

Arboricultural Report

Preliminary Tree Assessment



Provide specialist arboriculture advice for vegetation management in the urban forest.

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**Burnett Grey Gardens
Ripponlea VIC 3185**

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Introduction

Rigoni Tree Solutions has been engaged by City of Port Phillip to survey and assess all onsite trees located within Burnett Grey Gardens, Ripponlea (the 'Subject Property').

This is a Preliminary Tree Assessment report that details each trees health, condition, dimensions, suitability for retention, and provides recommendations to guide their future management; this is not a Construction Impact Assessment and does not consider any proposed plans for the subject site.

The overall site is located within a Public Park and Recreation Zone (PPRZ) in the City of Port Phillip (the 'Responsible Authority') (DTP, 2025).

While there are no relevant planning overlays affecting this site, the Responsible Authority provides tree protection through the enforcement of local laws.

These local laws state that a permit is required to remove any trees which have a trunk circumference of 150cm or more at 1m above ground level, or 150cm or more at ground level.

These trees are owned and managed by the Responsible Authority.

CRITICAL ISSUES

Demolition and construction works can negatively affect retained trees both directly through mechanical injury and indirectly in ways that are not evident immediately but affect the health of the tree in the long term. It is for this reason that tree protection measures should be implemented and adhered to throughout the entire development process.

Arboricultural techniques cannot repair construction damage to a tree or the degradation to its environment. Arborists only have a limited ability to 'cure' specific injuries or generalized stress caused by construction activities. Once a tree has been damaged, few remedial treatments available (Matheny & Clark 1998).

Direct damage to roots through trenching and site cuts can remove absorbing roots and sever structural roots. Root activity can be compromised by various activities: soil compaction, sealing the soil surface by adding soil fill over roots and severing roots during excavation. These activities limit the amount of oxygen and moisture that may reach the roots, and without which roots cannot function. Tree trunks and branches are easily damaged by machinery during works. It is important that trees are properly protected throughout all stages of the project starting at the design phase.

DETERMINING TREE PROTECTION ZONES

The following information has been adapted from the Australian Standard for the Protection of trees on development sites (AS4970-2009):

The tree protection zone (TPZ) is the principal means of protecting trees on development sites. The TPZ is a combination of the root area and crown area requiring protection. It is an area isolated from construction disturbance, so that the tree remains viable.

The radius of the TPZ is calculated for each tree by multiplying its diameter at breast height (DBH) by 12. DBH is measured 1.4m above ground level. The TPZ measurement is applied by measuring the radius from the centre of the stem at ground level. The following also applies:

- The TPZ incorporates the structural root zone (SRZ).
- A TPZ should not be less than 2 m nor greater than 15 m (except where crown protection is required).
- The TPZ of palms, other monocots, cycads and tree ferns should not be less than 1 m outside the crown projection.

Tree Protection Zone (TPZ) radius is measured from the centre of the trunk giving a circular area to protect the canopy and roots above and below ground during construction. The Structural Root Zone (SRZ) is incorporated in the TPZ to protect the tree's longevity and stability. Encroachment should be avoided inside the SRZ.

VARIATIONS TO THE TPZ

It may be possible to encroach into or make variations to the standard TPZ. Encroachment includes excavation, compacted fill and machine trenching.

MINOR ENCROACHMENT

If the proposed encroachment is less than 10% of the area of the TPZ and is outside the SRZ detailed root investigations should not be required. The area lost to this encroachment should be compensated for elsewhere and contiguous with the TPZ. Variations must be made by the project arborist considering relevant factors listed.

MAJOR ENCROACHMENT

If the proposed encroachment is greater than 10% of the TPZ or inside the SRZ, the project arborist must demonstrate that the tree(s) would remain viable. The area lost to this encroachment should be compensated for elsewhere and contiguous with the TPZ. This may require root investigation by non-destructive methods and consideration of relevant factors.

Methodology

On Thursday 20th March 2025, a detailed inspection was undertaken from the ground by Mark Waldron. Observations, estimations, measurements and photographs were taken during the inspection. Samples from the trees, including fruit, buds, bark and leaves were gathered to help in identifying the genus/species.

Individual detailed tree data is in the observations section, starting on the next page. The site plan with tree numbers is in appendix 1. Individual tree photos are in appendix 2 and tree descriptors are in appendix 4 of this report for reference in understanding the data collected for the trees assessed.

