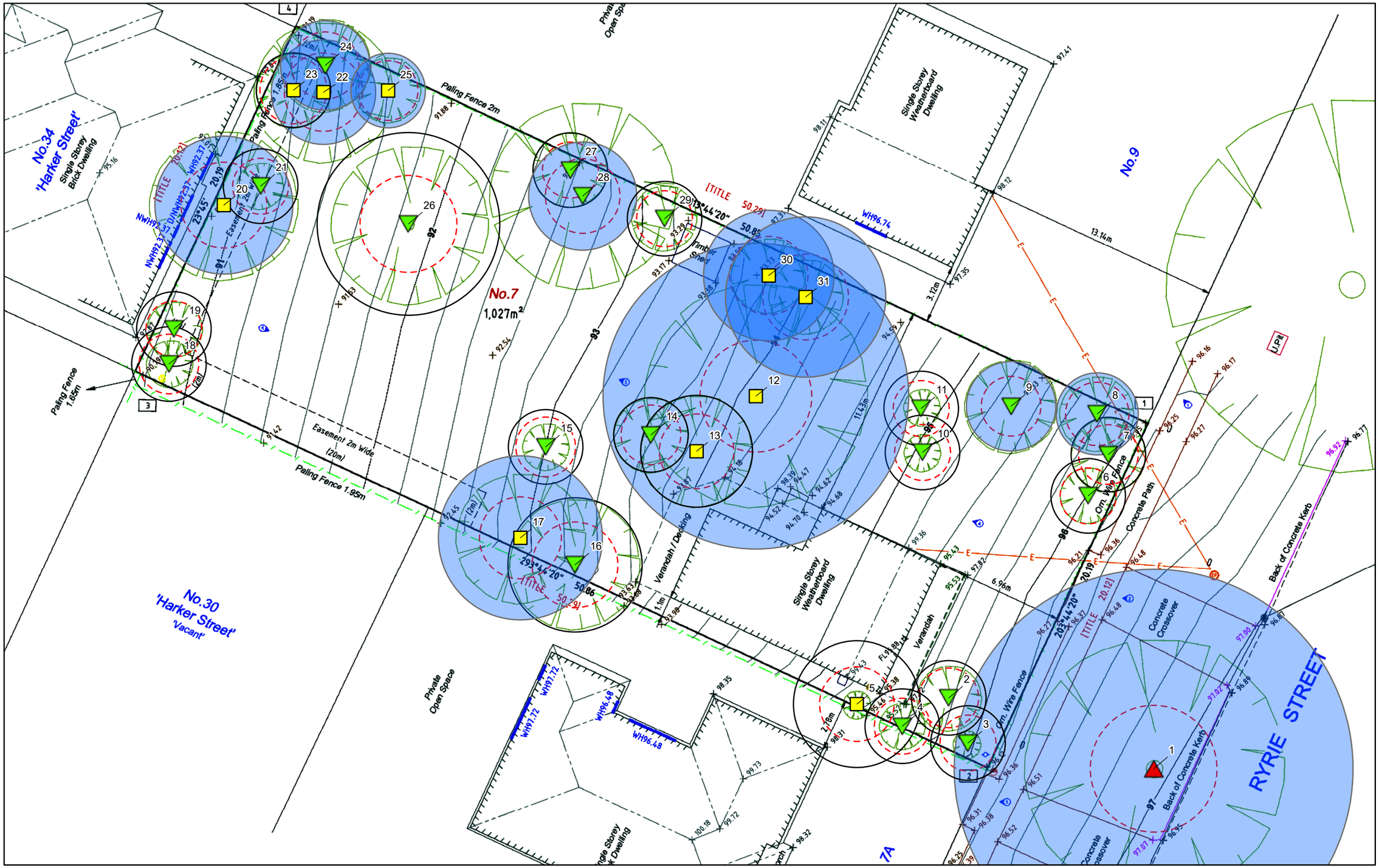
David Balsamo
Principal Consultant

Attachments

- Appendix 1 - Site Plan
- Appendix 2 - Site Data
- Appendix 3 - Tree Feature Descriptions

Appendix 1 - Site Plan

7 Ryrie Street, Healesville



Legend

Trees | **TPZ**

Retention Value
- ▲ High (1)
- 🟨 Moderate (10)
- ▼ Low (20)

Protection Status
- 🟦 Protected (12)
- ☐ Not Protected (19)

⬚ SRZ

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Scale: 1:200

Date: 25/09/2023

0 2 4 8 12 16 20 24 Meters

N

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PO Box 547 Leongatha VIC 3953 | ABN 89 647 282 446
Coordinate System: GDA 1994 VICGRID94. Trees represented as points, polylines or polygons not identified in the underlying feature survey have been plotted by Aja Arboriculture using a GNSS receiver with NTrip correction, available field references and/or aerial imagery. Location accuracy and dimensional characteristics associated with points, polylines and polygons can be assumed to not exceed one (1) metre from true position. Layers and attributes listed in the Legend are georeferenced in this plan and can be accessed in CAD using the PDFIMPORT command.

