

10 April 2024

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Arboricultural Impact Assessment Report regarding sixty-six (66) trees located within the vicinity of the proposed multideck carpark development at Thomas Embling Hospital and Melbourne Polytechnic, 201 Yarra Bend Road, Fairfield

Dear Joel,

We are pleased to provide you with the following Arboricultural Impact Assessment Report for sixty-six (66) trees within the grounds of Thomas Embling Hospital and Melbourne Polytechnic.

Complete use of this report is authorised under the conditions limiting its use as stated in Appendix A Item 7 of "*Arboricultural Reporting Assumptions and Limiting Conditions*".

Should you have any queries relating to this report, its recommendations, or the options considered please do not hesitate to contact us on 1300 272 671.

Regards,



Andrew Clark
Consulting Arborist
Dip. Hort. (Arb.), AQF Level 5



Version	Date	Author	Rationale
1	2 February	Andrew Clark	First Issue
2	29 February 2024	Andrew Clark	Update to tree removals
3	10 April 2024	Andrew Clark	Update to tree removals

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1 Executive Summary

- 1.1.1 The following is an Arboricultural Impact Assessment (Report) regarding sixty-six (66) trees located within the grounds of Thomas Embling Hospital and Melbourne Polytechnic. The subject site was identified by Guymer Bailey Landscape (the Client) as possessing trees that may be impacted upon by the proposed construction of a new multi-deck carpark within the area of an existing ground level bitumen carpark.
- 1.1.2 In part, the project scope was to nominate subject trees that can be retained, or require removal to facilitate the proposed development, as well as identify and reduce potential conflicts between subject trees and site development. Accurate information on the area required for tree retention and methods/techniques suitable for tree protection during construction have been provided.
- 1.1.3 No High or Moderate Retention Value (RV) trees would require removal based on the current design due to minimal impact on the trees TPZ due to the existence of the established carpark, and compacted foundation, limiting root growth within the proposed development area.
- 1.1.4 A row of thirty-two (32) establishing small, semi-mature Low RV Pencil Pines, planted as an avenue between the sports field and the existing car park, will require removal to facilitate construction activities such as leveling works and scaffolding.
- 1.1.5 A small Weeping Bottlebrush of poor structure (Tree 502) rated as Low RV, will require removal due to proposed water infrastructure causing major TPZ encroachment. A semi-mature (exotic) Canary Island Date Palm (Tree 501) located within an inappropriate proximity to the proposed building and due to expected future size is also proposed for removal.
- 1.1.6 A further one (1) Category U (Zero RV) Chinese Privet tree is also recommended for removal as part of the development. Refer to Appendix D for further detail.
- 1.1.7 The protection measures detailed largely focus on excluding the existing trees from the development site via site perimeter fencing.
- 1.1.8 Tree retention values have been determined based upon a modified version of the British Standard and which have been prescribed into one of the following four (4) categories, A, B, C and U. Refer to Appendix C for further detail. Generally, relevant consent authorities will consider:
- **A** retention value trees as a site constraint and may require alterations to the proposed development design and/or specific protection measures to allow retention, unless the proposed development outweighs the retention value of the tree,
 - **B** retention value trees as a site constraint consideration, lesser changes should be considered to retain such trees
 - **C** retention value trees are not considered a site constraint
 - **U** retention value trees are considered a site opportunity, as such trees are recommended for removal regardless of the proposed development.

1.1.9 Trees impacted by the proposed development:

Category	Description	Total	Removal		Retain	
			located within development footprint	irrespective of future development	with specific protection	with generic protection
A	High retention value trees	15				538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 551, 559, 564, 565
B	Moderate retention value trees	14	501			549, 552, 553, 554, 555, 556, 557, 558, 560, 561, 562, 563, 566
C	Low retention value trees	36	502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534			535, 536, 550
U	Trees to be removed irrespective of proposed development	1		537		

2 Introduction

- 2.1.1 Civica ArborSafe was engaged by Joel Lee on behalf of the Client to complete an Arboricultural Impact Assessment Report on sixty-six (66) trees located within or adjacent to the Thomas Embling Hospital and Melbourne Polytechnic at 201 Yarra Bend Road, Fairfield.
- 2.1.2 The site was located within the property grounds and includes the existing ground level bitumen carpark, interior driveway, buildings and surrounding areas of open space.
- 2.1.3 The proposed development has been reviewed and in summary consists of the construction of a multi-deck carpark within the confines of an existing ground level bitumen carpark along with associated surrounding landscaping.
- 2.1.4 The report was intended to provide information on site trees and how they may be impacted upon by the proposed development. Report findings and recommendations provided are based upon guidance provided within Australian Standard AS 4970–2009: *Protection of Trees on Development Sites*.
- 2.1.5 Observations and recommendations provided within this report are based upon information provided by the Client and an arborist site visit.

3 Scope

- 3.1.1 Carry out a visual examination of the nominated trees located within the vicinity of the proposed development.
- 3.1.2 Provide an objective appraisal of the subject trees in relation to their species, estimated age, health, structural condition, useful life expectancy (ULE) and viability within the landscape.
- 3.1.3 Based on the findings of this investigation, provide independent recommendations on the retention value of the trees.
- 3.1.4 Nominate subject trees that can be retained or require removal to facilitate the development.
- 3.1.5 Identify and reduce potential conflicts between subject trees and site development by providing accurate information on the area required for tree retention and methods/techniques suitable for tree protection during construction.
- 3.1.6 Provide information on restricted activities within the area nominated for tree protection, as well as suitable construction methods to be adopted during demolition and/or construction.

4 Methodology

4.1 Data Collection

- 4.1.1 Dylan Adcock of Civica ArborSafe carried out a site inspection of the subject trees on 9 November 2023.
- 4.1.2 Trees that are the subject of this report (Figure 1) were identified during discussions with the Client, reviewing relevant supplied development documentation and reviewing the description of a non-exempt 'Tree' as identified within the City of Yarra relevant documentation. Pursuant with the consent authority tree management policy, all site trees with a trunk DBH of greater than 40cm have been included within this report (Victoria State Government, 2024). All young and juvenile planted trees/shrubs within the site have also been included within the report.