Data collected for the trees included:

- **Genus and species** identification
- **Common name** of each tree
- An estimation of tree **height** and **canopy width**
- **Origin** of the species
- Measuring the **Diameter at Breast Height (DBH)** (measured at 1.4m above ground level) and **Diameter at Base (DAB)** (measured at ground level) of the tree
- An estimation of tree **age**
- The **health** of each tree
- The **structure** of each tree
- The **hazard** that each tree presents to the site
- The **Useful Life Expectancy (ULE)** of each tree
- The **Arboricultural Significance** and **retention value** of each tree, as calculated on the STARS regimen.
- **Tree Protection Zone (TPZ)** in accordance with AS4970-2009
- **Structural Root Zone (SRZ)** in accordance with AS4970-2009

No underground exploration was done and no liability can be taken for any faults occurring underground. All the information given is in accordance with normal weather conditions and not in severe weather events. The assessment information relates to evidence taken on the day of inspection only and does not include changes thereafter. Rigoni Tree Solutions recommends reassessing the tree annually or directly after severe weather events.

Note: Tree descriptors are located in the appendix of this report for reference in understanding the data collected for the tree assessed.

Observations

Table 1 Detailed tree data tree survey at Burnett Grey Gardens, Ripponlea. All measurements are in metres. Map: Appendix 1 Aerial Site Plan. GL = Ground Level

Tree #	Genus/species (Common name)	Height (m)	Width (m)	Origin	Age	Health	Structure	Hazard	ULE	Significance	DBH (m)	DAB (m)	TPZ (m)	SRZ (m)	Comments
T1	<i>Butia capitata</i> (Blue Palm, Jelly Palm)	6	3x3	Exotic	Semi Mature	Fair	Fair	Low	Long	Medium	NA	NA	2.50	NA	Onsite tree
T2	<i>Phoenix canariensis</i> (Canary Island Date Palm)	10	5x5	Exotic	Semi Mature	Fair	Fair	Low	Long	Medium	NA	NA	3.50	NA	Onsite tree
T3	<i>Phoenix canariensis</i> (Canary Island Date Palm)	12	6x6	Exotic	Semi Mature	Fair	Fair	Low	Long	Medium	NA	NA	4.00	NA	Onsite tree
TG4	<i>Yucca gigantea</i> (Spineless Yucca)	3	1x1	Exotic	Semi Mature	Fair	Fair	Low	Long	Medium	NA	NA	2.00	NA	Onsite group of 18 trees, 2 small Date Palms and 6 yuccas in garden bed and 10 Birds of Paradise
T5	<i>Brachychiton rupestris</i> (Bottle Tree)	5	5x5	Aust. Native	Semi Mature	Fair	Fair	Low	Long	Medium	0.27	0.28	3.24	1.94	Onsite tree
T6	<i>Phoenix canariensis</i> (Canary Island Date Palm)	6	8x8	Exotic	Semi Mature	Good	Good-Fair	Low	Long	Medium	NA	NA	5.00	NA	Onsite tree
T7	<i>Phoenix canariensis</i> (Canary Island Date Palm)	12	7x7	Exotic	Semi Mature	Fair	Fair	Low	Long	Medium	NA	NA	4.50	NA	Onsite tree
TG8	<i>Zelkova serrata</i> (Japanese Zelkova)	6	7x8	Exotic	Semi Mature	Good	Fair	Low	Long	Medium	0.38	0.37	4.56	2.10	Onsite group of 2 trees
T9	<i>Calodendron capense</i> (Cape Chestnut)	4	3x3	Exotic	Semi Mature	Fair	Fair	Low	Long	Medium	0.13	0.18	2.00	1.61	Onsite tree
TG10	<i>Yucca gigantea</i> (Spineless Yucca)	3	1x1	Exotic	Semi Mature	Fair	Fair	Low	Long	Low	NA	NA	2.00	NA	Onsite group of 6 trees