Site #:	1
Species:	***Eucalyptus camphora***
Common Name:	Mountain Swamp Gum
Origin:	Victorian Native
Height (m):	17
Width (m):	15
DBH Field Measurements (cm):	89
AS4970 DBH Calculation (cm):	89
Basal Diameter (cm):	103
Life Stage:	Mature
Vigour:	Fair
Structure:	Acceptable
Growth Space:	Optimal
Landscape Viability:	Medium
AS4970 TPZ Calculation (m):	10.7
AS4970 SRZ Calculation (m):	3.4
Retention Value:	**High**
Comments:	

Land Use and Social Contribution

Land Use (Victoria)
Statutory Planning
Landscape Function
Adequate
Landscape Significance
Important vegetation public space
Ecosystem Contribution
Indigenous

Site #:	2
Species:	***Jacaranda mimosifolia***
Common Name:	Jacaranda
Origin:	Exotic
Height (m):	3
Width (m):	3
DBH Field Measurements (cm):	5,6,7
AS4970 DBH Calculation (cm):	10
Basal Diameter (cm):	18
Life Stage:	Semi-mature
Vigour:	Fair
Structure:	Minor Correction
Growth Space:	Optimal
Landscape Viability:	Medium
AS4970 TPZ Calculation (m):	2
AS4970 SRZ Calculation (m):	1.6
Retention Value:	**Low**
Comments:	

Land Use and Social Contribution

Land Use (Victoria)
Low Density
Landscape Function
Adequate
Landscape Significance
None
Ecosystem Contribution
Specimen

Site #:	3
Species:	***Acacia floribunda***
Common Name:	Gossamer Wattle
Origin:	Victorian Native
Height (m):	2
Width (m):	2
DBH Field Measurements (cm):	3,3,3
AS4970 DBH Calculation (cm):	5
Basal Diameter (cm):	7
Life Stage:	Semi-mature
Vigour:	Fair
Structure:	Acceptable
Growth Space:	Optimal
Landscape Viability:	Medium
AS4970 TPZ Calculation (m):	2
AS4970 SRZ Calculation (m):	1.5
Retention Value:	**Low**
Comments:	

Land Use and Social Contribution

Land Use (Victoria)
Low Density
Landscape Function
Marginal
Landscape Significance
None
Ecosystem Contribution
Specimen

Site #:	4
Species:	***Pleroma granulosum***
Common Name:	Lasiandra
Origin:	Exotic
Height (m):	2
Width (m):	3
DBH Field Measurements (cm):	3,4,3,2,2
AS4970 DBH Calculation (cm):	6
Basal Diameter (cm):	16
Life Stage:	Semi-mature
Vigour:	Fair
Structure:	Major Correction
Growth Space:	Minor Limitation
Landscape Viability:	Short
AS4970 TPZ Calculation (m):	2
AS4970 SRZ Calculation (m):	1.5
Retention Value:	**Low**
Comments: Pleroma urvilleanum	

Land Use and Social Contribution

Land Use (Victoria)
Low Density
Landscape Function
Marginal
Landscape Significance
None
Ecosystem Contribution
Specimen

Site #:	5
Species:	***Dicksonia antarctica***
Common Name:	Soft Tree Fern
Origin:	Australian Native
Height (m):	2
Width (m):	2
DBH Field Measurements (cm):	28
AS4970 DBH Calculation (cm):	28
Basal Diameter (cm):	31
Life Stage:	Semi-mature
Vigour:	Good
Structure:	Acceptable
Growth Space:	Optimal
Landscape Viability:	Long
AS4970 TPZ Calculation (m):	3.4
AS4970 SRZ Calculation (m):	2
Retention Value:	**Moderate**
Comments:	

Land Use and Social Contribution

Land Use (Victoria)
Low Density
Landscape Function
Adequate
Landscape Significance
None
Ecosystem Contribution
Indigenous

Site #:	6
Species:	***Grevillea sp.***
Common Name:	Grevillea
Origin:	Australian Native
Height (m):	2
Width (m):	2
DBH Field Measurements (cm):	11
AS4970 DBH Calculation (cm):	11
Basal Diameter (cm):	13
Life Stage:	Semi-mature
Vigour:	Good
Structure:	Minor Correction
Growth Space:	Minor Limitation
Landscape Viability:	Medium
AS4970 TPZ Calculation (m):	2
AS4970 SRZ Calculation (m):	1.5
Retention Value:	**Low**
Comments:	

Land Use and Social Contribution

Land Use (Victoria)
Low Density
Landscape Function
Marginal
Landscape Significance
None
Ecosystem Contribution
Specimen

Site #:	7
Species:	***Callistemon viminalis***
Common Name:	Weeping Bottlebrush
Origin:	Australian Native
Height (m):	5
Width (m):	4
DBH Field Measurements (cm):	12
AS4970 DBH Calculation (cm):	12
Basal Diameter (cm):	18
Life Stage:	Semi-mature
Vigour:	Good
Structure:	Minor Correction
Growth Space:	Optimal
Landscape Viability:	Medium
AS4970 TPZ Calculation (m):	2
AS4970 SRZ Calculation (m):	1.6
Retention Value:	**Low**
Comments:	

Land Use and Social Contribution

Land Use (Victoria)
Low Density
Landscape Function
Adequate
Landscape Significance
None
Ecosystem Contribution
Specimen