- 4.1.3 The subject trees were inspected from the ground using the initial component of Visual Tree Assessment (VTA) (Mattheck, 1994). No foliage or soil samples were taken and no aerial, underground or internal investigations were undertaken.
- 4.1.4 Tree height and crown width were estimated and have been provided in a variety of ranges with 5-10m increments. Trunk diameter at breast height (DBH) and trunk diameter at the root crown (DRB) were measured with a diameter tape and provided to the nearest centimetre.
- 4.1.5 TPZ encroachment calculations are based upon measurements obtained from using PDF measuring tools and/or scale ruler and/or measurement descriptions from the assessing arborists against plans showing surveyed tree locations (which have individual CAD drawn TPZs displayed) calculated within a dedicated TPZ encroachment calculator.
- 4.1.6 Environmental and heritage information has been sourced from the VicPlan state planning portal. The source of all information has been referenced accordingly.
- 4.1.7 Data collected on site was analysed against the supplied development documentation by Dylan Adcock, following which relevant findings and recommendations were formulated and collated into report format.
- 4.1.8 Tree protection zones (TPZ) and structural root zones (SRZ) were calculated in accordance with the Australian Standard AS 4970–2009: *Protection of Trees on Development Sites* (refer to Section 7.6).
- 4.1.9 Retention values have been determined based upon a modified version of the British Standard BS 5837–2012: *Trees in Relation to Design, Demolition and Construction* (refer to Appendix C).
- 4.1.10 All photographs were taken at the time of the site inspections by the author and have not been altered for brightness or contrast, nor have they been cropped.
- 4.1.11 Plans of the existing site and of the proposed development were provided to Civica ArborSafe in January and February 2024.
- 4.1.12 No proposed underground service locations have been reviewed in the preparation of this report.

5 Observations

5.1 Proposed Construction

- 5.1.1 The proposed development has been reviewed and in summary consists of the construction of a multi-deck carpark within the confines of an existing ground level bitumen carpark, along with associated surrounding landscaping.
- 5.1.2 The carpark will be supported by a suspended reinforced concrete banded slab on piles.

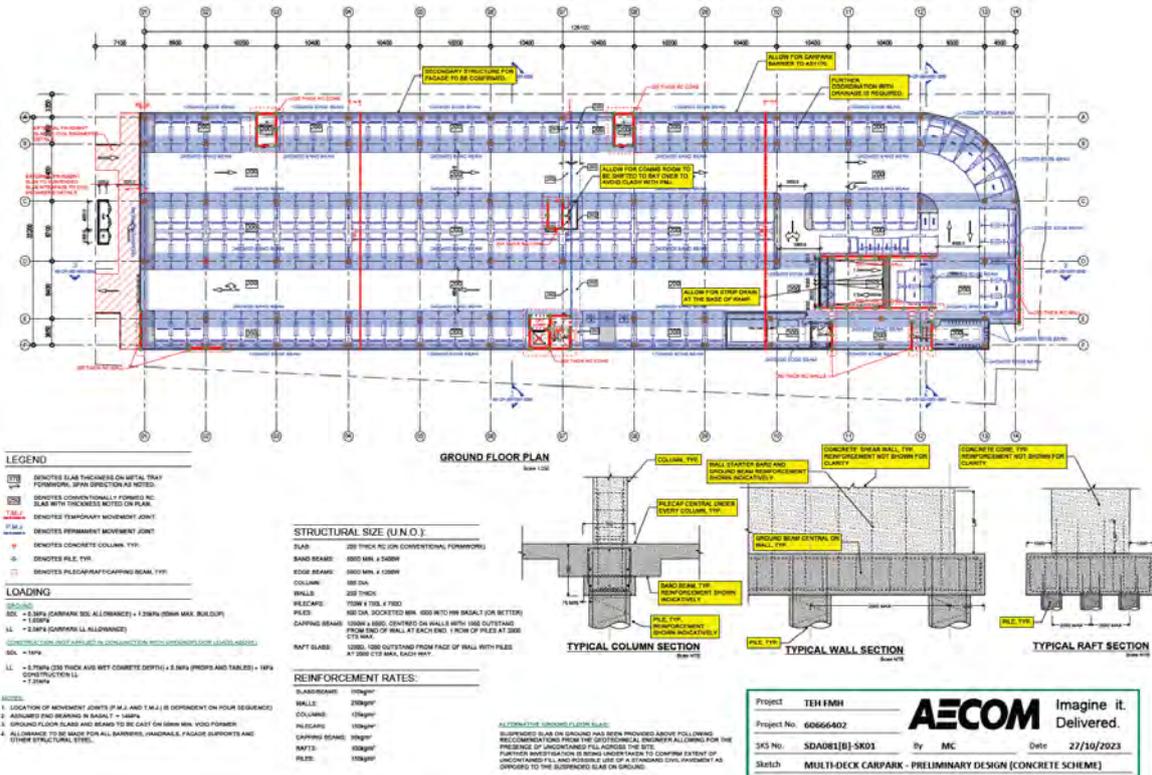


Figure 1. Excerpt from the Ground Floor Plan (AECOM, SDA081(B)-SK01, 27 October 2023). Client, January 2024.

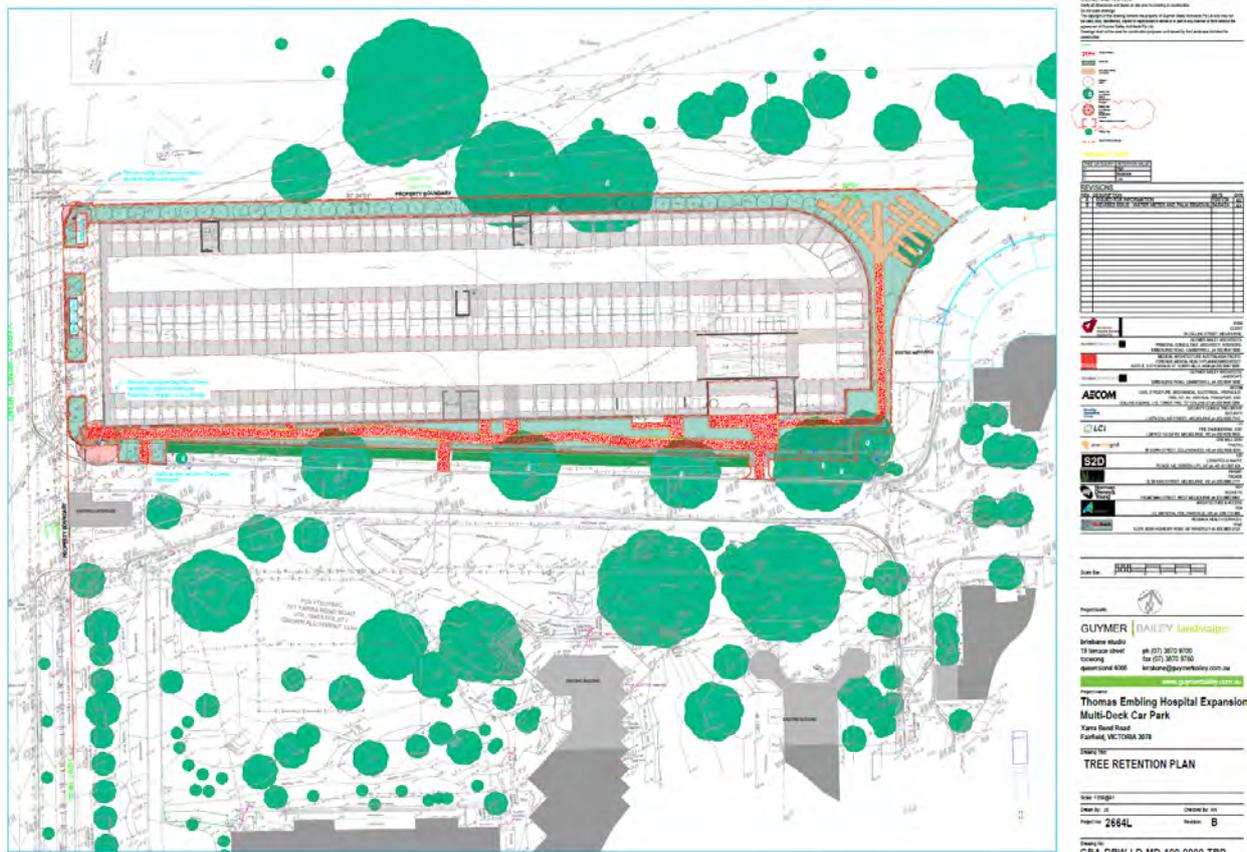


Figure 2. Excerpt from Tree Retention Plan, Guymer Bailey Landscape. Client, 4 April 2024.