Tree #	Genus/species (Common name)	Height (m)	Width (m)	Origin	Age	Health	Structure	Hazard	ULE	Significance	DBH (m)	DAB (m)	TPZ (m)	SRZ (m)	Comments
T11	<i>Pittosporum undulatum</i> (Sweet Pittosporum)	8	12x12	Vic Native	Mature	Good	Fair	Low	Medium	Medium	0.58	0.61	6.96	2.69	Onsite tree
T12	<i>Phoenix canariensis</i> (Canary Island Date Palm)	13	7x7	Exotic	Semi Mature	Fair	Fair	Low	Long	Medium	NA	NA	4.50	NA	Onsite tree
T13	<i>Butia capitata</i> (Blue Palm, Jelly Palm)	5	6x6	Exotic	Semi Mature	Good	Fair	Low	Long	Medium	NA	NA	4.00	NA	Onsite tree, low hanging fronds over path to station
T14	<i>Phoenix canariensis</i> (Canary Island Date Palm)	13	6x6	Exotic	Semi Mature	Good	Fair	Low	Long	Medium	NA	NA	4.00	NA	Onsite tree
T15	<i>Phoenix canariensis</i> (Canary Island Date Palm)	13	7x7	Exotic	Semi Mature	Good-Fair	Fair	Low	Long	Medium	NA	NA	4.50	NA	Onsite tree
TG16	<i>Metrosideros excelsa</i> (Pohutukawa)	4	7x7	Exotic	Semi Mature	Good	Fair	Low	Long	Medium	0.26	0.31	3.12	2.02	Onsite group of 2 trees
T17	<i>Koelreuteria paniculata</i> (Golden Rain Tree)	6	6x6	Exotic	Semi Mature	Good-Fair	Fair	Low	Long	Medium	0.29	0.36	3.48	2.15	Onsite tree

Recommendations

This park is comprised of the following:

- 9 monocots (Palms) comprised of 7 Date Palms & 2 Jelly Palms
- 6 dicots (woody trees)
- 2 groups of monocots in garden beds comprised of self-seeded juvenile Date Palms, Yuccas and Birds of Paradise

With all species Exotic (non-Australian) with the exception of Tree 5 (Australian native) and Tree 11 which is a Victorian Native.

All trees must be protected during any works and future designs should be limited to any new encroachment of 10% or less. Encroachments >10% require further justification by underground root exploration or root sensitive construction methods.

Tree 13 (Jelly Palm) has low hanging fronds over the pedestrian path to the station and should be pruned to remove the obstructions.

Appendix 1 shows the marked up feature survey and tree numbering has been colour coded to highlight the above points.

Reference

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Dunster, JA, Smiley, ET, Matheny, N & Lilly, S 2013. *Tree Risk Assessment Manual*, International Society of Arboriculture, Champaign, Illinois.

International Society of Arboriculture, 2014. *Glossary of Arboricultural Terms*. Martin One Source, United States of America.

Matheny, N & Clark JR, 1998, *Trees and Development: A Technical Guide to Preservation of Trees During Land Development*, International Society of Arboriculture, USA.