Site #:	8
Species:	***Pittosporum tenuifolium***
Common Name:	Kohuhu
Origin:	Exotic
Height (m):	6
Width (m):	4
DBH Field Measurements (cm):	13,12
AS4970 DBH Calculation (cm):	18
Basal Diameter (cm):	21
Life Stage:	Semi-mature
Vigour:	Fair
Structure:	Major Correction
Growth Space:	Minor Limitation
Landscape Viability:	Short
AS4970 TPZ Calculation (m):	2.2
AS4970 SRZ Calculation (m):	1.7
Retention Value:	**Low**
Comments:	

Land Use and Social Contribution

Land Use (Victoria)
Statutory Planning
Landscape Function
Minimal
Landscape Significance
None
Ecosystem Contribution
Specimen

Site #:	9
Species:	***Acer palmatum***
Common Name:	Japanese Maple
Origin:	Exotic
Height (m):	4
Width (m):	5
DBH Field Measurements (cm):	15,13
AS4970 DBH Calculation (cm):	20
Basal Diameter (cm):	19
Life Stage:	Semi-mature
Vigour:	Fair
Structure:	Major Correction
Growth Space:	Minor Limitation
Landscape Viability:	Short
AS4970 TPZ Calculation (m):	2.4
AS4970 SRZ Calculation (m):	1.6
Retention Value:	**Low**
Comments:	

Land Use and Social Contribution

Land Use (Victoria)
Statutory Planning
Landscape Function
Marginal
Landscape Significance
None
Ecosystem Contribution
Specimen

Site #:	10
Species:	***Camellia japonica***
Common Name:	Camellia
Origin:	Exotic
Height (m):	2
Width (m):	2
DBH Field Measurements (cm):	12
AS4970 DBH Calculation (cm):	12
Basal Diameter (cm):	15
Life Stage:	Semi-mature
Vigour:	Good
Structure:	Acceptable
Growth Space:	Optimal
Landscape Viability:	Long
AS4970 TPZ Calculation (m):	2
AS4970 SRZ Calculation (m):	1.5
Retention Value:	**Low**
Comments:	

Land Use and Social Contribution

Land Use (Victoria)
Low Density
Landscape Function
Marginal
Landscape Significance
None
Ecosystem Contribution
Specimen

Site #:	11
Species:	***Camellia japonica***
Common Name:	Camellia
Origin:	Exotic
Height (m):	2
Width (m):	2
DBH Field Measurements (cm):	12
AS4970 DBH Calculation (cm):	12
Basal Diameter (cm):	15
Life Stage:	Semi-mature
Vigour:	Good
Structure:	Acceptable
Growth Space:	Optimal
Landscape Viability:	Long
AS4970 TPZ Calculation (m):	2
AS4970 SRZ Calculation (m):	1.5
Retention Value:	**Low**
Comments:	

Land Use and Social Contribution

Land Use (Victoria)
Low Density
Landscape Function
Marginal
Landscape Significance
None
Ecosystem Contribution
Specimen

Site #:	12
Species:	***Brachychiton populneus***
Common Name:	Kurrajong
Origin:	Victorian Native
Height (m):	10
Width (m):	12
DBH Field Measurements (cm):	68
AS4970 DBH Calculation (cm):	68
Basal Diameter (cm):	82
Life Stage:	Semi-mature
Vigour:	Fair
Structure:	Acceptable
Growth Space:	Optimal
Landscape Viability:	Medium
AS4970 TPZ Calculation (m):	8.2
AS4970 SRZ Calculation (m):	3
Retention Value:	**Moderate**
Comments:	

Land Use and Social Contribution

Land Use (Victoria)
Statutory Planning
Landscape Function
Adequate
Landscape Significance
Important vegetation private property
Ecosystem Contribution
Specimen

Site #:	13
Species:	***Acer palmatum***
Common Name:	Japanese Maple
Origin:	Exotic
Height (m):	7
Width (m):	7
DBH Field Measurements (cm):	13,14,10,12
AS4970 DBH Calculation (cm):	25
Basal Diameter (cm):	31
Life Stage:	Semi-mature
Vigour:	Fair
Structure:	Acceptable
Growth Space:	Minor Limitation
Landscape Viability:	Medium
AS4970 TPZ Calculation (m):	3
AS4970 SRZ Calculation (m):	2
Retention Value:	**Moderate**
Comments:	

Land Use and Social Contribution

Land Use (Victoria)
Low Density
Landscape Function
Adequate
Landscape Significance
None
Ecosystem Contribution
Specimen

Site #:	14
Species:	***Syzygium paniculatum***
Common Name:	Magenta Cherry
Origin:	Australian Native
Height (m):	6
Width (m):	5
DBH Field Measurements (cm):	15
AS4970 DBH Calculation (cm):	15
Basal Diameter (cm):	19
Life Stage:	Semi-mature
Vigour:	Good
Structure:	Acceptable
Growth Space:	Optimal
Landscape Viability:	Long
AS4970 TPZ Calculation (m):	2
AS4970 SRZ Calculation (m):	1.6
Retention Value:	**Low**
Comments:	

Land Use and Social Contribution

Land Use (Victoria)
Low Density
Landscape Function
Marginal
Landscape Significance
None
Ecosystem Contribution
Specimen

