Sustainable
Tree Management
1/33 Colemans Road, Carrum Downs VIC 3201

Arboricultural Impact Assessment

Site address
8 Witt Street MITCHAM 3132
(724-728 Whitehorse Road MITCHAM 3132)

Report prepared for
Knowles Group

Prepared by
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Sustainable Tree Management

Prepared (V5) 23 February 2026

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VERSION CONTROL

Version	Date	Author	Change Notes
Draft	10/06/2025	BP, LS	Initial release.
1	16/06/2025	BP, LS	Corrections as per client review, dated 12/06/2025.
2	26/06/2025	IN, LS	Corrections as per client review, dated 26/06/2025.
3	14/10/2025	BP, LS	Incorporated Clause 52.37 (Canopy Tree Controls).
4	5/11/2025	BP, LS	Minor grammatical changes.
5	23/02/2026	BP, LS	Incorporated Clause 52.17 and Native Vegetation Controls, NVRR and NVCR

1. INTRODUCTION

This Arboricultural Impact Assessment has been prepared for Knowles Group to accompany a Planning Permit Application with the Whitehorse City Council for the redevelopment of the land for the construction of an aged care facility.

For planning purposes, the address for the parcel of land is 724-728 Whitehorse Road, Mitcham. Standard Parcel Identification 1\PS448313. However, throughout the Report, the site is addressed as 8 Witt Street, Mitcham, as referenced by the client.

This assessment evaluates the potential impacts of the development on existing trees nominated for retention. Focusing on their calculated Tree Protection Zones (TPZs) as a key constraint, to ensure compliance with planning regulations and promote sustainable integration with the surrounding landscape.

Recommendations are based on an evaluation of tree health, structure, and condition, with commentary on the potential loss of visual landscape or streetscape amenity and the ecological or aesthetic significance of the trees to the local environment.

Findings from a Non-Destructive Root Investigation (NDRI) conducted on 4th March 2025, are included with recommendations reflecting current environmental conditions.

Trees identified as worthy of retention are provided with protection guidelines in accordance with Australian Standard 4970-2009 Protection of Trees on Development Sites (AS4970-2009). These guidelines do not constitute a comprehensive Tree Management Plan or Tree Protection Plan.

2. Report Scope and Objectives

Sustainable Tree Management was engaged by Knowles Group to prepare an Arboricultural Impact Assessment (AIA) for trees located on and adjacent to the site located at 8 Witt Street, Mitcham.

The AIA contains a detailed examination of all trees potentially impacted by the proposed aged care facility development, ensuring a holistic approach that integrates arboricultural, environmental and urban planning considerations.

This assessment is designed to provide actionable insights for Knowles Group, the Whitehorse City Council and other stakeholders, by combining field inspections, non-destructive root investigations and compliance checks with relevant planning frameworks. The scope includes trees on the subject site and those on adjacent private land where development impacts may occur, addressing both ecological contributions and community amenity.

By prioritising sustainable outcomes, the Report supports the project's objective of creating a modern, community-oriented facility while minimising adverse effects on the local tree population and enhancing the landscape's character.

Report objectives include:

- Identify trees protected under the Whitehorse Planning Scheme;
- Assess the health, structure, and condition of established trees on the site and in proximity to the common boundaries;
- Evaluate tree suitability for retention based on observed characteristics and proposed development impacts;
- Calculate Tree Protection Zones (TPZs) and Structural Root Zones (SRZs) to quantify encroachments by the proposed development;
- Determine the feasibility of tree retention in the context of the proposed development and provide tree protection guidelines in accordance with Australian Standard 4970-2009 Protection of Trees on Development Sites (AS4970-2009); and
- Present results and recommendations obtained from the Non-Destructive Root Investigation (NDRI) conducted on 4th Mach 2025 reflecting current environmental conditions.

3. SITE OVERVIEW

The parcel of land is situated on the south side of Whitehorse Road and has an area of approximately 6,000m². The majority of the site is occupied by existing structures and hardstand surfaces, with vegetation primarily located around the boundaries. A total of twenty-two (22) trees were assessed growing on and adjacent to the site. The Nearmap image below (Figure1) provides an aerial overview of the site.

Figure 1. Aerial Nearmap image dated 18th April 2025.

4. Planning Considerations

Under the Department of Transport and Planning, the address for the parcel of land is 724-728 Whitehorse Road, Mitcham. Its Standard Parcel Identification (SPI) is 1\PS448313. The subject site falls within a General Residential Zone – Schedule 2 (GRZ2) under the provisions of the Whitehorse Planning Scheme and the following Vegetation Planning Overlays are applicable to the vegetation growing on the site:

- Clause 52.17 Native Vegetation;
- Clause 52.37 Canopy Trees;
- Clause 42.03 Significant Landscape Overlay – Schedule 9 (SLO9); and
- Clause 42.02 Vegetation Protection Overlay – Schedule 3 (VPO3).

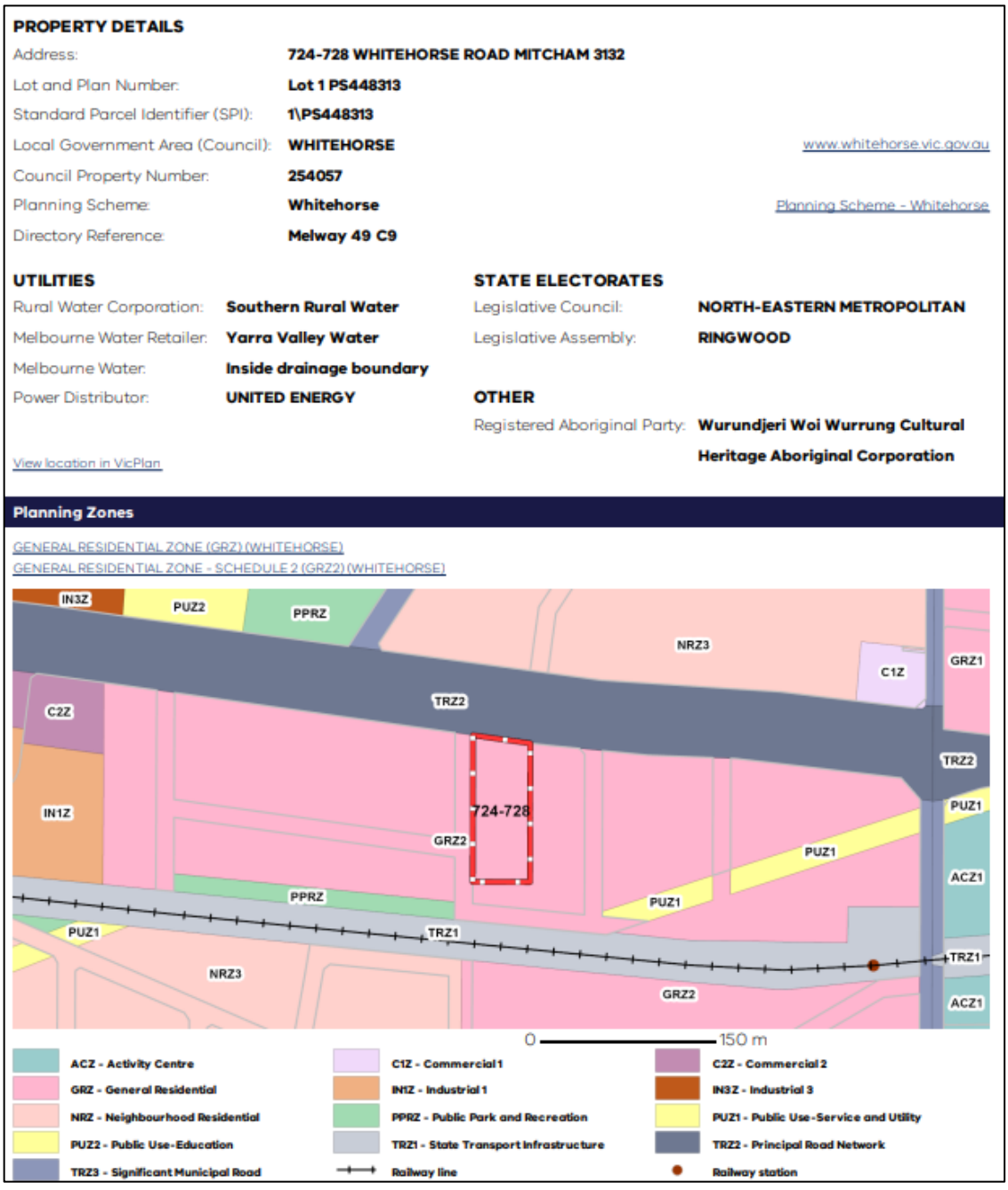


Figure 2. General Residential Zone – Schedule 2 (GRZ2) Planning Property Report, VicPlan, dated 3 June 2025.

Whitehorse Planning Scheme Clause 52.17 – Native Vegetation

Under Clause 52.17 of the Whitehorse Planning Scheme - Destruction, lopping or removal of native vegetation on land which, together with all contiguous land in one ownership, has an area of 0.4 hectares or more requires a planning permit under Clause 52.17. This includes the removal of dead trees with a DBH (diameter at breast height or 1.3 metres) of 40 centimetres or more and any individual scattered native plants.

The following exemptions must be considered when determining if native vegetation requires a permit for its removal.

1. Native vegetation that is to be removed, destroyed, or lopped that was either planted, or grown as a result of direct seeding.

This exemption does not apply to native vegetation planted or managed with public funding for the purpose of land protection or enhancing biodiversity unless the removal, destruction or lopping of the native vegetation is in accordance with written permission of the agency (or its successor) that provided the funding.

2. Native vegetation that is to be removed, destroyed, or lopped that has naturally established or regenerated on land lawfully cleared of naturally established native vegetation, and is: – less than 10 years old; or

- bracken (*Pteridium esculentum*); or
- less than ten years old at the time of a property vegetation plan being signed by the Secretary to the Department of Environment, Land, Water and Planning (as constituted under Part 2 of the *Conservation, Forests and Lands Act 1987*); and is shown on that Plan as being 'certified regrowth'; and
- on land that is to be used or maintained for cultivation or pasture during the term of that Plan; or
- within the boundary of a timber production plantation, as indicated on a Plantation Development Notice or other documented record and has established after the plantation.

This exemption does not apply to land where native vegetation has been destroyed or otherwise damaged as a result of flood, fire or other natural disaster.

52.17-5 14/07/2022 VC213	**Offset requirements** If a permit is required to remove, destroy or lop native vegetation, the biodiversity impacts from the removal, destruction or lopping of native vegetation must be offset, in accordance with the Guidelines. The conditions on the permit for the removal, destruction or lopping of native vegetation must specify the offset requirement and the timing to secure the offset.

Clause 52.37 – Canopy Trees

Clause 52.37 seeks to protect and enhance canopy tree cover in residential areas by maximising the retention of existing canopy trees and ensuring new development is designed to integrate canopy tree outcomes. The provision applies to residential and mixed-use zones, including the General Residential Zone (GRZ), Neighbourhood Residential Zone (NRZ), Residential Growth Zone (RGZ), Township Zone (TZ), Mixed Use Zone (MUZ) and Housing Choice and Transport Zone (HCTZ).
A canopy tree is defined as a tree with a height greater than 5 metres, a trunk circumference exceeding 0.5 metres at 1.4 metres above ground, and a canopy spread of at least 4 metres.

Permit Requirement

A permit is required to remove, destroy or lop a canopy tree in the Mixed Use Zone, Township Zone, Residential Growth Zone, General Residential Zone, Neighbourhood Residential Zone, and Housing Choice and Transport Zone.