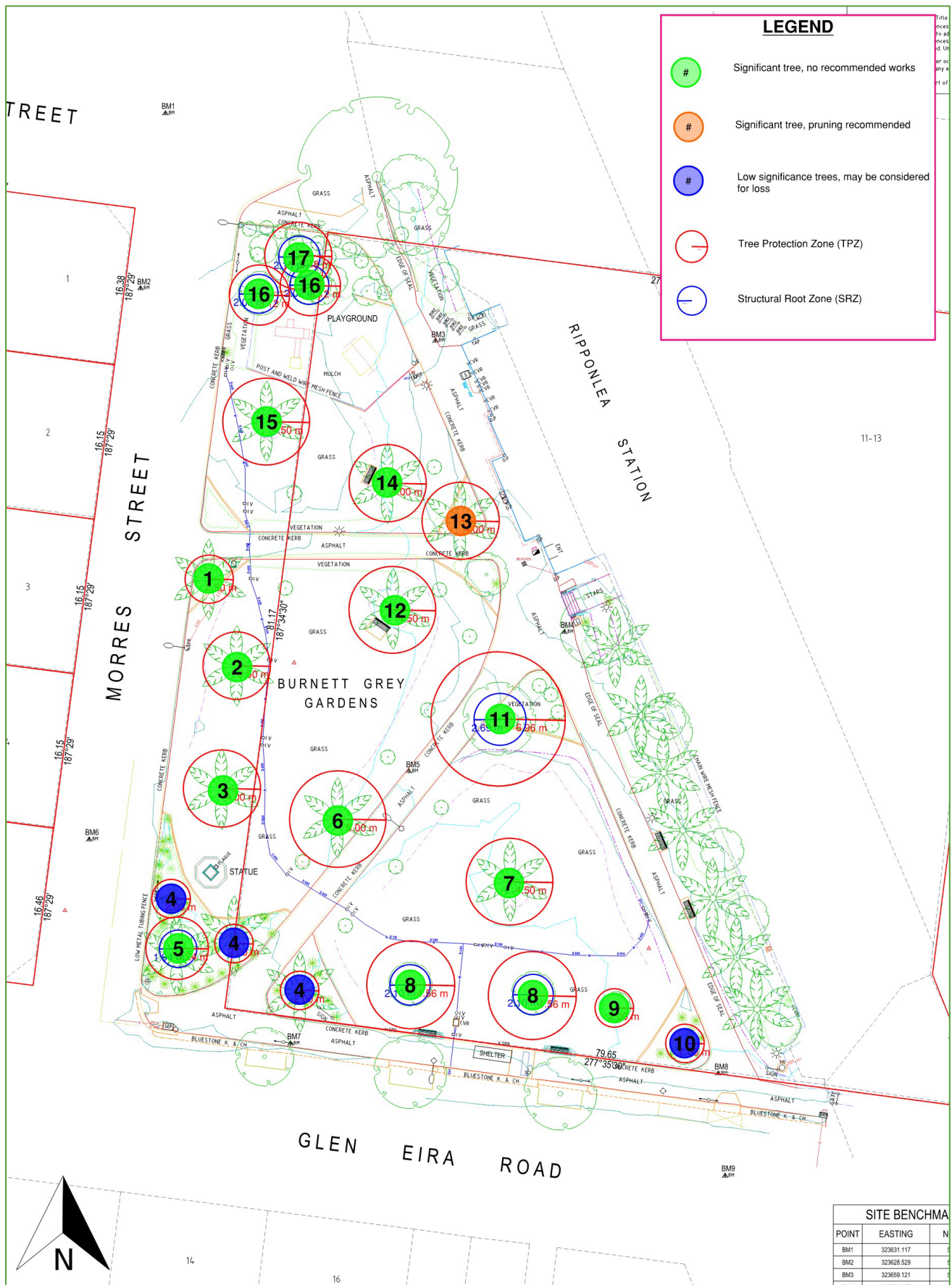
Standards Australia, 2007, *AS 4373-2007 Pruning of Amenity Trees*, Standards Australia, Sydney, Australia.

Standards Australia, 2009, *AS 4970-2009, Protection of Trees on Development Sites*, Standards Australia, Sydney, Australia.

DISCLAIMER

- Rigoni Tree Solutions shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including the payment of an additional fee for such services.
- The risk of trees remains the responsibility of the client or property owner.
- All, or any part of the contents of this report, or any copy thereof, shall not be used for any purpose by anyone but the person to whom it is addressed, without the written consent of Rigoni Tree Solutions.
- Payment and receipt of this report is considered acceptance of the above condition.

Appendix 1 - Feature Survey



Overall map of subject site

Source: 'Existing Conditions & Underground Services Plan' by Surfcoast dated December 2024