Site #:	15
Species:	***Acer palmatum***
Common Name:	Japanese Maple
Origin:	Exotic
Height (m):	5
Width (m):	3
DBH Field Measurements (cm):	11,10
AS4970 DBH Calculation (cm):	15
Basal Diameter (cm):	17
Life Stage:	Semi-mature
Vigour:	Fair
Structure:	Major Correction
Growth Space:	Optimal
Landscape Viability:	Short
AS4970 TPZ Calculation (m):	2
AS4970 SRZ Calculation (m):	1.6
Retention Value:	**Low**
Comments:	

Land Use and Social Contribution

Land Use (Victoria)
Low Density
Landscape Function
Adequate
Landscape Significance
None
Ecosystem Contribution
Specimen

Site #:	16
Species:	***Arbutus unedo***
Common Name:	Irish Strawberry Tree
Origin:	Exotic
Height (m):	7
Width (m):	7
DBH Field Measurements (cm):	23,19
AS4970 DBH Calculation (cm):	30
Basal Diameter (cm):	41
Life Stage:	Semi-mature
Vigour:	Fair
Structure:	Minor Correction
Growth Space:	Minor Limitation
Landscape Viability:	Short
AS4970 TPZ Calculation (m):	3.6
AS4970 SRZ Calculation (m):	2.3
Retention Value:	**Low**
Comments:	

Land Use and Social Contribution

Land Use (Victoria)
Low Density
Landscape Function
Adequate
Landscape Significance
None
Ecosystem Contribution
Weed

Site #:	17
Species:	***Fagus sylvatica***
Common Name:	European Beech
Origin:	Exotic
Height (m):	11
Width (m):	9
DBH Field Measurements (cm):	11,10,18,8,7,7,6,12,14,16
AS4970 DBH Calculation (cm):	37
Basal Diameter (cm):	38
Life Stage:	Semi-mature
Vigour:	Good
Structure:	Acceptable
Growth Space:	Minor Limitation
Landscape Viability:	Long
AS4970 TPZ Calculation (m):	4.4
AS4970 SRZ Calculation (m):	2.2
Retention Value:	**Moderate**
Comments:	

Land Use and Social Contribution

Land Use (Victoria)
Statutory Planning
Landscape Function
Adequate
Landscape Significance
None
Ecosystem Contribution
Specimen

Site #:	18
Species:	***Coprosma repens***
Common Name:	Mirror Bush
Origin:	Exotic
Height (m):	3
Width (m):	3
DBH Field Measurements (cm):	12
AS4970 DBH Calculation (cm):	12
Basal Diameter (cm):	18
Life Stage:	Semi-mature
Vigour:	Good
Structure:	Acceptable
Growth Space:	Optimal
Landscape Viability:	Long
AS4970 TPZ Calculation (m):	2
AS4970 SRZ Calculation (m):	1.6
Retention Value:	**Low**
Comments:	

Land Use and Social Contribution

Land Use (Victoria)
Low Density
Landscape Function
Minimal
Landscape Significance
None
Ecosystem Contribution
Weed

Site #:	19
Species:	***Laurus nobilis***
Common Name:	Bay Laurel
Origin:	Exotic
Height (m):	4
Width (m):	4
DBH Field Measurements (cm):	11
AS4970 DBH Calculation (cm):	11
Basal Diameter (cm):	14
Life Stage:	Semi-mature
Vigour:	Good
Structure:	Acceptable
Growth Space:	Optimal
Landscape Viability:	Long
AS4970 TPZ Calculation (m):	2
AS4970 SRZ Calculation (m):	1.5
Retention Value:	**Low**
Comments:	

Land Use and Social Contribution

Land Use (Victoria)
Low Density
Landscape Function
Marginal
Landscape Significance
None
Ecosystem Contribution
Specimen

Site #:	20
Species:	***Quercus palustris***
Common Name:	Pin Oak
Origin:	Exotic
Height (m):	13
Width (m):	8
DBH Field Measurements (cm):	31
AS4970 DBH Calculation (cm):	31
Basal Diameter (cm):	42
Life Stage:	Semi-mature
Vigour:	Good
Structure:	Minor Correction
Growth Space:	Major Limitation
Landscape Viability:	Short
AS4970 TPZ Calculation (m):	3.7
AS4970 SRZ Calculation (m):	2.3
Retention Value:	**Moderate**

Comments: Tree heavily pruned at boundary.

Land Use and Social Contribution

Land Use (Victoria)
Statutory Planning
Landscape Function
Notable
Landscape Significance
None
Ecosystem Contribution
Specimen

Site #:	21
Species:	***Betula pendula***
Common Name:	Silver Birch
Origin:	Exotic
Height (m):	6
Width (m):	3
DBH Field Measurements (cm):	8,6
AS4970 DBH Calculation (cm):	10
Basal Diameter (cm):	13
Life Stage:	Semi-mature
Vigour:	Poor
Structure:	Acceptable
Growth Space:	Minor Limitation
Landscape Viability:	Short
AS4970 TPZ Calculation (m):	2
AS4970 SRZ Calculation (m):	1.5
Retention Value:	**Low**
Comments:	

Land Use and Social Contribution

Land Use (Victoria)
Low Density
Landscape Function
Marginal
Landscape Significance
None
Ecosystem Contribution
Specimen