5.2 Location

- 5.2.1 The specific site was located within the grounds of Thomas Embling Hospital and Melbourne Polytechnic (Figure 3). Yarra Bend Road runs in an approximate north/south alignment to the site's west with Melbourne Polytechnic (Fairfield Campus) located immediately to the site's north. The Yarra River is located to the east, with sports ovals (Fairlea Ovals West and East) to the site's south (bordered by the Eastern Freeway).
- 5.2.2 The soil landscape for the site is likely to be disturbed which is typical of an urban site. Soil type is therefore expected to deviate from its natural state due to extensive previous site development and its location within an urban area.
- 5.2.3 The site was located within the City of Yarra Local Government Area (LGA).



Figure 3. Whole site image (location). Red lines delineate the site and area containing the subject trees that are to be impacted by the proposed development. Nearmap, n.d.

5.3 Site Trees

- 5.3.1 A total of sixty-six (66) trees were inspected and are the subject of this report. All subject trees are located within the Thomas Embling Hospital and Melbourne Polytechnic. No trees on adjoining properties have been inspected as part of this report. Complete attributes for each tree can be found in Appendix D – Tree Assessment Data.
- 5.3.2 Trees to be included in the report were detailed by the Client in a project briefing email. No trees beyond the scope outlined by the Client have been inspected as part of this report.
- 5.3.3 Trees can be identified on site using tree tags which are typically located at approximately 2.0m from ground level on the southern side of the trunk. As these tree numbers form part of a previous survey undertaken for the Thomas Embling Hospital and Melbourne Polytechnic site, tree numbers are not in sequential order. Refer to Figure 4.
- 5.3.4 All trees are considered to be planted stock. The treescape is relatively young with forty-four (67%) of the existing assessed trees rated as semi-mature and a further nine (8%) rated in the juvenile category. Seventeen trees (25%) were rated as mature specimens.
- 5.3.5 Nineteen (19) different species were identified across the site with the most prevalent being the exotic evergreen *Cupressus sempervirens* 'Stricta' (Pencil Pine), planted as an establishing avenue along the northern edge of the carpark, and the *Cupressocyparis leylandii* (Leyland Cypress) largely growing as a screening hedge in the south east corner between the existing carpark and the rest of the site.
- 5.3.6 Fifty-six (56) trees were exotic evergreen species, with another three (3) being exotic deciduous. The remaining seven (7) trees were species native to Australia but were not considered endemic to the local area.
- 5.3.7 Tree 537 is a juvenile *Ligustrum lucidum* (Chines Privet), a recognised weed species within the City of Yarra LGA.



Figure 4. Site map showing subject trees. Tree attributes are to be obtained from Appendix D – Tree Assessment Data. Refer to Appendix F for more detailed mapping. ArborSite, November 2023.

5.4 Tree Retention Values

5.4.1 Retention values were determined based upon a modified version of the British Standard BS 5837–2012: *Trees in Relation to Design, Demolition and Construction*. This standard categorises tree retention value based upon assessment of the tree’s quality (health and structure), and life expectancy. Other criteria such as a tree’s physical dimensions, age class, location and its amenity, heritage and environmental significance are also considered. A breakdown of attributes required for each category can be obtained from Appendix C – Tree Retention Values.

Category	Tree numbers
A	538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 551, 559, 564, 565
B	501, 549, 552, 553, 554, 555, 556, 557, 558, 560, 561, 562, 563, 566
C	502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 550
U	537

5.5 Significant Landscape

5.5.1 The subject site is located within a Significant Landscape Overlay (SLO1) area (Victoria State Government, 2024).

5.5.2 Under the provisions of this schedule (SLO1) a permit is required to remove, destroy or lop vegetation with the exception of non-native vegetation, which has all of the following:

- A trunk circumference of less than 0.35 metre at 1.4 metre above ground level;
- A height of less than 6 metres; and
- A branch spread of less than 4 metres.

5.5.3 In addition, the pruning of vegetation to maintain or improve its health, appearance or for safety reasons can also be undertaken without a permit Schedule 1 – SLO1 Section 3 (2017).

5.6 Heritage Status

5.6.1 The site is within the grounds of the Fairfield Hospital Grounds (former) as part of an Incorporated Plan (Victoria State Government, 2023).

5.6.2 The proposed development area itself does not appear to hold any specific heritage value, being largely an open space through most of the preceding time, but the current visual amenity of trees, hedges and open space has intrinsic value to the site as laid out in the Preliminary Heritage Advice Report from *Lovell Chen*, 15 Sept 2021.

Heritage Listing	Planning Scheme Map ref.	Tree Controls Apply?
Fairfield Hospital Grounds (former)	HO303 (Victorian Heritage Register Ref. H1878)	Yes (Registered Place)

Source: Yarra Planning Scheme

Planning Overlays



Figure 5. Excerpt of Heritage Overlay & Significant Landscape overlay. VicPlan, 2024.

5.7 Botanical and Environmental Status

- 5.7.1 The site trees were considered common, mainly exotic, species in the local area and as such hold limited botanical significance.

6 Discussion

6.1 Determining TPZ Encroachment

6.1.1 **Major encroachment.** As per the Australian Standard AS 4970–2009: *Protection of Trees on Development Sites*, a major encroachment into the TPZ of any tree is considered to occur when it is beyond 10% of the total TPZ area. Trees with major encroachment may require removal or, in certain instances, be retained with specific protection requirements throughout the construction stage.

6.1.2 **Minor encroachment.** Under the aforementioned standard, a minor encroachment is determined as being less than 10% of the total TPZ area. Trees with minor encroachment may be retained with specific, generic or no protection requirements throughout the construction stage.

6.1.3 **No encroachment.** Trees with no encroachment may be retained with generic or no protection requirements throughout the construction stage.

6.1.4 For the purposes of this report, trees to be removed or retained have been identified as those:

- Requiring removal due to a level of encroachment into their TPZ that would likely result in a detrimental impact upon their future health and/or stability,
- Retainable and requiring specific protection requirements throughout construction (i.e. generic requirements plus arborist supervision and careful construction methods within their TPZ)
- Retainable and requiring generic tree protection measures only (i.e. protective fencing and restriction of activities within the TPZ).