This does not apply:

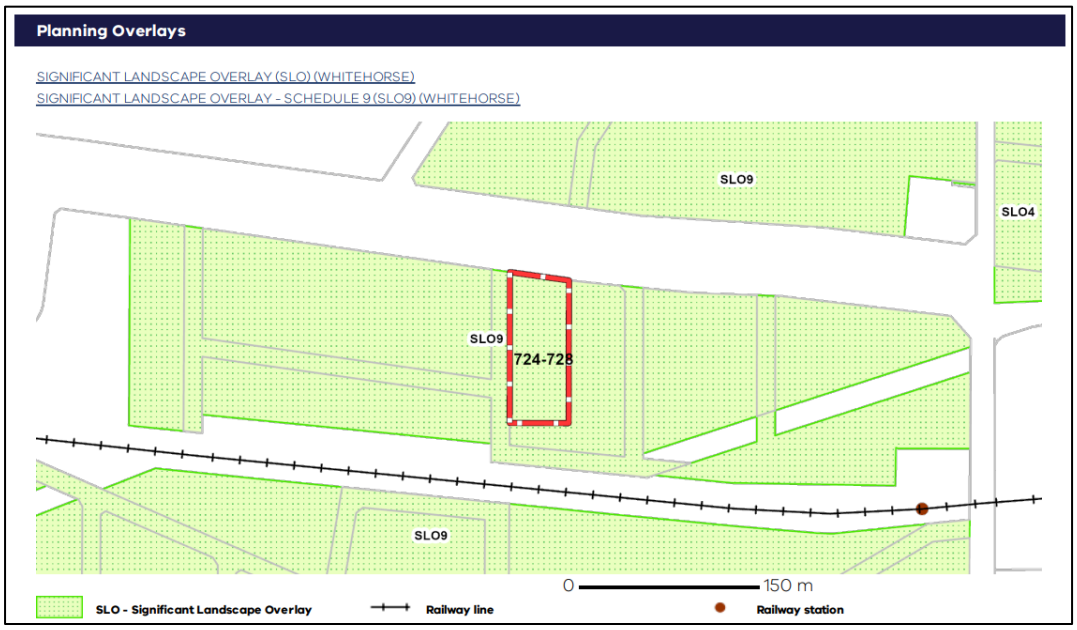
- If the table of exemptions in clause 52.37-8 specifically states that a permit is not required.
- To the removal, destruction or lopping of a canopy tree (other than a boundary canopy tree) identified for assessment in an application to which clause 54, 55, 57 or 58 applies and the tree is not removed, destroyed or lopped until the permit is issued.
- To the removal, destruction or lopping of a canopy tree (other than a boundary canopy tree) if the site is developed with an existing dwelling.

The additional exemptions provided in the table at Clause 52.37-8 apply in a number of instances such as where trees are dead, are weed species, pose an immediate risk to safety or property, or where works are undertaken for emergency, infrastructure or approved Traditional Owner agreements.

In addition to retention, Clause 52.37 establishes minimum canopy tree planting standards based on site area, ranging from one tree on small sites (≤ 100 m²) up to canopy cover equivalent to 20% of the site area on large sites (> 1000 m²). New trees should be planted in deep soil areas or planters of adequate soil volume and be capable of reaching at least 6m in height and a 4m canopy spread at maturity.

When preparing site layouts, the retention of mature, healthy and high retention value canopy trees should be prioritised. Where removal is unavoidable, appropriate tree protection measures in accordance with AS 4970-2009 Protection of Trees on Development Sites must be implemented, and new canopy trees provided to ensure compliance with Clause 52.37 standards.

SCHEDULE 9 TO CLAUSE 42.03 SIGNIFICANT LANDSCAPE OVERLAY



Statement of nature and key elements of landscape

The leafy garden and bushy character of Melbourne's eastern suburbs can be viewed from many high points throughout Melbourne and is a significant component of the subregion. The treed character of areas such as Whitehorse provides an important 'green' link between Melbourne and the Yarra Valley.

The Municipal Wide Tree Study (June 2016 and March 2019) identifies that trees are significant to the landscape character of the City of Whitehorse. The tree cover in Whitehorse simultaneously delivers multiple benefits to the community, including defining neighbourhood character, providing visual amenity, reducing the urban heat island effect in more urbanised areas, improving air quality and energy efficiency, providing habitat for fauna, and increasing the wellbeing of people and liveability of neighbourhoods. The Garden Suburban Neighbourhood Character Area generally has formalised streetscapes comprising grassed nature strips, concrete footpaths, kerbs and channels, and buildings are generally visible along streets behind low front fences and open garden settings.

Gardens are typically established with canopy trees, lawn areas, garden beds and shrubs and there are typically well defined property boundaries and consistent building siting. The majority of the municipality is included in the Garden Suburban Neighbourhood Character Area.

The Bush Suburban Neighbourhood Character Area generally has a mix of formal and informal streetscapes with wide nature strips and streets are dominated by vegetation with buildings partially hidden behind tall trees and established planting. Gardens are less formal, consisting of many canopy trees and property boundary definition can be non-existent or fenced. Buildings appear detached along the street and generally comprise pitched rooftops, with simple forms and articulated facades.

The Bush Suburban Neighbourhood Area includes parts of Blackburn, Box Hill South, Vermont South, Mitcham, Nunawading and Mont Albert North as shown in the Neighbourhood Character Precincts Map contained in the Neighbourhood Character Study 2014.

Permit Requirement

Buildings and works

A permit is required to construct or carry out works for a front fence that is within 4 metres of any vegetation that requires a permit to remove, destroy or lop under the provisions of this schedule. This does not apply to a front fence that is undertaken to the same details, specifications and materials as the front fence being replaced, to the satisfaction of the responsible authority.

A permit is not required to construct a building or construct or carry out works provided the buildings or works are set back at least 4 metres from any tree protected under the provisions of this schedule when measured at ground level from the outside of the trunk.

Vegetation removal

A permit is required to remove, destroy or lop a tree. This does not apply to:

- A tree that has both:
  - a height less than 5 metres; and
  - a single trunk circumference of less than 1.0 metre at a height of 1.0 metre above ground level.
- A tree that is less than 3 metres from the wall of an existing Dwelling or an existing Dependent Person's Unit when measured at ground level from the outside of the trunk. For the avoidance of doubt, this exemption does not apply to a tree that is less than 3 metres from an existing outbuilding.
- A tree that is located less than 3 metres from an existing inground swimming pool when measured at ground level from the outside of the trunk.
- A tree that is an Environmental Weed species listed below:
  - Box Elder (*Acer negundo*)
  - Cape Wattle (*Paraserianthes lophantha*)
  - Cherry Plum (*Prunus cerasifera*)
  - Cootamundra Wattle (*Acacia baileyana*)
  - Cotoneaster (*Cotoneaster spp.*)
  - Desert Ash (*Fraxinus angustifolia*)
  - Hawthorn (*Crataegus monoyna*)
  - Mirror Bush (*Coprosma angustifolia*)
  - Privet (*Ligustrum spp.*)
  - Radiata or Monterey Pine (*Pinus radiata*)
  - Sallow Wattle (*Acacia longifolia*)
  - Sweet Pittosporum (*Pittosporum undulatum*)
  - Willow (*Salix spp.*)

- The pruning of a tree for regeneration or ornamental shaping.

- A tree which is dead or dying or has become dangerous to the satisfaction of the responsible authority.

- A tree outside the minimum street setback requirement in the Residential Growth Zone.

- A tree on public land or in the road reserve removed by or on behalf of Whitehorse City Council.

- The removal, destruction, or lopping of a tree to the minimum extent necessary:

  - to maintain the safe and efficient function of a Utility Installation to the satisfaction of the responsible authority or the utility service provider; or

  - by or on behalf of a utility service provider to maintain or construct a Utility Installation in accordance with the written agreement of the Secretary to the Department of Environment, Land, Water and Planning (as constituted under Part 2 of the Conservation, Forests and Lands Act 1987); or

  - to maintain the safe and efficient function of the existing on road public transport network (including tramways) to the satisfaction of the Department of Transport.

- A tree required to be removed, destroyed or lopped in order to construct or carry out buildings or works approved by a Building Permit issued prior to 8 February 2018.

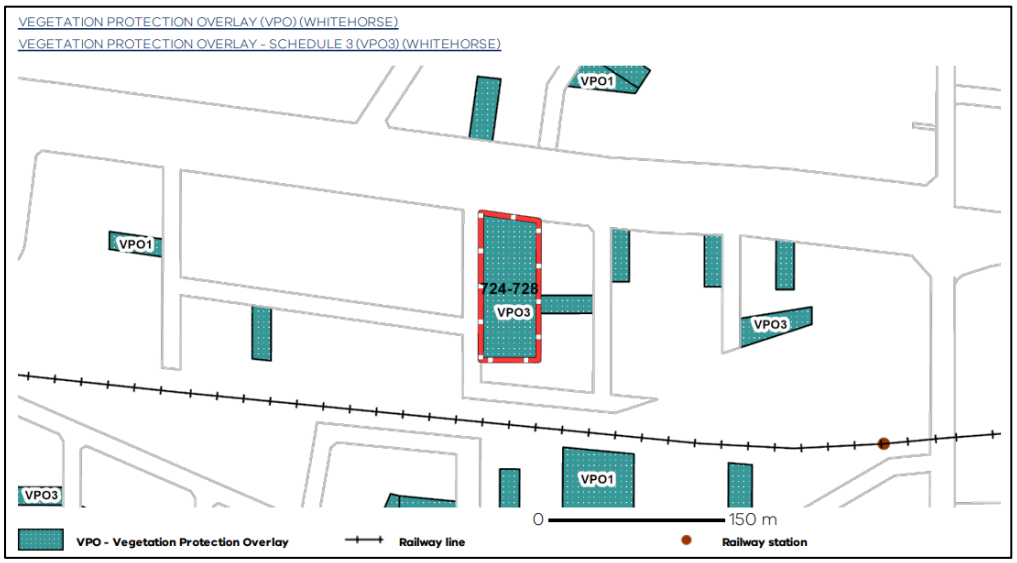
- A tree that may require separate approval to remove, destroy or lop as part of an existing permit condition, a plan endorsed under a planning permit or an agreement under section 173 of the Planning and Environment Act 1987.

Note:

For the purpose of this schedule, pruning is defined as removing branches (or occasionally roots) from a tree using approved practices, to achieve a specified objective such as for regeneration or ornamental shaping.

For the purpose of this schedule, lopping has its ordinary meaning and includes the practice of cutting branches or stems between branch unions or internodes.

SCHEDULE 3 TO CLAUSE 42.02 VEGETATION PROTECTION OVERLAY



Statement of nature and significance of vegetation to be protected

The Significant Tree Study, City of Whitehorse (Tree Dimensions, September 2006) has identified exotic, native and indigenous trees on private land within the municipality which are significant for either their contribution to the landscape or streetscape, or because the vegetation is of local provenance.

Indigenous habitat trees of local provenance are part of regional vegetation linkages and provide a corridor for local bird life and fauna. These trees are integral to the establishment of a sustainable urban and native landscape.

Other trees are significant due to their age and size and interest they bring to the streetscape. The Whitehorse Neighbourhood Character Study 2014 recognises that such trees are integral to the neighbourhood character in the City. The species and dominance vary across the municipality and contributes significantly to the broad character types found across the region.

Permit requirement

A permit is required to remove, destroy or lop vegetation included in Incorporated Document No. 11 - City of Whitehorse - Statements of Tree Significance, 2006.

This does not apply to any vegetation which is:

- Deemed unsafe by a suitably qualified arborist, and to the satisfaction of the responsible authority.
- Being pruned for regeneration or ornamental shaping.
- A tree which is dead or dying to the satisfaction of the responsible authority.
- Being maintained in accordance with a management program, developed by a suitably qualified arborist and approved by the responsible authority.

5. Survey Methodology

The site assessment was conducted by Brendan Pike and Luke Sturgess of Sustainable Tree Management on 12th July 2024. Detailed characteristics of each tree were recorded on-site, with comprehensive data presented in Section 7.1. Individual data tables, accompanied by identification images for each assessed tree, are included in Appendix A.

Images of proposed development plans, incorporating Structural Root Zones (SRZs), Tree Protection Zones (TPZs), and calculated TPZ encroachments, are provided in Section 7.2, 7.3, 7.4 and 7.5.

Each tree, classified as high, medium, or low value, was evaluated for genus and species, estimated height, canopy spread, health, structure, age class, significance, retention value, diameter at breast height (DBH), TPZ, and SRZ. Abbreviations used are defined in the Glossary of Terms in Appendix F.

The survey and assessment of the trees were based on visual inspections from ground level. No trees were climbed, and no samples of soil, plant material, or pest and disease infestations were collected for analysis. Species identification was performed in the field based on common characteristics, without verification from the National Herbarium of Victoria.

This Report excludes defects not visible during the ground-based visual inspection and reflects the condition of the trees solely at the time of assessment.