Site #:	22
Species:	***Callistemon salignus***
Common Name:	Willow Bottlebrush
Origin:	Australian Native
Height (m):	9
Width (m):	6
DBH Field Measurements (cm):	16,17
AS4970 DBH Calculation (cm):	23
Basal Diameter (cm):	32
Life Stage:	Semi-mature
Vigour:	Good
Structure:	Minor Correction
Growth Space:	Minor Limitation
Landscape Viability:	Medium
AS4970 TPZ Calculation (m):	2.8
AS4970 SRZ Calculation (m):	2.1
Retention Value:	**Moderate**
Comments:	

Land Use and Social Contribution

Land Use (Victoria)
Statutory Planning
Landscape Function
Notable
Landscape Significance
None
Ecosystem Contribution
Specimen

Site #:	23
Species:	***Melaleuca squarossa***
Common Name:	Scented Paperbark
Origin:	Victorian Native
Height (m):	8
Width (m):	4
DBH Field Measurements (cm):	16
AS4970 DBH Calculation (cm):	16
Basal Diameter (cm):	22
Life Stage:	Semi-mature
Vigour:	Good
Structure:	Acceptable
Growth Space:	Minor Limitation
Landscape Viability:	Long
AS4970 TPZ Calculation (m):	2
AS4970 SRZ Calculation (m):	1.8
Retention Value:	**Moderate**
Comments:	

Land Use and Social Contribution

Land Use (Victoria)
Low Density
Landscape Function
Adequate
Landscape Significance
None
Ecosystem Contribution
Specimen

Site #:	24
Species:	***Callistemon viminalis***
Common Name:	Weeping Bottlebrush
Origin:	Australian Native
Height (m):	6
Width (m):	5
DBH Field Measurements (cm):	18,9
AS4970 DBH Calculation (cm):	20
Basal Diameter (cm):	22
Life Stage:	Semi-mature
Vigour:	Fair
Structure:	Minor Correction
Growth Space:	Major Limitation
Landscape Viability:	Short
AS4970 TPZ Calculation (m):	2.4
AS4970 SRZ Calculation (m):	1.8
Retention Value:	**Low**
Comments:	

Land Use and Social Contribution

Land Use (Victoria)
Statutory Planning
Landscape Function
Marginal
Landscape Significance
None
Ecosystem Contribution
Specimen

Site #:	25
Species:	***Callistemon citrinus***
Common Name:	Crimson Bottlebrush
Origin:	Victorian Native
Height (m):	5
Width (m):	3
DBH Field Measurements (cm):	12,6,9,4
AS4970 DBH Calculation (cm):	17
Basal Diameter (cm):	19
Life Stage:	Semi-mature
Vigour:	Good
Structure:	Acceptable
Growth Space:	Major Limitation
Landscape Viability:	Medium
AS4970 TPZ Calculation (m):	2
AS4970 SRZ Calculation (m):	1.6
Retention Value:	**Moderate**
Comments:	

Land Use and Social Contribution

Land Use (Victoria)
Statutory Planning
Landscape Function
Adequate
Landscape Significance
None
Ecosystem Contribution
Specimen

Site #:	26
Species:	***Fraxinus angustifolia subsp. Oxycarpa***
Common Name:	Claret Ash
Origin:	Exotic
Height (m):	13
Width (m):	12
DBH Field Measurements (cm):	41
AS4970 DBH Calculation (cm):	41
Basal Diameter (cm):	58
Life Stage:	Semi-mature
Vigour:	Good
Structure:	Acceptable
Growth Space:	Optimal
Landscape Viability:	Long
AS4970 TPZ Calculation (m):	4.9
AS4970 SRZ Calculation (m):	2.6
Retention Value:	**Low**
Comments:	

Land Use and Social Contribution

Land Use (Victoria)
Low Density
Landscape Function
Adequate
Landscape Significance
None
Ecosystem Contribution
Weed

Site #:	27
Species:	***Melaleuca ericifolia***
Common Name:	Swamp Paperbark
Origin:	Victorian Native
Height (m):	6
Width (m):	3
DBH Field Measurements (cm):	11,6
AS4970 DBH Calculation (cm):	13
Basal Diameter (cm):	16
Life Stage:	Semi-mature
Vigour:	Fair
Structure:	Acceptable
Growth Space:	Minor Limitation
Landscape Viability:	Medium
AS4970 TPZ Calculation (m):	2
AS4970 SRZ Calculation (m):	1.5
Retention Value:	**Low**
Comments:	

Land Use and Social Contribution

Land Use (Victoria)
Low Density
Landscape Function
Marginal
Landscape Significance
None
Ecosystem Contribution
Specimen

Site #:	28
Species:	***Eucalyptus lehmannii***
Common Name:	Bushy Yate
Origin:	Australian Native
Height (m):	14
Width (m):	11
DBH Field Measurements (cm):	24
AS4970 DBH Calculation (cm):	24
Basal Diameter (cm):	29
Life Stage:	Semi-mature
Vigour:	Fair
Structure:	Minor Correction
Growth Space:	Optimal
Landscape Viability:	Medium
AS4970 TPZ Calculation (m):	2.9
AS4970 SRZ Calculation (m):	2
Retention Value:	**Low**
Comments:	