6.2 Impact of Proposed Development

6.2.1 The main development impacts which affect trees, but not necessarily to the point of requiring immediate removal, is through significant root damage due to major TPZ encroachment. Root damage largely occurs due to two (2) main impacts – soil compaction (compacting existing site soil to build on or installing additional fill to raise soil levels) and/or direct root severance (excavation for service installation or lowering surface levels).

6.2.2 Negative tree impacts can manifest as either a reduction in health and/or vigour, due to root loss (absorption and/or transport roots) leading to a reduction in water and nutrient absorption capability, or on tree stability if larger roots are impacted. Ultimately, the outcome for the trees depends on a number of variable factors including species, age, current health, TPZ encroachment percentage, soil type, topography, previous site use and the proposed design and construction methodology.

6.2.3 Compacted soils, especially artificially compacted soils such as those found under driveways or building platforms, have a higher bulk density down to a deeper level of subsoil. Bulk density is the term used for describing the weight of soil per unit volume. The broad engineering thinking is that the higher the density the more stable the carpark surface or building foundation due to less soil movement in expansion, contraction, or compression. A higher bulk density is produced by compacting the soil to reduce available pore space between the soil particles.

- 6.2.4 The effect of compacted soils on plants is somewhat influenced by the soil type but generally a reduction in available pore space reduces the available area for oxygen and water within the soil. A reduction in available soil water and oxygen inhibits root activity within the soil, as they are essential for root elongation and growth, and the lack of these properties is generally considered a major limiting factor. The impact from significant soil level rises across the TPZ generally occurs over a longer time frame, as the stored energy can still be utilised and shifted within the tree even if the long-term use of the affected root is limited, than if the roots were directly severed. This generally allows the tree more time to react to the changed growing environment. Root severance has the same effect, reduction in root function and capability and (possibly) tree stability, but on an instantaneous time scale where there is no time for the tree to adjust.
- 6.2.5 The assumption of allowable encroachment and minimal long-term health or structural impacts to the trees rely on a combination of the following being used - root sensitive construction methods being adhered to within the TPZ, minimal excavation within the TPZ to limit root severance (i.e. construction placed outside the TPZ where possible), fill rather than excavation utilised to affect level changes where possible (i.e. to minimise root severance and allow the trees root system time to adjust), no construction occurring within the SRZ, compensatory area being available around the unimpacted aspects of the trees and the enhancement of the existing TPZ area (i.e. mulched, soil conditioning and irrigation when required).
- 6.2.6 No High or Moderate RV trees would require removal based on the current design due to minimal impact on the trees TPZ due to the existence of the established carpark, and compacted foundation, limiting root growth within the proposed development area.
- 6.2.7 A row of thirty-two (32) establishing small, semi-mature Low RV Pencil Pines, planted as an avenue between the sports field and the existing car park, will require removal to facilitate construction activities such as leveling works and scaffolding.
- 6.2.8 A small Weeping Bottlebrush of poor structure (Tree 502) rated as Low RV, will require removal due to proposed water infrastructure causing major TPZ encroachment. A semi-mature (exotic) Canary Island Date Palm (Tree 501) located within an inappropriate proximity to the proposed building and due to expected future size is also proposed for removal.
- 6.2.9 A further one (1) Category U (Zero RV) Chinese Privet tree is also recommended for removal as part of the development. Refer to Appendix D for further detail.

7 Tree Protection and Management Recommendations

7.1 Tree Removal

7.1.1 Thirty-four (34) trees would require removal based on the supplied design proposal.

7.1.2 One (1) *Ligustrum lucidum* (Chinese Privet) tree should be removed irrespective of development (Category U) due to its small stature and recognised weed status within the Yarra Council LGA.

Recommendation	Category A High retention value		Category B Moderate retention value		Category C Low Retention value		Category U No retention value	
	Qty	Tree numbers	Qty	Tree numbers	Qty	Tree numbers	Qty	Tree numbers
Remove for development	0		1	501	33	502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534	0	
Remove irrespective of development	0		0		0		1	537

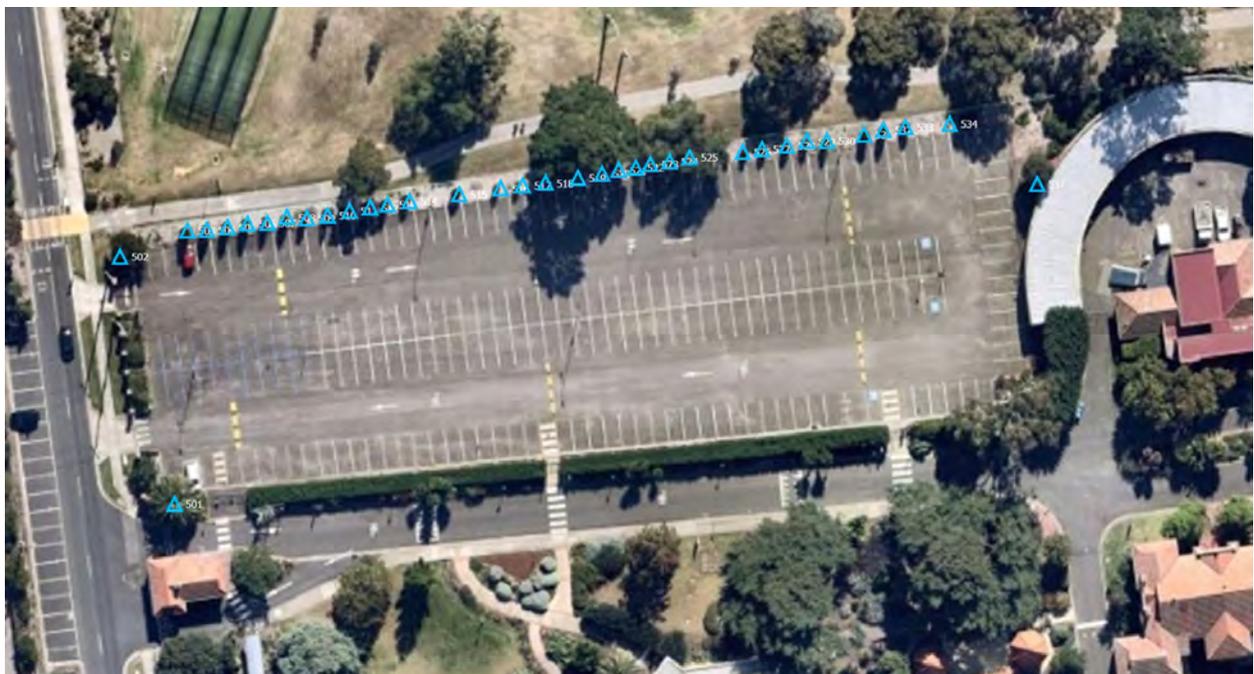


Figure 6. Site map showing the Category U retention value tree recommended for removal. ArborSite, April 2024).