6. Documents viewed in preparation of this report

The following documents were viewed in preparation of this Report:

- Aerial photography of the site (Nearmap, dated 18th April 2025);
- Tree Location Plan (VIA Architects, Project No. 2410022 Rev H, dated 19th May 2025);
- Basement Plan (VIA Architects, Project No. 2410022 Rev I, dated 19th May 2025);
- Ground Floor Plan (VIA Architects, Project No. 2410022 Rev I, dated 19th May 2025);
- Level 01 Floor Plan (VIA Architects, Project No. 2410022 Rev I, dated 19th May 2025);
- Whitehorse Planning Scheme;
- City of Whitehorse - Statements of Tree Significance, 2006; and
- Planning Property Report (VicPlan, dated 4th June 2025).

7. ARBORICULTURAL ASSESSMENT

The assessment of twenty-two (22) trees growing on and adjacent to the site revealed that:

- Fourteen (14) trees growing on and adjacent to the site are of high retention value;
- Four (4) trees growing on site are of medium retention value; and
- Four (4) trees growing on site are of low retention value.

The following twenty-two (22) trees have been assessed as being of high, medium, and low retention value. All third party owned assets including Council and neighbouring trees are assessed as high retention value regardless of their overall health and condition. DBH (cm) is the Diameter at breast height measured 1.4m from natural ground level, SRZ (m) is the structural root zone in metres in a radius from the centre of the trunk and TPZ (m) is the tree protection zone in metres in a radius from the centre of the trunk. The encroachment (%) is the level of encroachment into the tree protection zone of each tree. If the proposed encroachment is less than 10% of the area of the TPZ and is outside of the SRZ a detailed root investigation is not required. Any proposed encroachment of greater than 10% of the TPZ or inside the SRZ of tree(s), the project Arborist must demonstrate the tree(s) will remain viable. These measurements and distances are derived from the Australian Standard AS4970 - 2009 - 724Protection of Trees on Development sites.

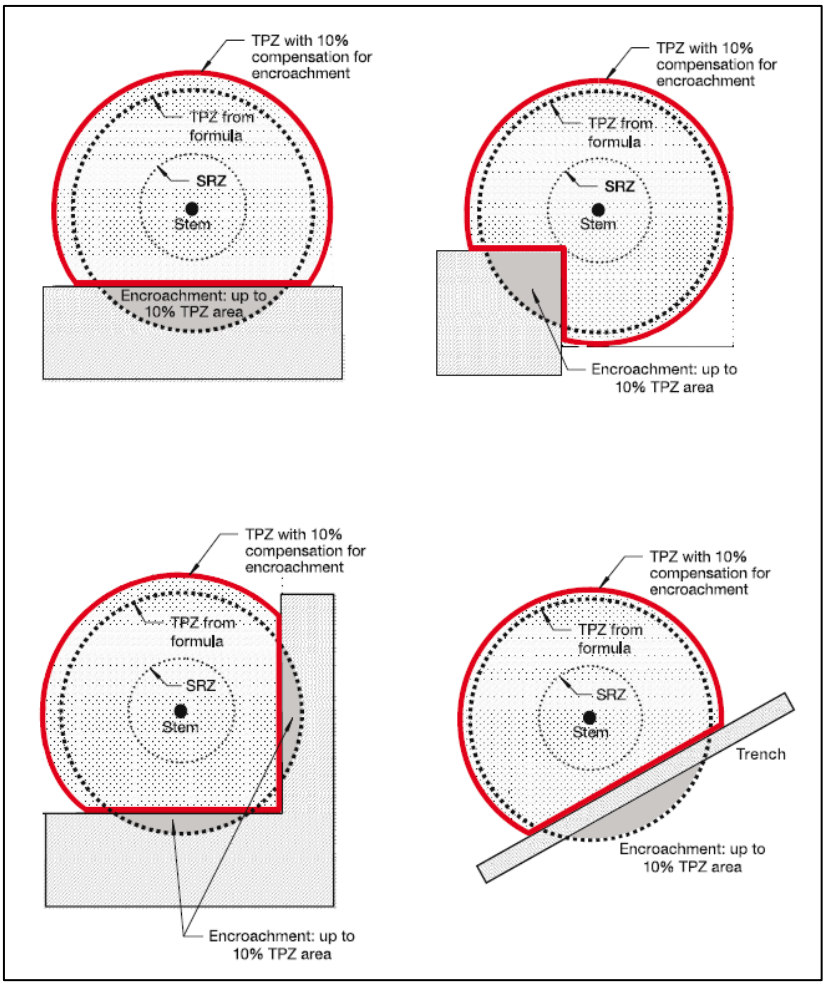


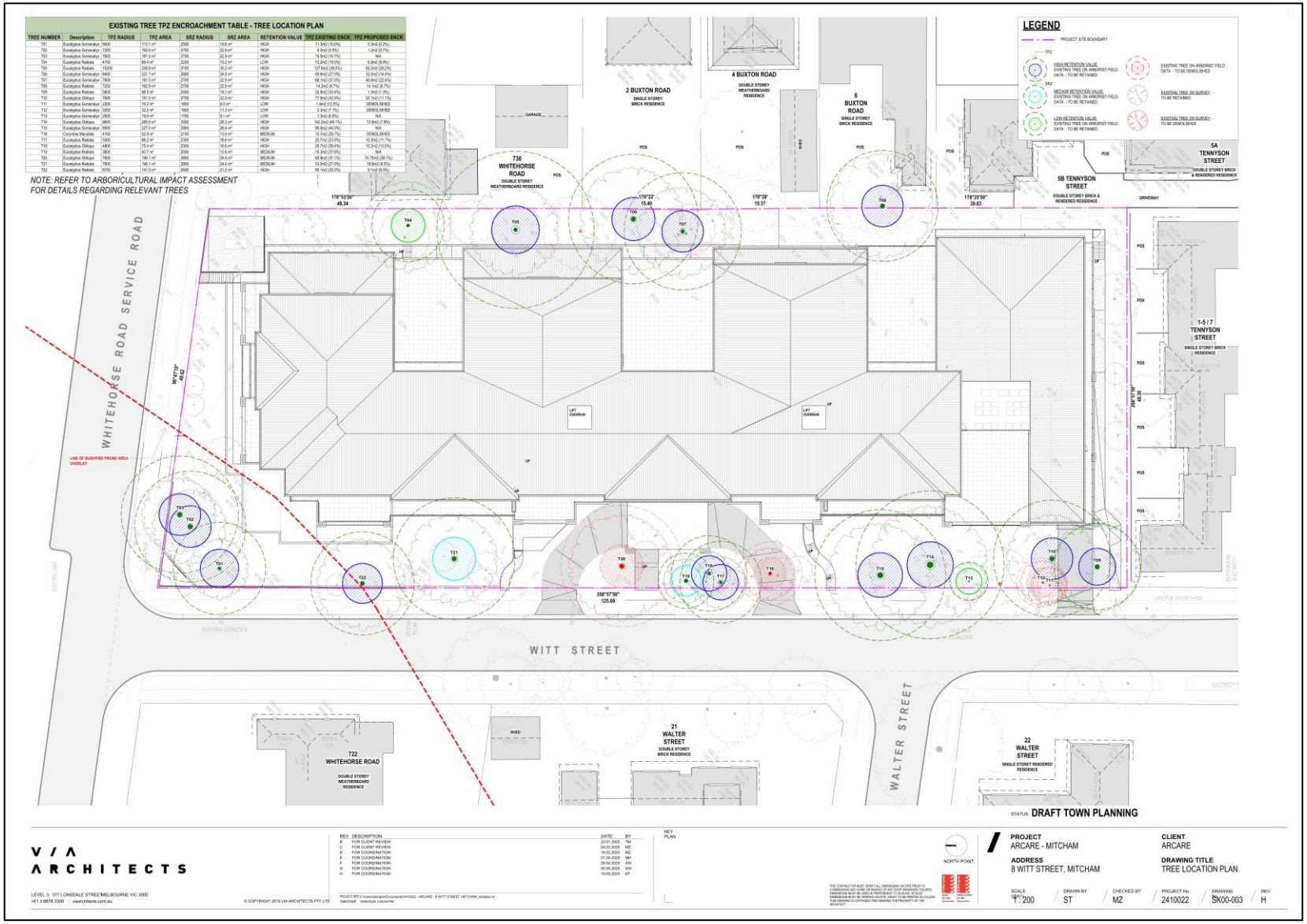
Figure 3: Extract: AS4970-2009.