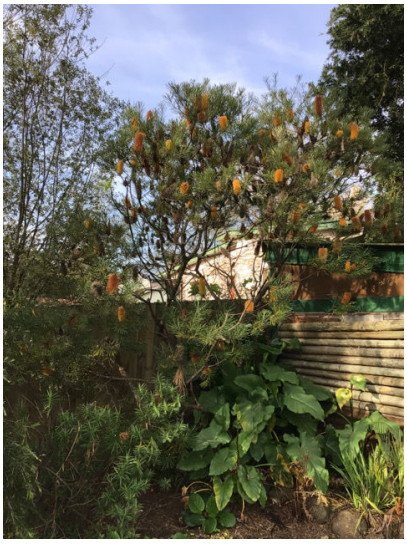
Land Use and Social Contribution

Land Use (Victoria)
Statutory Planning
Landscape Function
Marginal
Landscape Significance
None
Ecosystem Contribution
Specimen

Site #:	29
Species:	***Banksia ericifolia***
Common Name:	Heath-leaved Banksia
Origin:	Australian Native
Height (m):	3
Width (m):	3
DBH Field Measurements (cm):	9,8,7
AS4970 DBH Calculation (cm):	14
Basal Diameter (cm):	14
Life Stage:	Semi-mature
Vigour:	Fair
Structure:	Minor Correction
Growth Space:	Minor Limitation
Landscape Viability:	Short
AS4970 TPZ Calculation (m):	2
AS4970 SRZ Calculation (m):	1.5
Retention Value:	**Low**
Comments:	

Land Use and Social Contribution

Land Use (Victoria)
Low Density
Landscape Function
Adequate
Landscape Significance
None
Ecosystem Contribution
Specimen



Site #:	30
Species:	***Callistemon viminalis***
Common Name:	Weeping Bottlebrush
Origin:	Australian Native
Height (m):	8
Width (m):	7
DBH Field Measurements (cm):	23,17
AS4970 DBH Calculation (cm):	29
Basal Diameter (cm):	34
Life Stage:	Semi-mature
Vigour:	Good
Structure:	Minor Correction
Growth Space:	Minor Limitation
Landscape Viability:	Medium
AS4970 TPZ Calculation (m):	3.5
AS4970 SRZ Calculation (m):	2.1
Retention Value:	**Moderate**
Comments:	

Land Use and Social Contribution

Land Use (Victoria)
Statutory Planning
Landscape Function
Adequate
Landscape Significance
None
Ecosystem Contribution
Specimen

Site #:	31
Species:	***Melaleuca linariifolia***
Common Name:	Snow in Summer
Origin:	Australian Native
Height (m):	8
Width (m):	5
DBH Field Measurements (cm):	36
AS4970 DBH Calculation (cm):	36
Basal Diameter (cm):	40
Life Stage:	Semi-mature
Vigour:	Good
Structure:	Minor Correction
Growth Space:	Optimal
Landscape Viability:	Medium
AS4970 TPZ Calculation (m):	4.3
AS4970 SRZ Calculation (m):	2.3
Retention Value:	**Moderate**
Comments:	

Land Use and Social Contribution

Land Use (Victoria)
Statutory Planning

Landscape Function
Adequate

Landscape Significance
None

Ecosystem Contribution
Specimen

Appendix 3 - Tree Feature Descriptors

Feature Classes - Trees are classified into three groups, Individual Trees, Grouped Trees or Hedge Rows.

Category	Description
Individual Tree	An individual tree with one or more trunks that is represented in the Site Plan as a point. This may include two or more trees growing in close proximity where all trees are engaged in mutual structural support.
Grouped Trees	Multiple trees of one or more species that are represented in the Site Plan as a polygon. Grouped trees are generally managed as a discrete unit.
Hedge Row	Multiple trees of one or more species in a linear arrangement that are represented in the Site Plan as a polyline. Hedge Rows are generally managed as a discrete unit.

Site ID. ## - textural reference to the location of an Individual Tree, Grouped Trees or Hedge Rows within the attached Site Plan appendix.

Species and Common Name - Defines the botanical name including genus, species, sub-species, variety and cultivar (if known) according to current taxonomical classifications as published in current literature. The common name will be that that is familiar to the arboricultural assessor, the local community or referenced literature.

Origin - Identifies the general geographic origins of the tree species identified.

Category	Description
Victorian Native	Occurs naturally within some part of the State of Victoria.
Australian Native	Occurs naturally within Australia but is not a Victorian native.
Exotic	Does not occur naturally within Australia.
Mixed	Applies to Hedge Rows and Groups of Trees only where the feature is comprised of multiple species that have multiple places of origin.

Height and Width - Dimensions are expressed in metres (m). Identifies the estimated height and width of a tree crown or combined crown for Grouped Trees or Hedge Rows. Crown heights are measured with a clinometer where possible. Crown widths are paced and estimated at the widest axis unless otherwise stated. Measurements rounded to the nearest metre.

Diameter at Breast Height (DBH) - Identifies the trunk diameter expressed in centimetres (cm) of a tree measured at 1.4m above the site grade unless otherwise stated. The methods used to determine this measurement are described in Appendix A of the Australian Standard AS 4970-2009 'Protection of trees on development sites'. Measurements undertaken using a diameter tape or builders tape. In the case of multi-stem (2 - 5 stems) Single Trees, DBH measurements shown are calculated in accordance with the aforementioned Standard. Where the number of stems for a Single Trees exceeds five, the calculation is the square root of the mean stem diameter squared, multiplied by the number of stems and is specified in the British Standard BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'. Multi-stem DBH calculations are rounded to the nearest centimetre.