7.2 Tree Retention

7.2.1 Thirty-one (31) trees were recommended for retention and require generic protection measures during construction to ensure they remain viable following the completion of works.

Recommendation	Category A High retention value		Category B Moderate retention value		Category C Low Retention value	
	Qty	Tree numbers	Qty	Tree numbers	Qty	Tree numbers
Retain with specific protection requirements	0		0		0	
Retain with generic protection requirements	15	538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 551, 559, 564, 565	13	549, 552, 553, 554, 555, 556, 557, 558, 560, 561, 562, 563, 566	3	535, 536, 550



Figure 7. Site map showing tree requiring generic protection measures. ArborSite, April 2024.

7.3 Generic Protection and Reporting Measures

7.3.1 All retained trees require generic protection measures. Refer to Section 7.3–7.7 for further detail.

7.3.2 All trees to be retained require protection during the construction stage. Tree protection measures include a range of:

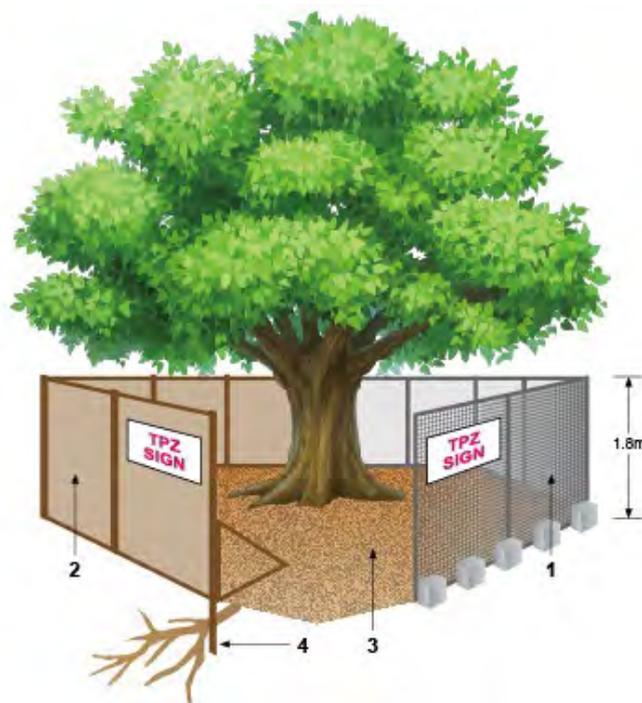
- Activities restricted within the TPZ
- Protective fencing
- Trunk and ground protection
- Tree protection signage
- Involvement from the project arborist
- Project milestones
- Compliance reporting

7.4 Activities Prohibited within the TPZ

- Machine excavation including trenching
- Storage
- Preparation of chemicals, including cement products
- Parking of vehicles and plant
- Refuelling
- Dumping of waste
- Wash down and cleaning of equipment
- Placement of fill
- Lighting of fires
- Soil level changes
- Temporary or permanent installation of utilities and signs
- Physical damage to the tree

7.5 Protective Fencing Specification

- 7.5.1 Protective fencing (Figure 8) is to be installed as far as practicable from the trunk of any retained trees. Fencing should be erected as per the image below before any machinery or materials are brought to site and before commencement of works (including demolition).
- 7.5.2 In some areas of the site (i.e. protection of trees on neighbouring properties) existing boundary fencing may be used as an alternative to protective fencing.
- 7.5.3 Once erected, protective fencing must not be removed or altered without approval from the project arborist. The TPZ fencing should be secured to restrict access.
- 7.5.4 TPZ fencing is to be a minimum of 1.8m high and mesh or wire between posts must be highly visible. Fence posts and supports should have a diameter greater than 20mm and should ideally be freestanding, otherwise be located clear of the roots. See image below.
- 7.5.5 Tree protection fencing must remain intact throughout all proposed construction works and must only be dismantled after their conclusion. The temporary dismantling of tree protection fencing must only be done with the authorisation of a consulting arborist and/or the responsible authority.
- 7.5.6 The subject trees themselves must also not be used as a billboard to support advertising material. Affixing nails or screws into the trunks of trees to display signs of any type is not a recommended practice in the successful retention of trees.



Legend:

1. Chain wire mesh panels with shade cloth attached (if required), held in place with concrete feet
2. Alternative plywood or wooden paling fence panels. This fencing material also prevents building materials or soil entering the TPZ
3. Mulch installation across surface of TPZ (at discretion of the project arborist). No excavation, construction activity, grade changes, surface treatment or storage materials of any kind are permitted within the TPZ
4. Bracing is permissible within the TPZ. Installation of supports should avoid damaging roots.

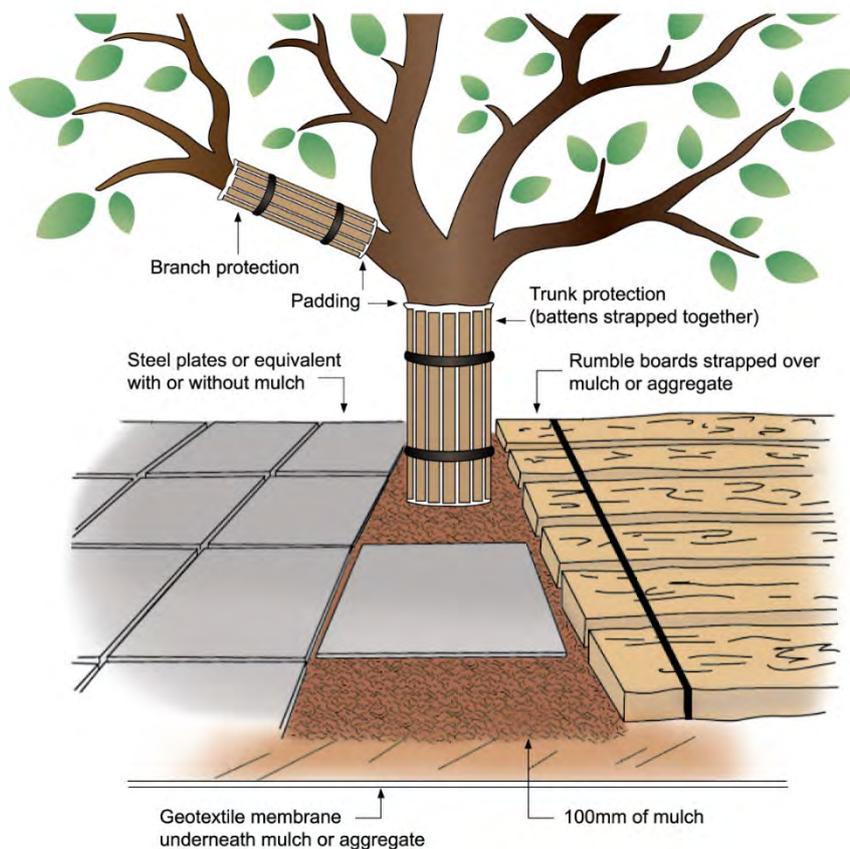
Figure 8. Depicts standard fencing techniques. (AS 4970–2009).