7.1. TABLED TREE DATA

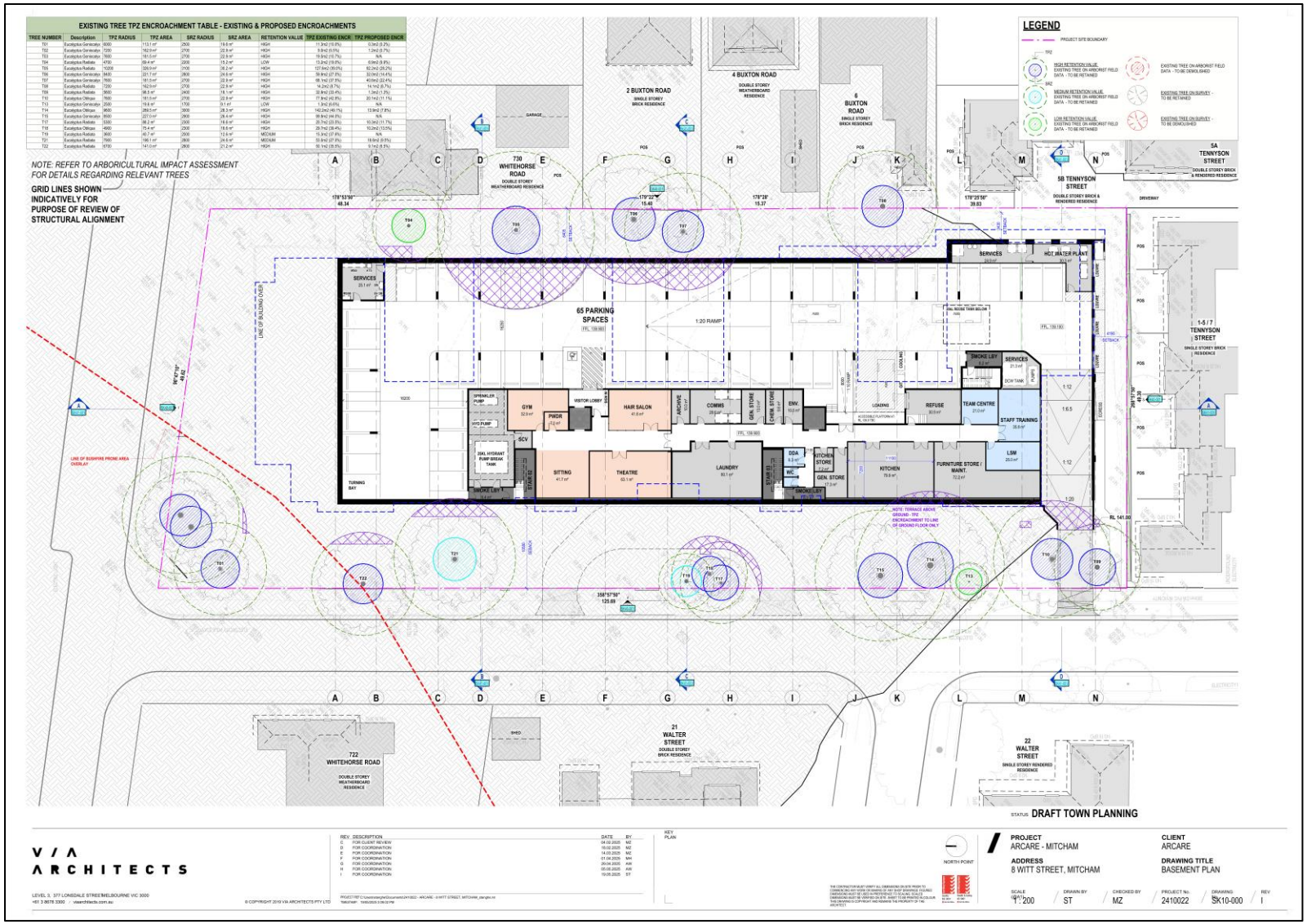
Table 1. Tree Data

Tree No.	Genus/Species	Common Name	Location	Origin	DBH (m)	SRZ (m)	TPZ (m)	Height (m)	Spread (m)	Health	Structure	Age Class	ULE	Site Significanc	Retention Value	Impact	Planning Control
1	*Eucalyptus goniocalyx*	Long-Leaved Box	On Site	Native (Vic)	50	2.5	6.0	12	3x3	Fair	Fair	Mature	Long	High	High	0.2%	SLO9, VPO3, C52.37
2	*Eucalyptus goniocalyx*	Long-leaved Box	On Site	Native (Vic)	60	2.7	7.2	13	4x9	Fair	Fair	Mature	Long	High	High	0.7%	SLO9, VPO3, C52.37 (Boundary)
3	*Eucalyptus goniocalyx*	Long-leaved Box	On Site	Native (Vic)	63	2.7	7.6	12	8x4	Fair	Fair	Mature	Long	High	High	NA	SLO9, VPO3, C52.37 (Boundary)
4	*Eucalyptus radiata*	Peppermint	On Site	Native (Vic)	39	2.2	4.7	8	0x8	Fair	Poor	Mature	Medium	Medium	Low	9.9%	SLO9, C52.37
5	*Eucalyptus radiata*	Peppermint	On Site	Native (Vic)	Multi = 85	3.1	10.2	13	6x5	Fair	Fair	Mature	Long	High	High	28.2%	SLO9, C52.37
6	*Eucalyptus goniocalyx*	Long-leaved Box	On Site	Native (Vic)	70	2.8	8.4	12	6x3	Fair	Fair	Mature	Long	High	High	14.4%	SLO9, C52.37
7	*Eucalyptus goniocalyx*	Long-leaved Box	On Site	Native (Vic)	63	2.7	7.6	12	3x4	Fair	Fair	Mature	Long	High	High	22.4%	SLO9, C52.37
8	*Eucalyptus radiata*	Peppermint	Neighbouring	Native (Vic)	60	2.7	7.2	10	5x6	Fair	Fair	Mature	Long	High	High	8.7%	SLO9, C52.37
9	*Eucalyptus obliqua*	Messmate	On Site	Native (Vic)	47	2.4	5.6	10	3x4	Fair	Fair	Mature	Long	High	High	1.3%	SLO9, C52.37 (Boundary)
10	*Eucalyptus obliqua*	Messmate	On Site	Native (Vic)	63	2.7	7.6	14	6x5	Fair	Fair	Mature	Long	High	High	11.1%	SLO9, C52.37
11	*Eucalyptus goniocalyx*	Long-leaved Box	On Site	Native (Vic)	18	1.6	2.2	6	2x2	Fair	Poor	Semi mature	Short	Low	Low	DEMOLISHED	SLO9, C52.37, C52.17
12	*Eucalyptus goniocalyx*	Long-leaved Box	On Site	Native (Vic)	27	1.9	3.2	5	0x4	Fair	Poor	Semi mature	Short	Low	Low	DEMOLISHED	SLO9, C52.37, C52.17
13	*Eucalyptus goniocalyx*	Long-leaved Box	On Site	Native (Vic)	21	1.7	2.5	6	2x1	Fair	Poor	Semi mature	Short	Low	Low	NA	SLO9, C52.37
14	*Eucalyptus obliqua*	Messmate	On Site	Native (Vic)	Multi = 80	3.0	9.6	16	7x7	Fair	Fair	Mature	Long	High	High	7.8%	SLO9, VPO3, C52.37
15	*Eucalyptus goniocalyx*	Long-leaved Box	On Site	Native (Vic)	71	2.9	8.5	15	6x4	Fair	Fair	Mature	Long	High	High	NA	SLO9, VPO3, C52.37
16	*Corymbia maculata*	Spotted Gum	On Site	Native (Vic)	34	2.1	4.1	16	5x5	Fair	Fair	Semi mature	Long	Medium	Medium	DEMOLISHED	SLO9, C52.37
17	*Eucalyptus radiata*	Peppermint	On Site	Native (Vic)	44	2.3	5.3	16	3x3	Fair	Fair	Mature	Long	Medium	High	11.7%	SLO9, C52.37
18	*Eucalyptus obliqua*	Messmate	On Site	Native (Vic)	41	2.3	4.9	13	4x3	Fair	Fair	Mature	Long	High	High	13.5%	SLO9, C52.37
19	*Eucalyptus radiata*	Peppermint	On Site	Native (Vic)	30	2.0	3.6	9	4x1	Fair	Fair	Semi mature	Long	Medium	Medium	NA	SLO9, C52.37
20	*Eucalyptus obliqua*	Messmate	On Site	Native (Vic)	66	2.8	7.9	15	6x6	Poor	Fair	Mature	Medium	High	Medium	DEMOLISHED	SLO9, VPO3, C52.37, C52.17
21	*Eucalyptus radiata*	Peppermint	On Site	Native (Vic)	66	2.8	7.9	14	5x6	Poor	Fair	Mature	Medium	High	Medium	9.5%	SLO9, VPO3, C52.37
22	*Eucalyptus radiata*	Peppermint	On Site	Native (Vic)	Multi = 56	2.6	6.7	10	6x5	Fair	Fair	Mature	Medium	Medium	High	6.5%	SLO9, C52.37

7.2. TREE LOCATION PLAN

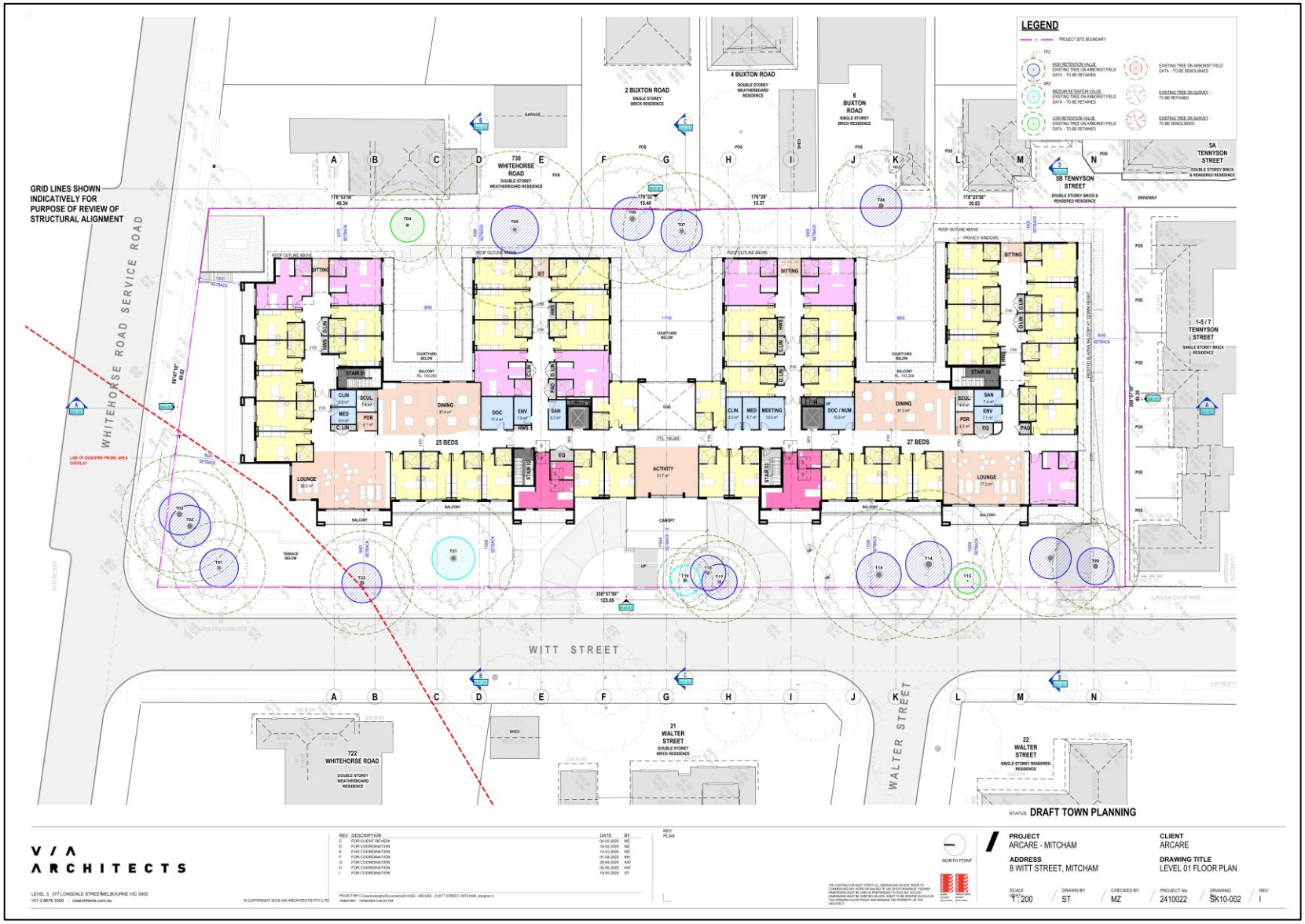


7.3. BASEMENT PLAN



7.4. GROUND FLOOR PLAN

7.5. LEVEL 01 FLOOR PLAN



8. FURTHER INVESTIGATIONS

Due to major TPZ encroachments, four (4) trees growing on the site required further investigations by the Project Arborist to justify their viability and incorporation into the proposed development. Table 2 below provides Tree Numbers, Genus Species, Location and Proposed TPZ encroachments.

Table 2. Major TPZ encroachments.

Tree No.	Genus/Species	Location	TPZ Encroachment
5	*Eucalyptus radiata*	On site, eastern boundary	28.2%
6	*Eucalyptus goniocalyx*	On site, eastern boundary	14.4%
7	*Eucalyptus goniocalyx*	On site, eastern boundary	22.4%
10	*Eucalyptus obliqua*	On site, western entrance	11.1%

Root investigations were conducted by Luke Sturgess and Brendan Pike of Sustainable Tree Management on 3rd March and 4th March 2025. The site predominantly features asphalt and concrete hardstand across much of the ground surface, with existing encroachments into Tree Protection Zones (TPZs) exceeding that of the proposed development. As a precautionary measure, hardstand was removed, and trenches were carefully excavated to confirm the absence of significant root mass within the areas designated for proposed construction. The areas of investigation can be viewed in Figures 4 and 5 below.

Figure 4. Existing hardstand within proximity to the trees growing along the site's eastern boundary.

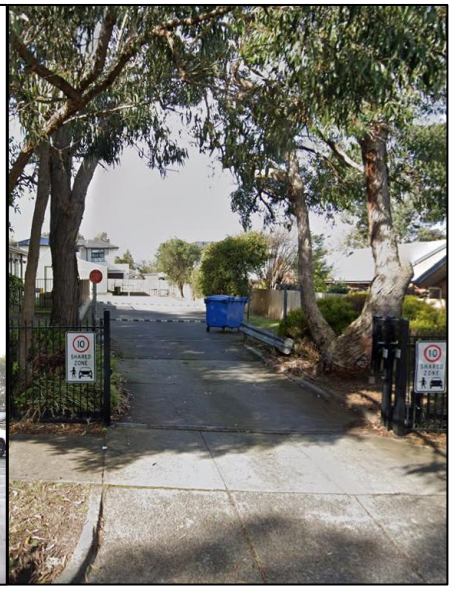
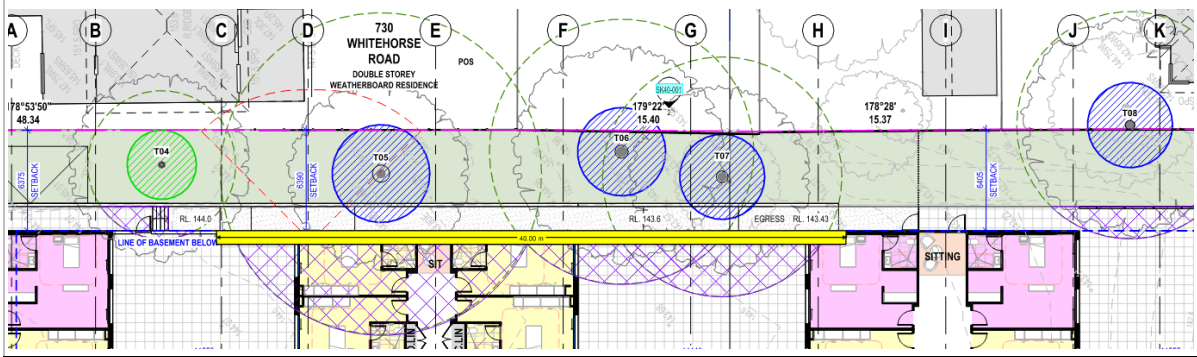


Figure 5. Existing hardstand within proximity to the trees growing close to the site's western entrance.