Stem Diameter - Identifies the diameter of the trunk expressed in centimetres (cm) of a tree immediately above the root buttress. Measurements undertaken using a diameter tape or builders tape and rounded to the nearest centimetre.

Life Stage - Identifies the physiological stage of the Features life cycle.

Category	Description
Young	Sapling tree and/or recently planted.
Semi-mature	Tree rapidly increasing in size and yet to achieve expected size in situation.
Maturing	Specimen approaching expected size in situation, with reduced incremental growth.
Over-mature	Tree may be senescent and in decline or crown area substantially reduced relative to trunk size.

Vigour - Describes the overall health and vigour of a Feature and is derived from the Condition variables identified in the iTree Eco v6.0 model. Category selection is based on the Feature displaying one or more of the criteria listed in the corresponding Description.

Category	Description
Excellent	100% live crown. Leaf size and colour is consistent with that of a healthy example of the species. Shoot tips are healthy and display excellent extension. Buds are swollen.
Good	97% - 92% live crown. Leaf size and colour is consistent with that of a healthy example of the species. Shoot tips are healthy and display adequate extension. Buds are swollen.
Fair	87% - 77% live crown. Leaf size and colour is generally consistent with that of a healthy example of the species although some foliage (less than 20% of total crown volume) displays discolouration or reduced leaf size. Some shoot tips may display reduced extension and buds may show signs of damage or desiccation.
Poor	72% - 52% live crown. Leaf size and colour is not consistent with that of a healthy example of the species. Foliage (greater than 20% but less than 40% of total crown volume) displays discolouration or reduced leaf size. Shoot tips may display reduced extension and buds may show signs of damage or desiccation.
Critical	47% - 27% live crown. Leaf size and colour is not consistent with that of a healthy example of the species. Foliage (greater than 40% but less than 60% of total crown volume) displays discolouration or reduced leaf size. Shoot tips display reduced extension and buds show signs of damage or desiccation.
Dying	22% - 2% live crown. Leaf size and colour is not consistent with that of a healthy example of the species. Foliage (greater than 60% but less than 95% of total crown volume) displays discolouration or reduced leaf size. Shoot tips display limited extension and buds show distinct signs of damage or desiccation.
Dead	0% live crown. Leaf size and colour is not consistent with that of a healthy example of the species. Foliage (greater than 95% of total crown volume) displays discolouration or reduced leaf size. Shoot tips display no extension and buds are damage or desiccated.

Appendix 3 - Tree Feature Descriptors

Structure - Adapted in part from the Quantified Tree Risk Assessment (QTRA) manual, the descriptor is designed to inform planners, architects and arborists of the overall structural capacity of a Feature and provide a concise description of the input required to maintain a Feature within the landscape.

Category	Description
Acceptable	Minimal or no damage, disease or decay visible in the root plate, trunk, primary scaffold limbs or outer crown. No works are required to relieve structural faults or remedy conflict with adjoining edifices. The probability of failure is generally considered to be less than 1/1M
Minor Correction	Minimal to moderate damage, disease or decay visible in primary scaffold limb(s), outer crown or peripheral root(s) that could be corrected through appropriate treatment that would moderately improve Landscape Viability. Adjoining edifices may benefit from treatment. The probability of failure is generally considered to be less than 1/10K but greater than 1/M.
Major Correction	Moderate to major damage, disease or decay visible in primary scaffold limb(s), outer crown or peripheral root(s) that could be corrected through appropriate treatment that would significantly improve Landscape Viability. Adjoining edifices would benefit from treatment. The probability of failure is generally considered to be less than 1/1K but greater than 10/K.
Unacceptable	Moderate to major damage, disease or decay visible in the root plate or lower trunk. Major damage, disease or decay in primary scaffold limb(s) that cannot be corrected through appropriate treatments. Landscape Viability unlikely to be improved by treatment. The probability of failure is generally considered to be greater than 1/1K.

Available Growth Space - Describes the space above and below ground that can be reasonably assumed based on visual inspection of the site that the Feature can exploit for future crown and root development.

Category	Description
Optimal	Open, level or gently sloping ground. Minimal competition for available light, water and nutrient. Part of a group of similar species that is suitably spaced and likely to provide mutual support. Specie genetically suited or adapted to the existing environment.
Minor Limitation	Moderately constrained location. Long standing built form present on one side of Features root zone. Surrounding trees are competing for available space, light, water or nutrients. Feature is regularly pruned to meet clearance requirements.
Major Limitation	Heavily constrained location. Root zone has been compacted by continuous and on-going traffic movements or built over with impervious surfaces. Crown crowded by surrounding larger trees or structures that impede natural form development.

Landscape Viability - Adapted from Tree AZ, describes how long it could be reasonably expected that a Feature will remain a viable asset in an evolving landscape. Landscape Viability is informed by Life Stage, Vigour, Structure and Available Growth Space.

Category	Description
Long	Feature will likely contribute to the landscape for forty (40) or more years.
Medium	Feature will likely contribute to the landscape for between fifteen (15) to forty (40) years.
Short	Feature will likely contribute to the landscape for between five (5) to fifteen (15) years.
Remove	Feature will likely require removal within five (5) years.

Land Use and Social Contribution - Describes the contribution or value a Feature provides to an existing landscape and is derived from MIS506 (2022) Tree Valuation published by Arboriculture Australia. It has four primary components including Land Use (State), Landscape Function, Landscape Significance and Ecosystem Contribution.