7.6 Trunk and Ground Protection

7.6.1 Given that proposed works are close to the TPZs of retained trees, standard protective fencing may not always be a viable method of protection. In these areas trunk protection and ground protection should be installed prior to the commencement of works and remain in place until after construction works have been completed.

7.6.2 Where construction access into the TPZ of retained trees cannot be avoided, the root zone of each tree must be protected using either steel plates or rumble board strapped over mulch/aggregate until such a time as permanent above ground surfacing (cellular confinement system or similar) is to be installed.

7.6.3 Trunk and ground protection (Figure 9) should be undertaken in line with the Australian Standard AS 4790–2009: *Protection of Trees on Development Sites* as per the image below:



Notes:

1. For trunk and branch protection use boards and padding that will prevent damage to bark. Boards are to be strapped to trees, not nailed or screwed.
2. Rumble boards should be of a suitable thickness to prevent soil compaction and root damage.

Figure 9. Depicts trunk and ground protection techniques. (AS 4970–2009).

7.7 Tree Protection Signs

- 7.7.1 Signs identifying the TPZ (Figure 10) should be placed at 10m intervals around the edge of the TPZ and should be visible from within the development site.



Figure 10. Depicts standard fencing techniques. (AS 4970–2009).

7.8 Project Arborist

- 7.8.1 An official project arborist must be commissioned to oversee the tree protection, any works within the TPZ's and complete regular monitoring compliance certification.
- 7.8.2 The project arborist must have minimum five (5) years industry experience in the field of arboriculture, horticulture with relevant demonstrated experience in tree management on construction sites, and diploma level qualifications in arboriculture – AQF Level 5.
- 7.8.3 Inspections are to be conducted by the project arborist at several key points during the construction in order to ensure that protection measures are being adhered to during construction stages and decline in tree health or additional remediation measures can be identified.

7.9 Project Milestones

7.9.1 The following visits and milestones were recommended as to when on-site tree inspection by the project arborist is required:

Item	Purpose of Visit	Timing of Visit(s)	Prerequisites
1	Pre-start induction	Following sign off from Item 1. Contractor to provide a minimum of five days advance notice for this visit.	Prior to commencement of works. All parties involved in the project to attend.
2	Supervision of works in TPZ's including all regrading and excavations	Whenever there is work planned to be performed within the TPZ's. Contractor to provide a minimum of five days advance notice for such visits.	
3	Regular site inspections	Minimum frequency monthly for the duration of the project.	The checklist must be completed by the Project Arborist at each site inspection and signed by both parties.
4	Final sign off	Following completion of works.	Practical completion of works and prior to tree protection removal.

7.10 Compliance Reporting

- 7.10.1 Following each inspection, the project arborist shall prepare a report detailing the condition of the trees. These reports should certify whether or not the works have been completed in compliance with the consent relating to tree protection.
- 7.10.2 These reports should contain photographic evidence where required to demonstrate that the work has been carried out as specified.
- 7.10.3 Matters to be monitored and included in these reports should include tree condition, tree protection measures and impact of site works which may arise from changes to the approved plans.
- 7.10.4 The reports and compliance statements shall be submitted to the project manager (as well as the Clients' nominated representative) following each inspection.
- 7.10.5 The reports and any non-compliance statements shall be submitted to the project manager (as well as the Clients' nominated representative) if tree protection conditions have been breached. Reports should contain clear remedial action specifications to minimise any adverse impact on any subject tree.

7.11 Additional Excavation/Trenching within TPZs

- 7.11.1 In the event additional excavation is required within the TPZs of retained trees identified within this report, or any other site trees, arborist involvement will be required to ensure works are undertaken in accordance with the Australian Standard AS 4970–2009: *Protection of Trees on Development Sites*.
- 7.11.2 Where excavation or trenching is required to facilitate installation of underground services within the TPZs of any site trees arborist supervision is required. Works should be undertaken using techniques that are sensitive to tree roots to avoid unnecessary damage. Such techniques include:
1. Excavation by hand
 2. Excavation using a high-pressure water jet and vacuum truck
- 7.11.3 Machine excavation should be prohibited within the TPZs of retained trees unless undertaken at the direct consent from the project arborist and/or the responsible authority.

7.12 Pruning

- 7.12.1 It is anticipated that minor pruning only may be required, largely centred on reduction or crown lifting to facilitate site access during construction, of no greater than 10% of any one tree's total crown area. Such pruning is considered to have minimal long term health impact to the tree.
- 7.12.2 All pruning is recommended to be completed in accordance with the Australian Standard AS 4373–2007: *Pruning of Amenity Trees* (Standards Australia, 2007) and undertaken by a suitably qualified arborist (minimum AQF 3 arborist).
- 7.12.3 Reduction pruning should focus on the removal of smaller diameter branches where feasible and remove no greater than 10% of the total crown. Branches no greater than 50mm diameter are to be removed unless specifically approved by the project arborist.

8 References

- Mattheck, C. a. B. H., 1994. *The Body Language of Trees: A Handbook for Failure Analysis*. H. M. Stationery Office: University of Michigan.
- Standards Australia, 2007. *AS 4373–2007 Pruning of Amenity Trees*, GPO Box 476 Sydney NSW 2001: Standards Australia.
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- The British Standards Institution, 2012. *BS5837–2012: Trees in relation to design, demolition and construction*, London: BSI Standards Limited.
- Urban, J., 2008. *Up By Roots - Healthy Soils and Trees in the Built Environment*. Champaign (Illinois): International Society of Arboriculture.
- Victoria State Government, 2023. *VicPlan*. [Online] Available at: <https://mapshare.vic.gov.au/vicplan/> [Accessed January 2024].
- Victoria State Government, 2024. *Yarra Planning Scheme*. [Online] Available at: <https://planning-schemes.app.planning.vic.gov.au/Yarra/ordinance?f.Scheme%7CplanningSchemeName=> [Accessed January 2024].

Plans of the existing site and of the proposed development were provided to Civica ArborSafe in January and February 2024 and include:

- Ground Floor Plan (AECOM, SDA081(B)-SK01, 27/10/2023).
- Tree Retention Plan (Guymer Bailey Landscape, GBA-DRW-LD-MD-100-0000-TRP, Rev A, 10/1/24)
- Landscape Design, Schematic Design Report (Guymer Bailey Landscape, 5/2/2024).