Tree Number	5, 6, 7
Location	On site, eastern boundary
Genus/Species	*T5 - Eucalyptus radiata, T6 - Eucalyptus goniocalyx, T7 - Eucalyptus goniocalyx*

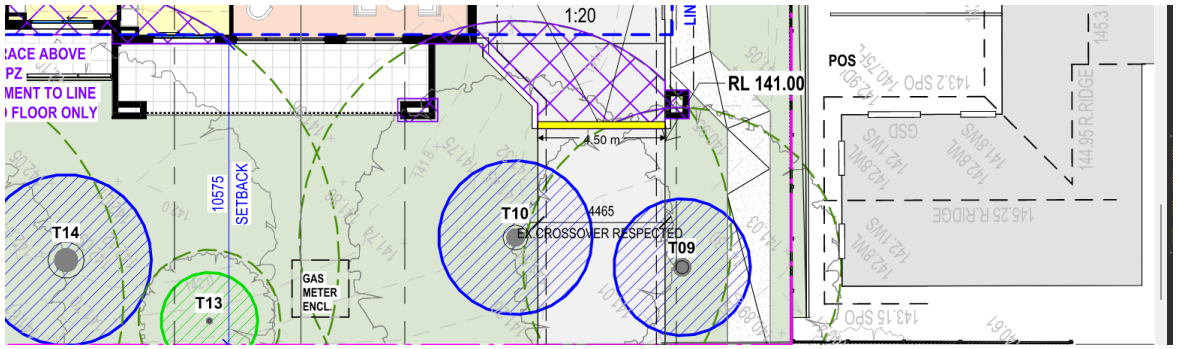


Root Investigation Details	
TPZ Encroachment	T5 (28.2%), T6 (14.4%), T7 (22.4%)
Trench Length	40 metres
Root Pruning Required	Yes
Number of Roots	1 (T7 - 48mm)
Further Investigations Required	No

Root Investigation Results

Given the existing hardstand and clay soil profile, significant root mass from Trees 5, 6, or 7 was not anticipated during the investigation. A 40-metre trench, excavated to a depth of 60–70 cm, was aligned with the proposed construction footprint. As expected, minimal tree roots were encountered within the excavation area. A single root, extending from Tree 7, was exposed. Measuring 48 mm in diameter, the root was cleanly pruned at the time of investigation.

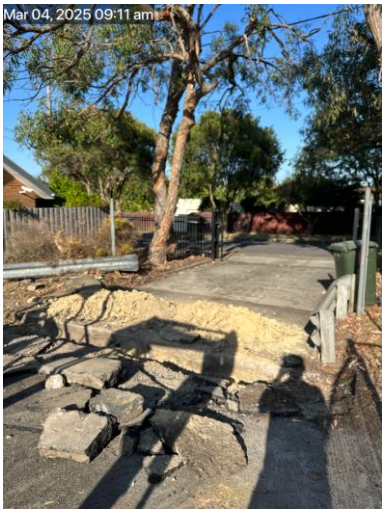
Tree Number	5, 6, 7
Location	On site, eastern boundary
Genus/Species	*T5 - Eucalyptus radiata, T6 - Eucalyptus goniocalyx, T7 - Eucalyptus goniocalyx*



Root Investigation Details	
TPZ Encroachment	T10 – 11.1%
Trench Length	4.5 metres
Root Pruning Required	No
Number of Roots	NA
Further Investigations Required	No

Root Investigation Results

Given the existing hardstand and clay soil profile, significant root mass from Tree 10 was not anticipated during the investigation. A 4.5 metre trench, excavated to a depth of 60cm, was aligned with the beginning of the proposed ramp footprint. As expected, no tree roots were encountered within the excavation area.



9. OBSERVATIONS

This assessment has thoroughly evaluated the potential impacts on twenty-two (22) trees located in proximity to the proposed construction envelope. This concept design aligns with the Whitehorse Planning Scheme objectives as well as Australian Standard AS4970-2009 (Protection of Trees on Development Sites). The findings identify a balanced approach to integrating the development with the preservation of significant trees and minimal tree loss supporting a sustainable landscape outcome.

Ecological and Aesthetic Significance

The assessed trees, predominantly native species including as *Eucalyptus goniocalyx, Eucalyptus radiata, and Eucalyptus obliqua*, contribute significantly to the site's bushland character and neighbourhood amenity. The retention of all healthy and structurally sound trees supports the objectives of the Significant Landscape Overlay and enhances the site's integration with the Suburban Neighbourhood Character.

Tree Health and Structure

The majority of trees are in fair health with mature age classes and long life expectancies. Exceptions include Trees No. 20 (nominated for removal) and Tree No. 21 (nominated for retention) that are in deteriorating health due to clearance pruning and/or extensive possum grazing.

Tree 20. Nominated for removal

Tree 21. Nomiated for retention.

TPZ Encroachments and Tree Retention

The proposed development results in varying levels of TPZ encroachment, with six trees (Tree Nos. 5, 6, 7, 10, 17 and 18) exhibiting major encroachments exceeding 10% of their TPZ (28.2%, 14.4%, 22.4%, 11.1%, 11.7% and 13.5% respectively). Root Investigations conducted on 3rd March and 4th March 2025, confirmed the anticipated absence of significant root mass in the areas of proposed construction due to existing hardstand surfaces, justifying the retention of these trees. Further investigation of smaller trees numbered Tree 17 and Tree 18 (with TPZ encroachment of 11.7% and 13.5% respectively) were not deemed necessary due to the proposed level of encroachment and the existing growing conditions (concrete hardstand) in which they are growing. The trees impacted within minor TPZ encroachments do not require any further arboricultural investigations to successfully be retained and incorporated in the development design.

Tree Removal and Planning Compliance

The following trees have been nominated for removal to facilitate construction of the aged care facility:

Table 2. Tree Removal.

Tree No.	Genus/Species	Height (m)	Spread (m)	Health	Structure	Age Class	ULE	Site Significanc	Retention Value	Planning Control
11	*Eucalyptus goniocalyx*	6	2x2	Fair	Poor	Semi mature	Short	Low	Low	SLO9, C52.37, C52.17
12	*Eucalyptus goniocalyx*	5	0x4	Fair	Poor	Semi mature	Short	Low	Low	SLO9, C52.37, C52.17
16	*Corymbia maculata*	16	5x5	Fair	Fair	Semi mature	Long	Medium	Medium	SLO9, C52.37
20	*Eucalyptus obliqua*	15	6x6	Poor	Fair	Mature	Medium	High	Medium	SLO9, VPO3, C52.37, C52.17

Tree 11.

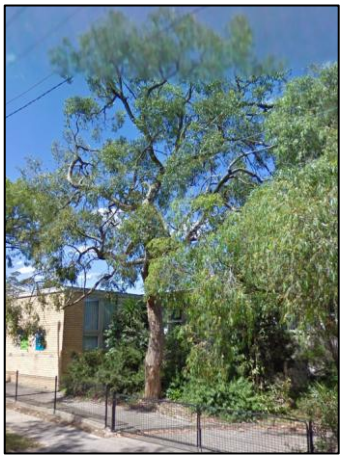
Tree 12.

Tree 16.

Tree 20.

Trees numbered 11 and 12 are relatively small native specimens with supressed form and poor structured due to continued overhead powerline clearance pruning. They have been assessed as having low significance in the broader context of vegetation growing on the site and their proposed removal will have little environmental consequence. Tree No. 16, a semi-mature *Corymbia maculata* (Spotted Gum) offers moderate aesthetic value to the Witt Road streetscape. The proposed removal of this tree is unlikely to have a significant visual impact due to the remaining trees growing within proximity and a landscape plan designed to enhance amenity.

Tree No. 20, a mature *Eucalyptus obliqua* (Messmate) located adjacent to Witt Road, exhibits declining health, as evidenced by historical imagery (see attached Google images). Its medium life expectancy, combined with past and ongoing pruning for powerline clearance, was taken into consideration when evaluating its removal. Additionally, the commitment to retaining all other high value trees on the site mitigates the impact of removing Tree No. 20.



Tree 20. Street View image 2009.

Tree 20. Street View image 2022.

Planning Permit Requirements

The four trees nominated for removal exceed 0.5 metres trunk circumference at 1.4 metres above ground, 5 metres in height and 4 metres canopy spread, and therefore meet the definition of a Canopy Tree under Clause 52.37 of the Whitehorse Planning Scheme. As no dwelling exists on the site, their removal requires a planning permit under the subject Clause.

Due to the lack of evidence of past landscape plantings, Trees 11, 12 and 20 constitute native vegetation under Clause 52.17 of the Whitehorse Planning Scheme. Their removal is not exempt and therefore requires a planning permit, triggering a native vegetation offset requirement in accordance with the Guidelines for the removal, destruction or lopping of native vegetation (DELWP 2017).

Tree 16 (*Corymbia maculata* – Spotted Gum) does not trigger the provisions of Clause 52.17. Spotted Gum is a widely planted urban canopy species throughout Victoria and is not indigenous to the Whitehorse municipal area. The species is naturally distributed along the east coast of Australia, primarily from southern Queensland through coastal New South Wales. Although a small, isolated and threatened natural population occurs in East Gippsland near the township of Buchan, Tree 16 is evidently a cultivated specimen and does not represent remnant or naturally occurring native vegetation at the subject site.

Further, no mature or semi mature Spotted Gums are growing on site or within close proximity to site from which natural regeneration could reasonably occur. The likelihood for Tree 16 to have established via natural seed dispersal is considered negligible. Accordingly, Tree 16 does not warrant consideration under the native vegetation removal provisions or associated offset requirements of Clause 52.17.

The trees are further affected by Significant Landscape Overlay – Schedule 9 (SLO9), and Tree 20 is subject to Vegetation Protection Overlay – Schedule 3 (VPO3). Accordingly, their removal must be assessed as part of the overall planning permit application under the combined provisions of Clause 52.37, Clause 52.17 and the applicable overlays.

Smaller trees and shrubs, including *Pittosporum undulatum* (refer Appendix B), are proposed for removal to facilitate construction. These specimens are of limited retention value and are exempt from permit requirements under SLO9, Clause 52.37 and Clause 52.17 due to their size or weed status.

Native Vegetation Offset Requirements – Clause 52.17

The removal of Trees 11, 12 and 20 constitutes the removal of native vegetation under Clause 52.17. In accordance with the Guidelines for the removal, destruction or lopping of native vegetation (DELWP 2017), the proposal will require assessment under the Native Vegetation Removal pathway and preparation of a Habitat Hectare assessment to determine the extent of impact.

The biodiversity offset requirement will be calculated based on the habitat score and strategic biodiversity value of the vegetation proposed for removal. The required offset must be secured prior to the commencement of works, either through the purchase of native vegetation credits or via establishment of a first-party offset site in accordance with State policy.

Replanting Requirements – Clause 52.37

The removal of four (4) Canopy Trees (Trees 11, 12, 16 and 20) requires replacement planting in accordance with Clause 52.37 of the Whitehorse Planning Scheme. A minimum of four (4) new canopy trees are to be planted within deep soil areas on site to meet the canopy replacement standard. Replacement trees must be capable of reaching a mature height of at least 6 metres and a canopy spread of 4 metres, contributing toward the 20% canopy cover requirement applicable to sites exceeding 1,000 m². The Landscape Plan prepared by John Patrick demonstrates a proposed canopy cover of 24.7%, exceeding the minimum requirement.

Each replacement tree must be provided with the minimum soil volume specified under Clause 52.37-3. Species selection should reflect the prevailing native canopy character of the locality and may include, but is not limited to:

- *Eucalyptus goniocalyx* (Long-leaved Box)
- *Eucalyptus obliqua* (Messmate)
- *Eucalyptus radiata* (Peppermint)
- *Eucalyptus cephalocarpa* (Silver Stringybark)
- *Acacia melanoxylon* (Blackwood)
- *Allocasuarina littoralis* (Black Sheoak)
- *Corymbia eximia* (Yellow Bloodwood)
- *Corymbia ficifolia* (Red Flowering Gum)
- *Eucalyptus leucoxylon* (Yellow Gum)
- *Eucalyptus polyanthemos* (Red Box)

All replacement trees are to be advanced stock (minimum 45 L) and planted in accordance with AS 2303:2018 – Tree Stock for Landscape Use. A Tree Establishment and Maintenance Plan should be implemented to ensure the trees are adequately maintained for a minimum period of two (2) years post-planting. The final Landscape Plan should demonstrate compliance with Clause 52.37 by illustrating the species, planting locations, soil volumes, and canopy spread of replacement trees, ensuring the long-term restoration and enhancement of canopy tree cover across the site.