Land Use (Victoria)	
Category	**Description**
Legal Instrument	Legal Instrument. Section 173 agreements that contain conditions on the property title requiring the retention and/or protection of vegetation.
Local Law	Local laws protecting vegetation on all land within a municipal area. Exempt trees are attributed according to designated land use for the site.
Statutory Planning	Statutory planning scheme overlays that protect vegetation on private and public land. Existing planning permits requiring the retention of trees. Exempt trees are attributed according to designated land use for the site.
Native Vegetation	Property subject to the provisions of 52.16 or 52.17 Native Vegetation. Exempt trees are attributed according to designated land use for the site.
Public Space	Public Space. Public Park and Recreation Zones. Public Conservation and Resource Zones.
High Density	High Density Mixed Use Zones. Township Zones.
Medium Density	Medium Density. Residential Growth Zone. General Residential Zone.
Low Density	Low Density Residential Zones. Neighbourhood Residential Zones. Green Wedge Zones. Rural Conservation Zones.
Special Purpose	Special Purpose Zones. Public Use Zones. Transport Zones. Commercial Zones.
Industrial/ Farming	Industrial and Farming Zones.
Exempt Land	Exempt Land. Land not subject to statutory land zoning, native vegetation provisions, legal instruments or local laws.

Appendix 3 - Tree Feature Descriptors

Landscape Function	
Category	**Description**
Minimal	Nondescript tree, hedge or grouped planting in a poorly designed and/or maintained landscape. Planting contributes minimally to positive architectural, engineering, aesthetic or climate function. Canopy intersecting another tree
Marginal	Tree, hedge or grouped planting in a poorly designed and/or maintained landscape. Planting contributes marginally to positive architectural, engineering, aesthetic or climate function. One of a group of close plantings
Adequate	Tree, hedge or grouped planting of moderate value that contributes as a positive architectural, engineering, aesthetic or climate function. Wide plantings. Irregular spacing between trees; regular spacing one side (not hard surface)
Notable	Tree, hedge or grouped planting of moderate to high value that contributes as a positive architectural, engineering, aesthetic or climate function in a built environment. Hard surface planting (street or pathway), or plantings with regular spacing both sides
Exceptional	Individual feature specimen tree, hedge or grouped planting of significant value as a positive architectural, engineering, aesthetic or climate modifier. Avenue, park, reserve or other green space feature planting.

Landscape Significance	
Category	**Description**
None	The tree(s) is not considered significant within the landscape.
Important private property	The tree(s) represents a significant feature within the subject site or adjoining properties.
Important public space	The tree(s) represents a significant feature within the public realm as viewed from the subject site, adjoining properties and/or streetscapes.
Horticultural 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.
Local/state significant tree	Tree is listed in either a local or state significant tree register.
National significant tree	Tree is listed in a national significant tree register.

Ecosystem Contribution	
Category	**Description**
Weed	The tree(s) is a listed weed species.
Specimen	A typical garden specimen of a species commonly found in the urban context.
Indigenous	Remnant, regenerated or planted indigenous vegetation that contributes to biological diversity.

Ecosystem Contribution	
Category	**Description**
Habitat	Tree(s) could have value as habitat for indigenous wildlife, including providing breeding, foraging or roosting habitat, or is a component of a wildlife reserve.

Retention Value - Provides a concise rating of the Features value within the context of an evolving landscape that may include built form. Retention Value is informed by Landscape Viability, Landscape Contribution, published literature and the experience of the surveyor on the capacity of the Feature to tolerate and adapt to change.

Category	Description
High 	A tree of good quality that displays acceptable vigour and structure. The tree contributes to the existing landscape and has the potential to be long-term component in an evolving one if appropriately managed. The species is known to perform well within its given context and has desirable aesthetic traits. Retention of this tree is highly desirable.
Moderate 	A tree of reasonable quality that displays acceptable vigour and structure. The tree may have a condition, and or structural problem that can be corrected with arboricultural treatment. The species is known to perform within its given context. The tree has the potential to be a medium to long-term component of the landscape if managed appropriately. Retention of these trees is generally desirable.
Low 	A tree of poor quality that displays unacceptable vigour or structure. The tree may present an unacceptable hazard to existing and future users of the site. The tree is not considered significant within the landscape. These tree is easily replaceable. The species is functionally inappropriate given the context and may demand excessive management if retained. The cost to maintain this tree within the given context may exceed the benefit it provides to the landscape.

Comments - Provides additional information concerning the Feature.

Tree Protection Zone (TPZ) - Dimensions are expressed in metres (m) as a radius measured from the center of the trunk. Defined under the Australian Standard AS 4970 - 2009 “Protection of trees on development site’ as a specified area above and below ground and at a given distance from the trunk set aside for the protection of a tree’s roots and crown to provide for the viability and stability of a tree to be retained where it is potentially subject to damage by development.

Structural Root Zone (SRZ) - Dimensions are expressed in metres (m) as a radius measured from the center of the trunk. Defined under the Australian Standard AS 4970 - 2009 “Protection of trees on development site’ and the subsequent amendment AS 4970/Amdt 1/2010-03-26 as the area around the base of a tree required for the tree’s stability in the ground. The woody root growth and soil cohesion in this area are necessary to hold the tree upright.