Appendix 2 - Tree photos



Tree 1



Tree 2



Tree 3



Tree Group 4



Tree 5



Tree 6



Tree 7



Tree Group 8



Tree 9



Tree Group 10



Tree 11



Tree 12



Tree 13



Tree 14



Tree 15



Tree Group 16



Tree 17

Appendix 3 - Glossary

Australian Qualification Framework (AQF)	A national framework for all educational and training purposes in Australia.
Arborist:	The person with training to AQF Level 3 in Arboriculture, or above, or equivalent recognized and relevant experience that enables the person to perform the tasks required by this Standard.
Branch:	A lateral shoot on a main axis such as a trunk or another branch. A branch arising off a trunk is a first order branch. A branch arising off a first order branch is a second order branch and so on. Second and successive orders of branches may be referred to as 'lateral branches.'
Buttress root:	Roots at the trunk base that help support the tree.
Bulge:	Swellings on branches, trunks or root flares; often caused by new tissue formed as a response to movement and that reinforces the wood structure at the weak area
Canopy:	A layer or multiple layers of branches and foliage at the top or crown of the tree.
Codominant stems:	Stems or trunks of about the same size originating from the same position from the main stem.
Crown:	Portion of the tree consisting of branches and leaves and any part of the trunk from which branches arise.
Decay:	The process of degradation of woody tissues by micro-organisms.
Defect:	An imperfection, weakness, or lack of something necessary. In trees, defects are injuries, growth patterns, decay, or other conditions that reduce the tree's structural strength.
Duty of care:	Legal obligation that requires an individual to apply reasonable actions when performing tasks that may potentially harm others.
Epicormic bud:	Latent or adventitious bud located at the cambium and concealed by the bark.
Epicormic shoots:	Shoots produced from epicormic buds at the cambium of trunks or branches.
Failure:	(Of tree or tree part) - breakage of stem, branch or roots, or loss of mechanical support in the root system
Hanging branches:	Unattached, cut or broken branches that are caught in the canopy.
Hazard:	Situation or condition that is likely to lead to a loss, personal injury, property damage, or disruption of activities; a likely source of harm. In relation to trees, a hazard is the tree part(s) identified as a likely source of harm.
Included bark:	Bark that grows between two closely positioned limbs or stems that eventually seals and joins the two structures together seemingly as one.
Lever arm:	The distance between the applied force (or centre of force) and the point where the object will bend or rotate

Likelihood:	The chance of an event occurring. In the context of tree failures, the term may be used to specify: (1) the chance of a tree failure occurring; (2) the chance of impacting a specified target; and (3) the combination of the likelihood of a tree failing and the likelihood of impacting a specified target.
Lopping:	The practice of cutting branches or stems between branch unions or internodes.
Mitigation:	In tree risk management, the process for reducing risk.
Overextended branch:	Branch that extends outside the normal crown area.
Pruning:	Removing branches (or occasionally roots) from a tree or other plant, using approved practices, to achieve a specified objective.
Reaction wood:	Wood formed in leaning or crooked stems, or on upper or lower sides of branches, as a means of counteracting the effects of gravity (<i>or other forces</i>).
Risk:	The combination of the likelihood of an event and the severity of the potential consequences. In the context of trees, risk is the likelihood of a conflict or tree failure occurring affecting a target, and the severity of the associated consequences-personal injury, property damage, or disruption of activities.
Scaffold limbs:	Permanent or structural limbs that form the scaffold architecture or structure of the tree.
Structural defect:	Feature, condition, or deformity of a tree that indicates a weak structure or instability that could contribute to tree failure.
Target:	people, property, or activities that could be injured, damaged, or disrupted by a tree.

Appendix 4 - Tree descriptors

AGE

Young	Juvenile or recently planted approximately 1-7 years.
Semi-mature	Tree actively growing.
Mature	Tree has reached expected size in situation.
Senescent	Tree is over mature and has started to decline.

HEALTH

Good	Foliage of tree is entire, with good colour, very little sign of pathogens and of good density. Growth indicators are good i.e., Extension growth of twigs and wound wood development. Minimal or no canopy dieback (deadwood).
Fair	Tree is showing one or more of the following symptoms: <25% dead wood, minor canopy dieback, foliage generally with good colour though some imperfections may be present. Minor pathogen damage present, with growth indicators such as leaf size, canopy density and twig extension growth typical for the species in this location.
Poor	Tree is showing one or more of the following symptoms of decline; >25% deadwood, canopy dieback is observable, discoloured or distorted leaves. Pathogens present, stress symptoms are observable as reduced leaf size, extension growth and canopy density.
Dead or dying	Tree is in severe decline; >55% deadwood, very little foliage, possibly epicormic shoots and minimal extension growth.

STRUCTURE

Good	Trunk and scaffold branches show good taper and attachment with minor or no structural defects. Tree is a good example of species with well-developed form showing no obvious root problems or pests and diseases.
Fair	Tree shows minor structural defects or minor damage to trunk e.g., bark missing, there could be cavities present. Minimal damage to structural roots. Tree could be seen as typical for this species.
Poor	There are major structural defects, damage to trunk or bark missing. Co-dominant stems could be present with likely points of failure. Girdling or damaged roots obvious. Tree is structurally problematic.
Hazardous	Tree is immediate hazard with potential to fail, this should be rectified as soon as possible.

HAZARD

Low	Tree appears to be structurally sound, is healthy with no signs of pests and disease, has good health and is clear of any hazards.
Medium	Tree displays signs of structural problems, evidence of pests or disease, signs of poor health, deadwood, decay, may be growing into an area that could create a hazard.
High	Tree is immediate hazard with the potential to fail, this should be rectified as soon as possible.