10. Conclusion

The proposed development can proceed with minimal adverse impacts on the local tree population through vigorous preliminary arboricultural investigations, weekly detailed communication with all stakeholders and a professional and experienced design team.

Having all stakeholder involved from the project's inception, the retention of healthy, high value trees and the implementation of appropriate tree protection measures during site works has and will continue be successfully achieved. Further, precautionary root investigation findings support the feasibility of retaining mature trees despite identified TPZ encroachments. By adhering to tree protection guidelines in accordance with AS4970-2009 and implementing ongoing arboricultural monitoring, the redevelopment of land will achieve a sustainable balance between urban progress and environmental preservation. This approach aligns with the objectives of the Whitehorse Planning Scheme, (Clause 52.17) and maintains the site's contribution to the established bushy character.

A Native Vegetation Removal Report (NVRR ID: 372_20260223_QK9) and Report of Available Credits (ID:34286) have been prepared to accompany this assessment in support of Clause 52.17. The NVRR quantifies the native vegetation impact and outlines the associated biodiversity offset obligation in accordance with the Guidelines for the removal, destruction or lopping of native vegetation (DELWP 2017).

The trees identified as having low retention value are not suitable for long-term retention due to factors including declining health, structural defects and site constraints that cannot be rectified through pruning or management intervention. In some instances, inherent defects limit their reasonable life expectancy. Their removal will facilitate implementation of a coordinated landscape plan that will provide a greater long-term benefit to the site and surrounding environment.

Once detailed engineering and landscaping plans have been finalised, a Tree Management Plan (TMP) and Tree Protection Plan (TPP) should be prepared by a nominated Project Arborist. These documents will ensure that trees endorsed for retention are appropriately protected during construction and will outline the procedural steps required to safeguard their ongoing health and structural stability. The TMP and TPP should be prepared in accordance with Australian Standard AS4970-2009 – Protection of Trees on Development Sites and should be required by condition of any planning permit issued.

Should you have any questions with regards to the assessment please do not hesitate to make contact.

Yours sincerely,

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APPENDIX A – INDIVIDUAL TREE DATA TABLES

Tree Number	1	High Retention Value
Location	On Site	
Genus/Species	*Eucalyptus goniocalyx*	
Common Name	Long-Leaved Box	
Origin	Native (Vic)	
DBH (cm)	50	
Height (m)	12	
Spread NS (m)	3x3	
Health	Fair	
Structure	Fair	
Age Class	Mature	
Site Significance	High	
ULE	Long	
SRZ (m)	2.5	
TPZ (m)	6.0	
Encroachment (%)	.2	
Planning Control	SLO9, VPO3, C52.37	

Comments

Minor TPZ encroachment.
Growing 330cm from the existing retaining wall.
VPO3 - Whitehorse Statement of Tree Significance (Group of 3 Trees – Tree 1 of 3).
Clause 52.37 Canopy Tree.

Tree Number	2	High Retention Value
Location	On Site	
Genus/Species	*Eucalyptus goniocalyx*	
Common Name	Long-leaved Box	
Origin	Native (Vic)	
DBH (cm)	60	
Height (m)	13	
Spread NS (m)	4x9	
Health	Fair	
Structure	Fair	
Age Class	Mature	
Site Significance	High	
ULE	Long	
SRZ (m)	2.7	
TPZ (m)	7.2	
Encroachment (%)	.7	
Planning Control	SLO9, VPO3, C52.37 (Boundary)	

Comments

Minor TPZ encroachment.
Growing 700cm from the existing retaining wall.
VPO3 - Whitehorse Statement of Tree Significance (Group of 3 Trees – Tree 2 of 3).
Clause 52.37 Boundary Canopy Tree.

Tree Number	3	High Retention Value
Location	On Site	
Genus/Species	*Eucalyptus goniocalyx*	
Common Name	Long-leaved Box	
Origin	Native (Vic)	
DBH (cm)	63	
Height (m)	12	
Spread NS (m)	8x4	
Health	Fair	
Structure	Fair	
Age Class	Mature	
Site Significance	High	
ULE	Long	
SRZ (m)	2.7	
TPZ (m)	7.6	
Encroachment (%)	NA	
Planning Control	SLO9, VPO3, C52.37 (Boundary)	

Comments

No developmental impact.
Growing 900cm from the existing retaining wall.
VPO3 - Whitehorse Statement of Tree Significance (Group of 3 Trees – Tree 3 of 3).
Clause 52.37 Boundary Canopy Tree.

Tree Number	4	Low Retention Value
Location	On Site	
Genus/Species	*Eucalyptus radiata*	
Common Name	Peppermint	
Origin	Native (Vic)	
DBH (cm)	39	
Height (m)	8	
Spread NS (m)	0x8	
Health	Fair	
Structure	Poor	
Age Class	Mature	
Site Significance	Medium	
ULE	Medium	
SRZ (m)	2.2	
TPZ (m)	4.7	
Encroachment (%)	9.9	
Planning Control	SLO9, C52.37	

Comments

Minor TPZ encroachment.
Significant bias to the south. Decay is evident within the base. Tree is low retention value in its current state. Structural support (mechanical brace) recommended if to be retained.
Clause 52.37 Canopy Tree.

Tree Number	5	High Retention Value
Location	On Site	
Genus/Species	*Eucalyptus radiata*	
Common Name	Peppermint	
Origin	Native (Vic)	
DBH (cm)	Multi = 85	
Height (m)	13	
Spread NS (m)	6x5	
Health	Fair	
Structure	Fair	
Age Class	Mature	
Site Significance	High	
ULE	Long	
SRZ (m)	3.1	
TPZ (m)	10.2	
Encroachment (%)	28.2	
Planning Control	SLO9, C52.37	

Comments

210cm from the existing retaining wall.
Major encroachment, retention justified through root investigation.
Existing retaining wall and asphalt hardstand in close proximity to the west.
Clause 52.37 Canopy Tree.

Tree Number	6	High Retention Value
Location	On Site	
Genus/Species	*Eucalyptus goniocalyx*	
Common Name	Long-leaved Box	
Origin	Native (Vic)	
DBH (cm)	70	
Height (m)	12	
Spread NS (m)	6x3	
Health	Fair	
Structure	Fair	
Age Class	Mature	
Site Significance	High	
ULE	Long	
SRZ (m)	2.8	
TPZ (m)	8.4	
Encroachment (%)	14.4	
Planning Control	SLO9, C52.37	

Comments

320cm from the existing retaining wall.
Major encroachment, retention justified through root investigation.
Existing retaining wall and asphalt hardstand in close proximity to the west.
Clause 52.37 Canopy Tree.

Tree Number	7	High Retention Value
Location	On Site	
Genus/Species	*Eucalyptus goniocalyx*	
Common Name	Long-leaved Box	
Origin	Native (Vic)	
DBH (cm)	63	
Height (m)	12	
Spread NS (m)	3x4	
Health	Fair	
Structure	Fair	
Age Class	Mature	
Site Significance	High	
ULE	Long	
SRZ (m)	2.7	
TPZ (m)	7.6	
Encroachment (%)	22.4	
Planning Control	SLO9, C52.37	

Comments

Growing 50cm from the existing retaining wall to the west.
Major encroachment, retention justified through root investigation.
Existing retaining wall and asphalt hardstand in close proximity to the west.
Clause 52.37 Canopy Tree.

Tree Number	8	High Retention Value
Location	Neighbouring Asset	
Genus/Species	*Eucalyptus radiata*	
Common Name	Peppermint	
Origin	Native (Vic)	
DBH (cm)	60	
Height (m)	10	
Spread NS (m)	5x6	
Health	Fair	
Structure	Fair	
Age Class	Mature	
Site Significance	High	
ULE	Long	
SRZ (m)	2.7	
TPZ (m)	7.2	
Encroachment (%)	8.7	
Planning Control	SLO9, C52.37	

Comments

Minor TPZ encroachment.
Growing 470cm from retaining wall.
Clause 52.37 Canopy Tree.

Tree Number	9	High Retention Value
Location	On Site	
Genus/Species	*Eucalyptus obliqua*	
Common Name	Messmate	
Origin	Native (Vic)	
DBH (cm)	47	
Height (m)	10	
Spread NS (m)	3x4	
Health	Fair	
Structure	Fair	
Age Class	Mature	
Site Significance	High	
ULE	Long	
SRZ (m)	2.4	
TPZ (m)	5.6	
Encroachment (%)	1.3	
Planning Control	SLO9, C52.37 (Boundary)	

Comments

Nominated for retention.
Minor TPZ encroachment.
Existing concrete and asphalt hardstand in close proximity to the north.
Clause 52.37 Boundary Canopy Tree.

Tree Number	10	High Retention Value
Location	On Site	
Genus/Species	*Eucalyptus obliqua*	
Common Name	Messmate	
Origin	Native (Vic)	
DBH (cm)	63	
Height (m)	14	
Spread NS (m)	6x5	
Health	Fair	
Structure	Fair	
Age Class	Mature	
Site Significance	High	
ULE	Long	
SRZ (m)	2.7	
TPZ (m)	7.6	
Encroachment (%)	11.3	
Planning Control	SLO9, C52.37	

Comments

Nominated for retention.
Major encroachment, retention justified through root investigation.
Existing concrete and asphalt hardstand in close proximity to the south.
Clause 52.37 Canopy Tree.

Tree Number	11	Low Retention Value
Location	On Site	
Genus/Species	*Eucalyptus goniocalyx*	
Common Name	Long-leaved Box	
Origin	Native (Vic)	
DBH (cm)	18	
Height (m)	6	
Spread NS (m)	2x2	
Health	Fair	
Structure	Poor	
Age Class	Semi mature	
Site Significance	Low	
ULE	Short	
SRZ (m)	1.6	
TPZ (m)	2.2	
Encroachment (%)	100 - Demolished	
Planning Control	SLO9, C52.37, C52.17	

Comments
Nominated for removal. Topped for powerlines clearance.
Clause 52.37 Canopy Tree.

Tree Number	12	Low Retention Value
Location	On Site	
Genus/Species	*Eucalyptus goniocalyx*	
Common Name	Long-leaved Box	
Origin	Native (Vic)	
DBH (cm)	27	
Height (m)	5	
Spread NS (m)	0x4	
Health	Fair	
Structure	Poor	
Age Class	Semi mature	
Site Significance	Low	
ULE	Short	
SRZ (m)	1.9	
TPZ (m)	3.2	
Encroachment (%)	100 - Demolished	
Planning Control	SLO9, C52.37, C52.17	

Comments
Nominated for removal. Topped for powerlines clearance.
Clause 52.37 Canopy Tree.

Tree Number	13	Low Retention Value
Location	On Site	
Genus/Species	*Eucalyptus goniocalyx*	
Common Name	Long-leaved Box	
Origin	Native (Vic)	
DBH (cm)	21	
Height (m)	6	
Spread NS (m)	2x1	
Health	Fair	
Structure	Poor	
Age Class	Semi mature	
Site Significance	Low	
ULE	Short	
SRZ (m)	1.7	
TPZ (m)	2.5	
Encroachment (%)	NA	
Planning Control	SLO9, C52.37	

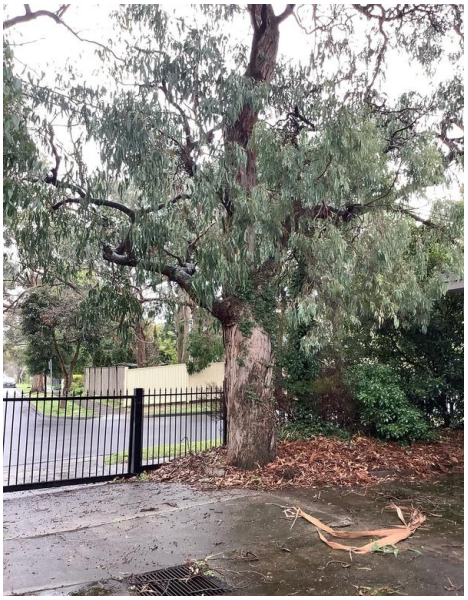
Comments

No impact. Topped for powerlines clearance.
Clause 52.37 Canopy Tree.