Appendix A. Arboricultural Reporting Assumptions and Limiting Conditions

1. Any legal description provided to the consultant is assumed to be correct. Any titles and ownership of any property are assumed to be good. No responsibility is assumed for matters legal in character.
2. It is assumed that any property/project is not in violation of any applicable codes, ordinances, statutes or other government regulations.
3. Care has been taken to obtain all information from reliable sources. All data has been verified in so far as possible, however, the consultant can neither guarantee nor be responsible for the accuracy of the information provided by others.
4. The consultant shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services.
5. Loss or alteration of any part of this report invalidates the entire report.
6. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by anyone but the person to whom it is addressed, without the prior written consent of the consultant.
7. Neither all nor any part of the contents of this report, nor any copy thereof, shall be used for any purpose by anyone but the person to whom it is addressed, without the written consent of the consultant. Nor shall it be conveyed by anyone, including the Client, to the public through advertising, public relations, news, sales or other media, without the written consent of the consultant.
8. This report and any values expressed herein represent the opinion of the consultant and the consultant's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.
9. Sketches, diagrams, graphs and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys unless expressed otherwise.
10. Information contained in this report covers only those items that were examined and reflect the condition of those items at the time of inspection.
11. Inspection is limited to visual examination of accessible components without dissection, excavation or probing. There is no warranty or guarantee expressed or implied that the problems or deficiencies of the plants or property in question may not arise in the future.

Appendix B. Explanation of Tree Assessment Terms

Tree number: Refers to the individual identification number assigned within the ArborSafe software to each assessed tree on the site and the number which appears of the tree's tag.

Tree location: Refers to the easting and northing coordinates assigned to the location of the tree as obtained from the geo-referenced aerial image within the ArborSafe software.

Tree species: Provides the botanic name (genus, species, sub-species, variety and cultivar where applicable) in accordance with the International Code of Botanical Nomenclature (ICBN), and the accepted common name.

Trees in group: The number of trees encompassing a collective assessment of more than one tree. Typically grouped trees have similar attributes that can be encompassed within one data record.

Height: The estimated range in metres attributed to the tree from its base to the highest point of the canopy. Where required height will be estimated to the nearest metre.

Diameter at Breast Height (DBH): Refers to the tree's estimated trunk diameter measured 1.4m from ground level for a single trunked tree. These estimates increase in 50mm increments. Where required DBH will be measured to give an accurate measurement for single trunked trees, trees with multiple trunks, significant root buttressing, bifurcating close to ground level or trunk defects and will be measured as per the Australian Standard AS 4970–2009: *Protection of Trees on Development Sites*.

Tree Protection Zone (TPZ): A specified area above and below ground and at a given distance measured radially away from the centre of the tree's trunk and which is set aside for the protection of its roots and crown. It is the area required to provide for the viability and stability of a tree to be retained where it is potentially subject to damage by development. The radius of the TPZ is calculated by multiplying its DBH by 12. TPZ radius = DBH × 12. (Note "Breast Height" is nominally measured as 1.4m from ground level). TPZ is a theoretical calculation and can be influenced by existing physical constraints such as buildings, drainage channels, retaining walls, etc. (Standards Australia, 2009).

Structural Root Zone (SRZ): The area close to the base of a tree required for the tree's anchorage and stability in the ground. The woody root growth and soil cohesion in this area are necessary to hold the tree upright. The SRZ is nominally circular with the trunk at its centre and is expressed by its radius in metres. SRZ radius = $(D \times 50)^{0.42 \times 0.64}$ (Standards Australia, 2009).

Canopy spread: The estimated range in metres attributed to the spread of the tree's canopy on its widest axis. Where required crown spread will be estimated to the nearest metre.

Origin: Refers to the origin of the species and its type.

Category	Description
Indigenous	Occurs naturally in the local area and is native to a given region or ecosystem.
State Native	Occurs naturally within State but is not indigenous.
Australian Native	Occurs naturally within Australia and its territories but is not a State native or indigenous.
Exotic Evergreen	Occurs naturally outside of Australia and its territories and typically retains its leaves throughout the year.
Exotic Deciduous	Occurs naturally outside of Australia and its territories and typically loses its leaves at least once a year.

Health: Refers to the health and vigour of the tree.

Category	Description
Excellent	Canopy full with even foliage density throughout, leaves are entire and are of an excellent size and colour for the species with no visible pathogen damage. Excellent growth indicators, e.g. seasonal extension growth. Exceptional specimen.
Good	Canopy full with minor variations in foliage density throughout, leaves are entire and are of good size and colour for the species with minimal or no visible pathogen damage. Good growth indicators, none or minimal deadwood.
Fair	Canopy with moderate variations in foliage density throughout, leaves not entire with reduced size and/or atypical in colour, moderate pathogen damage. Reduced growth indicators, visible amounts of deadwood, may contain epicormic growth.
Poor	Canopy density significantly reduced throughout, leaves are not entire, are significantly reduced in size and/or are discoloured, significant pathogen damage. Significant amounts of deadwood and/or epicormic growth, noticeable dieback of branch tips, possibly extensive.
Dead	No live plant material observed throughout the canopy, bark may be visibly delaminating from the trunk and/or branches.

Age: Refers to the life cycle of the tree.

Category	Description
Young	Newly planted small tree not fully established may be capable of being transplanted or easily replaced.
Juvenile	Tree is small in terms of its potential physical size and has not reached its full reproductive ability.
Semi-mature	Tree in active growth phase of life cycle and has not yet attained an expected maximum physical size for its species and/or its location.
Mature	Tree has reached an expected maximum physical size for the species and/or location and is showing a reduction in the rate of seasonal extension growth.
Senescent	Tree is approaching the end of its life cycle and is exhibiting a reduction in vigour often evidenced by natural deterioration in health and structure.

Structure: Refers to the structure of the tree from roots to crown.

Category	Description
Good	Sound branch attachments with no visible structural defects, e.g. included bark or acute angled unions. No visible wounds to the trunk and/or root plate. No fungal pathogens present.
Fair	Minor structural defects present, e.g. apical leaders sharing common union(s). Minor damage to structural roots. Small wounds present where decay could begin. No fungal pathogens present.
Poor	Moderate structural defects present, including bifurcations with included bark with union failure likely within 0–5 years. Wounding evident with cavities and/or decay present. Damage to structural roots.
Hazardous	Significant structural defects with failure imminent (3–6 months). Defects may include active splits and/or partial branch or root plate failures. Tree requires immediate arboricultural works to alleviate the associated risk.

Useful Life Expectancy (ULE): Useful life expectancy refers to an expected period of time the tree can be retained within the landscape before its amenity value declines to a point where it may detract from the appearance of the landscape and/or presents a greater risk and/or more hazards to people and/or property. ULE values consider tree species, current age, health, structure and location. ULE values are based on the tree at the time of assessment and do not consider future changes within the tree's location and environment which may influence the ULE value.

Category
0 Years
<5 Years
5–10 Years
10–15 Years
15–25 Years
25–50 Years
>50 Years

Defects: Visual observations made of the presenting defects of the tree and its growing environment that are, or have the capacity to impact upon, the health, structural condition and/or the useful life expectancy of the tree. Defects may include adverse physical traits or conditions, signs of structural weaknesses, plant disease and/or pest damage, tree impacts to assets or soil related issues.

Tree Significance: Includes environmental, social or historical reasons why the tree is significant to the site. The tree may also be rare under cultivation or have a rare or localised natural distribution.