ULE - Useful Life Expectancy

Long	- Trees that appear to be retainable with an acceptable level of risk for more than 40 years. - Structurally sound trees located in positions that can accommodate future growth. - Storm damaged or defective trees that could be made suitable for retention in the long term by remedial tree surgery. - Trees of special significance for historical, commemorative or rarity reasons that would warrant extraordinary efforts to secure their long-term retention.
Medium	- Trees that appear to be retainable with an acceptable level of risk for 15-40 years. - Trees that may only live between 15-40 years. - Trees that may live for more than 40 years but would be removed to allow the safe development of more suitable individuals. - Trees that may live for more than 40 years but would be removed during the course of normal management for safety and nuisance reasons. - Storm damaged or defective trees that can be made suitable for retention in the medium term by remedial work.
Short	- Trees that appear to be retainable with an acceptable level of risk for 5-15 years. - Trees that may live for 5-15 years. - Trees that may live for more than 15 years but would be removed to allow the safe development of more suitable individuals. - Trees that may live for more than 15 years but would be removed during the course of normal management for safety and nuisance reasons. - Storm damaged or defective trees that can be made suitable for retention in the medium term by remedial work.
Remove	Trees with a high level of risk that would need removal within the next 5 years.
Dead Tree	- Dying or suppressed and declining trees through disease or inhospitable conditions. - Dangerous trees through instability or recent loss of adjacent trees. - Dangerous trees through structural defects including decay, included bark, wounds or poor form. - Damaged trees that are considered unsafe to retain.

ORIGIN

Indigenous	Occurs naturally in the area of the subject site
Victorian native	Occurs naturally in some parts of the State of Victoria
Australian native	Occurs naturally in some parts of Australia
Exotic	Occurs naturally outside of Australia

Tree Significance

IACA Significance of a Tree, Assessment Rating System (STARS)

The tree is to have a minimum of 3 criteria in a category to be classified in that group.

High	• The tree is in good condition and good vigour. • The tree has a form typical for the species. • The tree is a remnant or is a planted locally indigenous specimen and/or is rare or uncommon in the local area or of botanical interest or of substantial age. • The tree is listed as a Heritage Item, Threatened Species or part of an Endangered ecological community or listed on Councils significant Tree Register. • The tree is visually prominent and visible from a considerable distance when viewed from most directions within the landscape due to its size and scale and makes a positive contribution to the local amenity. • The tree supports social and cultural sentiments or spiritual associations, reflected by the broader population or community group or has commemorative values. • The tree's growth is unrestricted by above and below ground influences, supporting its ability to reach dimensions typical for the taxa in situ - tree is appropriate to the site conditions.
Medium	• The tree is in fair-good condition and good or low vigour. • The tree has form typical or atypical of the species. • The tree is a planted locally indigenous or a common species with its taxa commonly planted in the local area • The tree is visible from surrounding properties, although not visually prominent as partially obstructed by other vegetation or buildings when viewed from the street, • The tree provides a fair contribution to the visual character and amenity of the local area, • The tree's growth is moderately restricted by above or below ground influences, reducing its ability to reach dimensions typical for the taxa in situ.
Low	• The tree is in fair-poor condition and good or low vigour. • The tree has form atypical of the species. • The tree is not visible or is partly visible from surrounding properties as obstructed by other vegetation or buildings, • The tree provides a minor contribution or has a negative impact on the visual character and amenity of the local area, • The tree is a young specimen which may or may not have reached dimension to be protected by local Tree Preservation orders or similar protection mechanisms and can easily be replaced with a suitable specimen, • The tree's growth is severely restricted by above or below ground influences, unlikely to reach dimensions typical for the taxa in situ - tree is inappropriate to the site conditions, • The tree is listed as exempt under the provisions of the local Council Tree Preservation Order or similar protection mechanisms, • The tree has a wound or defect that has potential to become structurally unsound. • Environmental Pest / Noxious Weed Species • The tree is an Environmental Pest Species due to its invasiveness or poisonous/ allergenic properties, • The tree is a declared noxious weed by legislation. • Hazardous/Irreversible Decline • The tree is structurally unsound and/or unstable and is considered potentially dangerous, - The tree is dead, or is in irreversible decline, or has the potential to fail or collapse in full or part in the immediate to short term. • It is insignificant within the landscape and could not reasonably tolerate changes to its environment.