Tree Number	14	High Retention Value
Location	On Site	
Genus/Species	*Eucalyptus obliqua*	
Common Name	Messmate	
Origin	Native (Vic)	
DBH (cm)	Multi = 80	
Height (m)	16	
Spread NS (m)	7x7	
Health	Fair	
Structure	Fair	
Age Class	Mature	
Site Significance	High	
ULE	Long	
SRZ (m)	3.0	
TPZ (m)	9.6	
Encroachment (%)	7.8	
Planning Control	SLO9, VPO3, C52.37	

Comments

Nominated for retention, minor TPZ encroachment.
Concrete hardstand in close proximity to the north.
VPO3 Whitehorse Statement of Tree Significance.
Clause 52.37 Canopy Tree.

Tree Number	15	High Retention Value
Location	On Site	
Genus/Species	*Eucalyptus goniocalyx*	
Common Name	Long-leaved Box	
Origin	Native (Vic)	
DBH (cm)	71	
Height (m)	15	
Spread NS (m)	6x4	
Health	Fair	
Structure	Fair	
Age Class	Mature	
Site Significance	High	
ULE	Long	
SRZ (m)	2.9	
TPZ (m)	8.5	
Encroachment (%)	NA	
Planning Control	SLO9, VPO3, C52.37	

Comments

Nominated for retention, minor TPZ encroachment.
Concrete hardstand in close proximity to the south.
VPO3 - Whitehorse Statement of Tree Significance.
Clause 52.37 Canopy Tree.

Tree Number	16	Medium Retention Value
Location	On Site	
Genus/Species	*Corymbia maculata*	
Common Name	Spotted Gum	
Origin	Native (Vic)	
DBH (cm)	34	
Height (m)	16	
Spread NS (m)	5x5	
Health	Fair	
Structure	Fair	
Age Class	Semi mature	
Site Significance	Medium	
ULE	Long	
SRZ (m)	2.1	
TPZ (m)	4.1	
Encroachment (%)	100 - Demolished	
Planning Control	SLO9, C52.37	

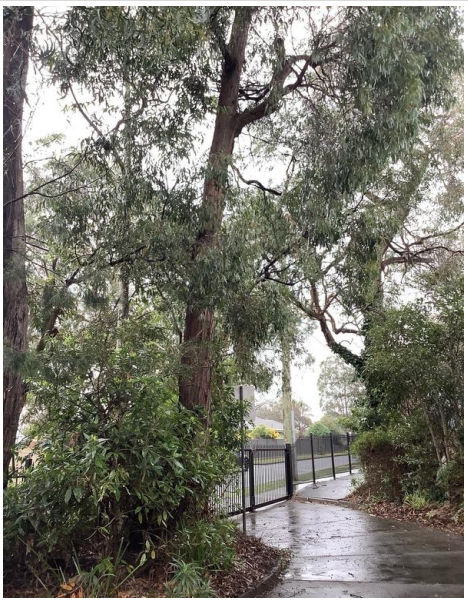
Comments

Nominated for removal. Planted tree.
Clause 52.37 Canopy Tree.

Tree Number	17	High Retention Value
Location	On Site	
Genus/Species	*Eucalyptus radiata*	
Common Name	Peppermint	
Origin	Native (Vic)	
DBH (cm)	44	
Height (m)	16	
Spread NS (m)	3x3	
Health	Fair	
Structure	Fair	
Age Class	Mature	
Site Significance	Medium	
ULE	Long	
SRZ (m)	2.3	
TPZ (m)	5.3	
Encroachment (%)	11.7	
Planning Control	SLO9, C52.37	

Comments

Major encroachment. No further investigations required due to concrete hardstand in close proximity to the east. Clause 52.37 Canopy Tree.

Tree Number	18	High Retention Value
Location	On Site	
Genus/Species	*Eucalyptus obliqua*	
Common Name	Messmate	
Origin	Native (Vic)	
DBH (cm)	41	
Height (m)	13	
Spread NS (m)	4x3	
Health	Fair	
Structure	Fair	
Age Class	Mature	
Site Significance	High	
ULE	Long	
SRZ (m)	2.3	
TPZ (m)	4.9	
Encroachment (%)	13.5	
Planning Control	SLO9, C52.37	

Comments

Major encroachment. No further investigations required due to concrete hardstand in close proximity to the north and east. Clause 52.37 Canopy Tree.

Tree Number	19	Medium Retention Value
Location	On Site	
Genus/Species	*Eucalyptus radiata*	
Common Name	Peppermint	
Origin	Native (Vic)	
DBH (cm)	30	
Height (m)	9	
Spread NS (m)	4x1	
Health	Fair	
Structure	Fair	
Age Class	Semi mature	
Site Significance	Medium	
ULE	Long	
SRZ (m)	2.0	
TPZ (m)	3.6	
Encroachment (%)	NA	
Planning Control	SLO9, C52.37	

Comments

No developmental impact.
Concrete hardstand in close proximity to the north.
Clause 52.37 Canopy Tree.

Tree Number	20	Medium Retention Value
Location	On Site	
Genus/Species	*Eucalyptus obliqua*	
Common Name	Messmate	
Origin	Native (Vic)	
DBH (cm)	66	
Height (m)	15	
Spread NS (m)	6x6	
Health	Poor	
Structure	Fair	
Age Class	Mature	
Site Significance	High	
ULE	Medium	
SRZ (m)	2.8	
TPZ (m)	7.9	
Encroachment (%)	100 - Demolished	
Planning Control	SLO9, VPO3, C52.37, C52.17	

Comments

Nominated for removal.
The subject tree is in a state of decline due to clearance pruning and possum grazing.
VPO3 - Whitehorse Statement of Tree Significance.
Clause 52.37 Canopy Tree.

Tree Number	21	Medium Retention Value
Location	On Site	
Genus/Species	*Eucalyptus radiata*	
Common Name	Peppermint	
Origin	Native (Vic)	
DBH (cm)	66	
Height (m)	14	
Spread NS (m)	5x6	
Health	Poor	
Structure	Fair	
Age Class	Mature	
Site Significance	High	
ULE	Medium	
SRZ (m)	2.8	
TPZ (m)	7.9	
Encroachment (%)	9.5	
Planning Control	SLO9, VPO3, C52.37	

Comments

Minor TPZ encroachment.
Heath improvements required, include possum guarding.
VPO3 - Whitehorse Statement of Tree Significance.
Clause 52.37 Canopy Tree.

Tree Number	22	High Retention Value
Location	On Site	
Genus/Species	*Eucalyptus radiata*	
Common Name	Peppermint	
Origin	Native (Vic)	
DBH (cm)	Multi = 56	
Height (m)	10	
Spread NS (m)	6x5	
Health	Fair	
Structure	Fair	
Age Class	Mature	
Site Significance	Medium	
ULE	Medium	
SRZ (m)	2.6	
TPZ (m)	6.7	
Encroachment (%)	6.5	
Planning Control	SLO9, C52.37	

Comments

Nominated for retention.
Minor TPZ encroachment.
Pruned for powerline clearance.
Clause 52.37 Canopy Tree.

APPENDIX B – SITE PHOTOGRAPHS

Photo 1. The view of the trees growing adjacent to Witt Street.

Photo 2. The western site entrance and area of proposed ramp to basement.

Photo 3. The view of the site from the intersection of Witt Street and the Whitehorse Road service road.

Photo 4. The northern view looking along the site's eastern boundary.

Photo 5. Example of exempt vegetation nominated for removal.

Photo 6. Example of exempt vegetation nominated for removal.

APPENDIX C - TREE PROTECTION GUIDELINES

Sustainable Tree Management assesses individual tree protection requirements based upon the Australian Standard AS4970 – 2009 'Protection of Trees on Development Sites'. Tree protection requirements are calculated based upon trunk diameter of the tree at breast height. These calculations produce what is referred to in this Report as the Tree Protection Zone (TPZ) and is provided as a measurement in metres in a radius from the centre of the trunk.

The TPZ is the zone in which protective measures should be applied in order to protect the tree(s) whilst maintaining the current levels of health and vigour.

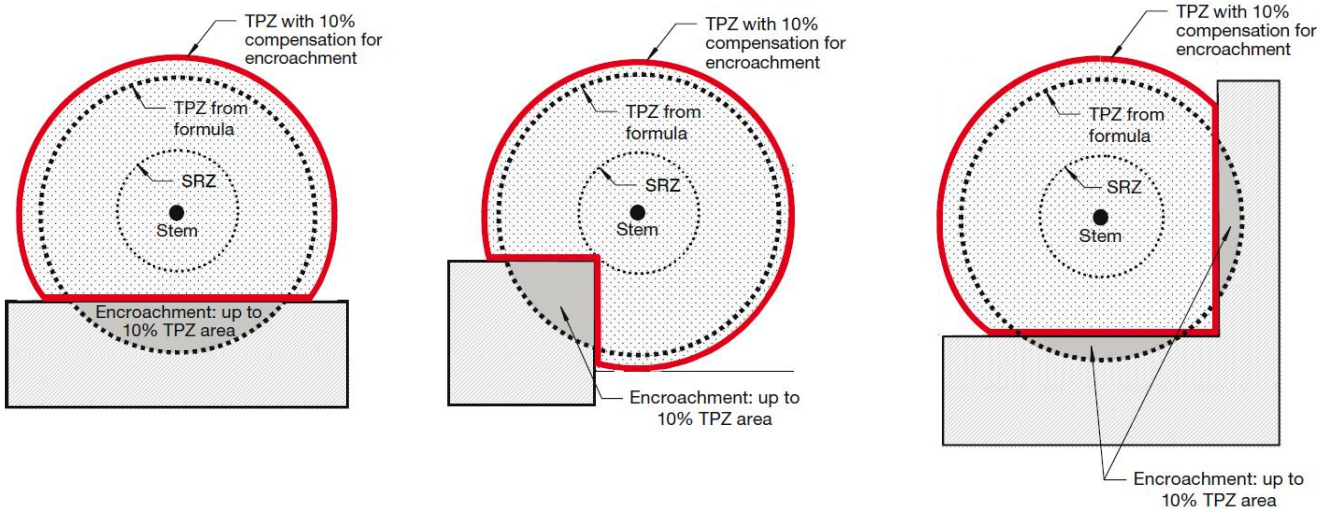
Determination of the structural root zone or the zone of rapid taper is provided as the Structural Root Zone (SRZ). The structural root zone calculations (may also be referred to as the Root Plate Radius (RPR) of the tree, based upon the Australian Standard AS4970 - 2009. The SRZ determines the minimum distance around the tree in which the structural stability of the tree is able to be maintained.

It is important to note that the SRZ only determines the root plate area or the zone of rapid taper. Excavation within this area will not only cause a decline in tree vigour but may also cause catastrophic tree failure (Coder, 1996).

Often it is difficult to protect the entire TPZ due to site constraints. In such events it is imperative that condition and species tolerance to disturbance are evaluated in conjunction with the site characteristics. Helliwell (1985) and Harris (1999) identified that a healthy tree may tolerate removal of up to one-third of its roots and possibly up to 50% in some cases, although stability may be compromised at this level.

In situations where the TPZ of a tree to be retained will be in close proximity to a proposed development or where there will be encroachment into the TPZ of a tree, a specific tree management plan should be developed. This plan provides prescriptive measures to protect trees on development sites

Extract from Australian Standard AS 4970 - 2009 Protection of trees on Development sites



General Tree Protection Requirements

The following requirements are only provided only for basic guidance with the design phase for a project. These guidelines do not constitute a specific tree management plan.

- A tree protective fence should be installed at the recommended distance allocated for each tree to be retained. The fence should be located at the TPZ distance provided.

- The protection fence should be rigid (chain link or similar) and should not be less than 1.8 metres in height. Fencing should be firmly attached to a removable concrete or similar base. Alternatively, star pickets (1.5 metre spacing) and para-webbing may be used to define the tree protection area. Fencing should be in accordance with the Australian Standard for Temporary Fencing AS 4687.

- In cases where the TPZ cannot be entirely fenced, it is recommended that ground protection is used. Specific ground protection requirements will form part of a tree management plan that should be developed for each tree to be retained.

- No soil levels should be altered within the fenced TPZ area, no heavy machinery should be allowed to pass within this area and no spoil, chemicals, building materials or refuse should be stored within this area. Nothing whatsoever should be attached to the tree (excluding tape to identify a tree to be protected).

- The area within the tree protection fence should be covered with a layer of organic mulch (woodchips) to a depth of 100mm prior to the commencement of the project. Mulch material should comply with Australian Standard AS 4454.

- The tree protective fencing should be installed prior to any works (including demolition) commencing on site and should remain in place until all site development work is completed. The protective fencing should be located at the prescribed distances and clearly signed **TREE PROTECTION ZONE**. The sign should be similar to the following *(as recommended by the Australian Standard AS4970)* and should be of a size no smaller than 600mm x 400mm:

- An area should be designated on site, which is at least 10 metres distance from any optimal tree protection zone of the trees to be retained, where all building materials, chemicals etc. can be stored throughout the proposed development.

- Open trenching for underground services located within the recommended tree protection zone (TPZ) must be avoided. Should there be no alternative for service location; the services must be bored underneath the area designated as the tree protection zone. No trenching whatsoever should be used to install services within the protected area.

- Soil moisture during construction should be maintained at not less than 50% of field capacity (usually 10 litres of water per 10mm of each tree DBH per week). Irrigation may be applied by hand, automatic or manual irrigation system, or by fine spray from water tanker located outside the previously submitted exclusion zones. Water is to be applied at a volume and frequency required so as to maintain turgor and leaf retention and encourage healthy root development. The consultant Arborist should discuss variations to the amount of water to be supplied with the site or Project Manager.

- Remedial pruning works recommended to be undertaken on the subject trees must be carried out to Australian Standard AS4373 (2007) – Pruning of Amenity Trees, by a qualified Arborist. If pruning works are to be undertaken, then these works should be carried out prior to any construction works beginning on site.

- Documentation should be provided to the site manager by the consultant Arborist for each inspection during the development process which details the consultant Arborist name, date and time of inspection, the stage of development, and provides comments of what actions are required.

APPENDIX D - REFERENCES

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APPENDIX E - QUALIFICATIONS AND EXPERIENCE OF CONSULTANT

Brendan Pike (Senior Arborist)

Diploma in Arboriculture (AQF5) – Melbourne Polytechnic

Certificate III in Horticulture (Arboriculture)

Certificate IV in Computer Science

Consulting Arborist – Sustainable Tree Management	2019 – Present
Supervising Arborist - Antler Environmental Pty. Ltd.	2018 - 2019
Supervising Arborist - Austree Contracting Pty. Ltd.	2012 - 2018
Supervising Arborist - Arborco Australia Pty. Ltd.	2011 - 2012
Arborist/Leading Hand - Branching Out Arbor Care Pty. Ltd.	2003 - 2011

Luke Sturgess (Principal Arborist/Director)

Diploma Arboriculture (AQF5)

Advanced Diploma Business Management

Experience

Director Sustainable Tree Management 16 years

Senior Vegetation Management Officer 11 years (Arborist Town Planning City of Kingston

APPENDIX F - GLOSSARY OF TERMS

Amenity
Although difficult to quantify, the term as used in this Report relates to the contribution given to the landscape or streetscape in terms of visual aesthetics. It may also relate to the contribution in terms of shade or protection from the elements.

Bifurcation
Forked or divided into two or more parts or branches. Used to describe a union point.

Branch Bark Ridge
Swelling of bark tissue on the upper side of the branch junction or union. Considered the normal pattern of development in contrast to included bark (from Matheny & Clark, 1994).

Branch collar
Trunk tissue that forms around the base of a branch between the main stem and the branch. As the branch decreases in vigour or begins to die, the branch collar becomes more pronounced. (AS4373).

Structural Root Zone (SRZ)
The Structural Root Zone (SRZ) is the calculated distance based on DBH only. The SRZ identifies the minimum radius at which the root plate cannot be disturbed. This measure only relates to the trees' stability and does not take into account the implications of a decline in health. The measurement is given in metres in a radius from the tree trunk. (Coder, 1996). This area may also be referred to as the Root Plate Radius (RPR).

Chlorotic
Discolouration of the leaves, yellow in colour resulting from a lack of chlorophyll

Codominant
Generally relates to trunks/ stems (although it may relate to scaffold branches within the crown) of two or more and of equal or similar size and relative importance (from Matheny & Clark, 1994).

Compartmentalisation
Physiological process which creates the chemical and mechanical boundaries that act to limit the spread of disease and decay organisms (from Matheny & Clark, 1994).

Decay
Degeneration and de-lignification of plant tissue, including wood, by pathogens or micro-organisms (AS4373).

Diameter at Breast Height (DBH)
DBH is measured at 1.4m above ground level. In cases where the tree has up to three stems the diameter is calculated by taking the area of each stem at 1.4 metres and calculating the combined diameter. In trees with more than three stems the measurement is provided as 'Multi-stemmed', however in some cases the diameter will be taken at the point below the multi-stemmed union.

Epicormic Shoots
Shoots which arise from adventitious or latent buds (usually dormant). They are generally produced in response to environmental stress.

Included Bark
The pattern of development at a branch union where bark is turned inward rather than outward or pushed out. Relates to the branch bark ridge. (from Matheny & Clark, 1994)

Live Crown Ratio
Relative proportion of healthy crown in proportion to overall tree height. Often not used in isolation due to the different natural forms of many species.

Lateral
A branch arising from another branch or stem (AS4373)

Lopping
Cutting back a limb or stem at any point with no regard to natural target pruning. Random cutting of branches or stems between branch unions or at internodes on young trees. Not considered an acceptable practice as part of the Australian Standard AS4373: *Pruning of Amenity Trees.*

Tree Protection Zone (TPZ)
The Tree Protection Zone (TPZ) (referenced from Australian Standard AS 4970 - 2009 - Protection of Trees on Development Sites; is the calculated distance based on the DBH of the tree. The TPZ addresses the physiological implications by retaining enough area around the tree not only to minimise the potential for complete tree failure but for the tree to survive in the landscape on a long-term basis. The measurement is given in metres in a radius from the centre of the trunk.

Senescence
The organic process of age and the deterioration of tissue within the tree.

Stem bark ridge
The ridge of bark that forms in the union between two codominant stems (AS4373).

Wound wood
Lignified, partially differentiated tissue which develops from the callus associated with wound or pruning cuts.

Origin

Origin is given as Indigenous (the trees' natural range is within the study area), Native (the trees natural range is within Australia) or Exotic (the tree originates from outside of Australia).

Health

Health relates to the tree vigour, live crown ratio and canopy density.

Health is rated according to the following categories:

Category	Description
Good	Crown is excurrent or decurrent with greater than 50% live crown ratio. Foliage density is greater than 70% at optimal growth. There is less than 10% canopy dieback present and foliage has no or very minor tip dieback. Tree may also have acceptable extension growth if it is in active growth and is showing no symptoms of nutrient deficiency. The tree also has good wound wood development.
Fair	Crown is excurrent or decurrent with 30-50% live crown ratio. Foliage density is between 50-70% at optimal growth for the species. There may be 10-30% canopy dieback present and foliage may have minor tip dieback. Tree maybe showing signs of normal growth but it is not consistent throughout the crown. Some foliage discolouration maybe present from possible nutrient deficiency or other cause.
Poor	The tree may have less than 30% live crown ratio and the canopy may be codominant or suppressed. There may be greater than 30% canopy dieback present and foliage density is below 50%. Stunted growth through leaf size or petiole extension and discolouration of the leaf may be present. Tree may be producing epicormic shoots as a stress response. Nutrient deficiency, lack of resources (water, light etc) or pathogens may be the causal agent in the tree's decline

Significance

Site significance pertains to the significance of the individual tree to its surroundings. It should be noted that site significance applies only to the tree as it stands and does not allow for future development or decline. While a newly planted tree may be accorded a low rating it may well be essential to the future aesthetic qualities of its surroundings. Neither hazard nor appropriateness nor factors other than significance are taken into account. Significance does not relate to retention value.

Site significance is rated according to the following categories:

Category	Description
High	The tree may be of large size (height and/or spread) or located on neighbouring land. The tree may be of unusual and attractive form. The tree may be listed as a "Significant Tree" on one or more of several registers. The tree may flower abundantly or attractively. The tree may screen unattractive structures or landscape features. The tree may be part of a design that compliments the landscape. The tree contributes extensively to the landscape and may be worthy of extensive efforts of preservation.
Medium	The tree may be of medium or small size. The tree may be of somewhat unusual or attractive form. The tree may flower moderately. The tree may be isolated or part of a loosely defined planting. The tree may be part of a partially unsuccessful design or contribute moderately to the design. The tree contributes moderately to the landscape and dependant of the situation could be recommended for retention or removal.
Low	The tree may be of small size. The tree may be of nondescript form. The tree may have a poor floral display. The tree may be part of an unsuccessful design. The tree contributes little to the landscape and may be worthy of little attention or care.

Retention Value

High Retention Value
The tree is well suited to the site and offers significant amenity and/or screening values. The tree is typically in fair to good health with fair to good structure. The ULE rating is generally medium to long for the species. The tree may need to be retained for cultural/historic reasons. Indigenous, old or remnant vegetation is generally assessed as high retention value but may be downgraded due to hazardous structure or other health and safety concerns.

High Retention Value (Third-party ownership)
The tree is located outside of the subject site. It may be owned by a private entity or public body. The tree has been assessed on the assumption that its owner requires the retention and successful incorporation of the tree. Negotiations with the relevant parties and authorities may result in the agreed removal.

Medium Retention Value
The tree is generally of moderate amenity value. Proposed design should (where practical) accommodate tree retention. The tree may be high amenity value but be compromised due environmental conditions and/or hazardous structure or other health and safety concerns.

Low Retention Value
The tree is generally of low amenity value. The tree may not be worth retaining in the landscape or may be easily replaced. The tree may be considered a weed species or structurally unsound. This category may contain trees that are young, juvenile, or semi-mature specimens that could be replaced with standard/advanced nursery stock with limited site amenity impacts.

Structure

Structure relates to the physical form of the tree, including the trunk(s), main scaffold branches and roots. Structure includes the attributes that may influence the probability of major trunk, limb or root failure.

Structure is rated according to the following categories:

Category	Description
Good	The form of the tree is typical for the species and exhibits good symmetrical form. Major limbs are well formed with acceptable branch taper and unions appear to be strong with no signs of defects. The tree has minimal defects throughout the trunk and limbs. There is no sign of root plate heave or damage to the root system. The tree is unlikely to suffer branch or trunk failure under normal environmental conditions.
Fair	Tree has a fairly consistent form for the species. Tree may exhibit minor structural defects that may be managed through formative pruning. Only minor wounds are present that do not affect the overall stability or structural integrity of the tree. Minor root damage may have occurred in the past. Defects present are likely to cause only minor branch failure under normal environmental conditions.
Poor	Tree has a poorly formed crown that is not symmetrical. Branch and or trunk taper may be unacceptable and scaffold limbs may be overextended. Branch unions may exhibit significant defects that cannot be managed through formative pruning. Major root damage may have occurred and there may be evidence of root plate heave. Defects that are present may result in catastrophic failure of branches or trunk under normal environmental conditions.

Age Class

The age class is given as a guide to the current live stage of the tree. Ultimately, the level of maturity that a tree may reach is dependent on the growing environment.

Age Class is rated according to the following categories

Category	Description
New Planting	Planted within approximately 2 years
Juvenile	Generally less than 5 years old
Young	Estimated as less than 15 years old
Semi-mature	Estimated at between 15 – 25 years old, however, this may be species dependant
Mature	Estimated at over 25 years old or in a life stage that is considered at the peak of growth for the species.
Senescent	In the declining phase of the tree's lifespan

Useful Life Expectancy

Long ULE: 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 ULE: 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 ULE: 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 Trees.
- 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.
- Trees that will become dangerous after removal of other trees for the above reasons.

APPENDIX G - TERMS AND CONDITIONS

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2. The author contracts with you on the basis that your promise that all affected property complies with all applicable statutes and legislation.

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9. Unless expressly stated otherwise:

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   (b) The inspection is limited to visual examination of accessible components without dissection, excavation or probing. There is no warranty or guarantee, expressed or implied, that even if they were not present during our inspection, problems or defects in plants or property examined may not arise in the future.

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