Arborist Actions: A list of arboricultural and/or plant health care works that are aimed at maintaining or improving the tree's health, structural condition or form. Actions may also directly or indirectly reduce the risk potential of the tree such as via the removal of a particular branch or the moving of infrastructure from under its canopy.

Appendix C. Tree Retention Values

Based upon a modified version of the British Standard BS 5837–2012: *Trees in relation to design, demolition and construction* – recommendations.

Category and definition	Criteria (including sub-categories where appropriate)		
Category U			
Trees in such a condition that they cannot realistically be retained as viable trees in the context of the current land use for longer than 5 years.	<ul style="list-style-type: none"> Trees that have a severe structural defect that are not remediable such that their failure is expected within 12 months. Trees that will become unviable after removal of other Category U trees (e.g. where for whatever reason the loss of companion shelter cannot be mitigated by pruning). Trees that are dead or are showing signs of significant, immediate and irreversible overall decline. Trees infected with pathogens of significance to the health and or safety of other trees nearby Low quality trees suppressing adjacent trees of better quality. Noxious weeds or species categorised as weeds within the local area. <p>Note: Category U trees can have existing or potential conservation value* which might make it desirable to preserve.</p>		
	1. Arboricultural Qualities	2. Landscape qualities	3. Cultural and environmental values
Category A			
Trees of High Quality with an estimated remaining life expectancy of at least 25 years and of dimensions and prominence that it cannot be readily replaced in <20 years.	Trees that are particularly good examples of their species, especially if rare or unusual (in the wild or under cultivation); or those that are important components of groups or avenues.	Trees or groups of significant visual importance as arboricultural and/or landscape features. (e.g. feature and landmark trees).	Trees, groups or plant communities of significant conservation, historical, commemorative or other value (e.g. remnant trees, aboriginal scar trees, critically endangered plant communities, trees listed specifically within a Heritage statement of significance).
Category B			
Trees of Moderate Quality with an estimated remaining life expectancy of 15–25 years and of dimensions and prominence that cannot be readily replaced within 10 years.	Trees that might be included within Category A but are downgraded because of diminished condition such that they are unlikely to be suitable for retention beyond 25 years.	Trees that are visible from surrounding properties and/or the street but make little visual contribution to the wider locality.	Trees with conservation or other cultural value (trees within conservation areas or landscapes described within a statement of significance, locally indigenous species).
Category C			
Trees of Low Quality with an estimated remaining life expectancy of 5–15 years, or young trees that are easily replaceable.	Trees of very limited value or such impaired condition that they do not qualify in higher categories.	Trees offering low or only temporary/transient landscape benefits.	Trees with no material conservation or other cultural value.

* Where trees would otherwise be categorised as U, B or C but have significant identifiable conservation, heritage or landscape value even though only for the short term, they may be upgraded, although they might be suitable for retention only.

Tree Quality

		Health**			
		Excellent/ Good	Fair	Poor	Dead
Structure	Good	A	B	C	U
	Fair	B	B	C	U
	Poor	C	C	U	U
	Hazard *	U	U	U	U

* Structural hazard that cannot be remediated through mitigation works to enable safe retention.

** Trees of short term reduced health that can be remediated via basic, low cost plant health care works (e.g. mulching, irrigation etc.) may be designated in a higher health rating to ensure correct retention value nomination.

Category A	Typically trees in this category are of high quality with an estimated remaining life expectancy of at least 25 years and of dimensions and prominence that it cannot be readily replaced in <20 years. The tree may make significant amenity contributions to the landscape and may make high environmental contributions. In some cases, trees within this category may not meet the above criteria, however possess significant heritage or ecological value. Trees of this retention value warrant design consideration and amendment to ensure their viable retention.
Category B	Typically trees in this category are of moderate quality with an estimated remaining life expectancy of 15–25 years and prominence of size dimensions that cannot be readily replaced within 10 years. They may make moderate amenity contributions to the landscape and make low/moderate environmental contributions. Trees with this retention value warrant lesser design consideration in an attempt to allow for their retention.
Category C	Trees in this category are of low quality with an estimated remaining life expectancy of 5–15 years, or young trees that are easily replaceable, may have poor health and/or structure, are easily replaceable, or are of undesirable species and do not warrant design consideration.
Category U	Trees in this category are found to be in such a condition that they cannot realistically be retained as viable trees in the context of the current land use for longer than five years. These trees may be dead and/or of a species recognised as a weed that resulted in them being unretainable.

Appendix D. Tree Assessment Data

Tree no.	Botanical Name	Common Name	Origin	Trees in group	DBH Total (cm)	DRC (cm)	Radial TPZ (m)	TPZ area (m2)	Radial SRZ (m)	Tree Height (m)	Canopy (m)	Health	Structure	Age	TLE (Yrs.)	Defects	Significance	Arborist comments	Tree Quality Score	Recommendation
501	<i>Phoenix canariensis</i>	Canary Island Date Palm	Exotic evergreen	1	115	115	13.8	598.28	3.5	5-10	5-10	Good	Excellent	Semi-Mature	>50		Amenity value/shade;	Semi-mature Palm of large mature dimensions inappropriate for the location	B	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
502	<i>Callistemon viminalis</i>	Weeping Bottlebrush	Native	1	10	30	2.0	12.57	2.0	<5	<5	Fair	Poor	Semi-Mature	10-15	Co-dominant stems; Weak union(s); Wound(s);		Major TPZ encroachment from proposed water infrastructure	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
503	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	10	10	2.0	12.57	1.5	5-10	<5	Good	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
504	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	10	10	2.0	12.57	1.5	5-10	<5	Good	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
505	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	10	10	2.0	12.57	1.5	5-10	<5	Good	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
506	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	10	10	2.0	12.57	1.5	5-10	<5	Good	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
507	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	10	10	2.0	12.57	1.5	5-10	<5	Good	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
508	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	10	10	2.0	12.57	1.5	5-10	<5	Good	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
509	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	10	10	2.0	12.57	1.5	5-10	<5	Good	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
510	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	10	10	2.0	12.57	1.5	5-10	<5	Good	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
511	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	10	10	2.0	12.57	1.5	5-10	<5	Good	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
512	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	10	10	2.0	12.57	1.5	5-10	<5	Good	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
513	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	10	10	2.0	12.57	1.5	5-10	<5	Good	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
514	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	10	10	2.0	12.57	1.5	5-10	<5	Good	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
515	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	10	10	2.0	12.57	1.5	<5	<5	Good	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
516	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	10	10	2.0	12.57	1.5	<5	<5	Good	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
517	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	10	10	2.0	12.57	1.5	<5	<5	Good	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
518	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	10	10	2.0	12.57	1.5	<5	<5	Good	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
519	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	5	10	2.0	12.57	1.5	<5	<5	Good	Poor	Semi-Mature	>50			Central leader has previously died. Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
520	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	5	10	2.0	12.57	1.5	<5	<5	Good	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
521	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	5	10	2.0	12.57	1.5	<5	<5	Good	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
522	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	5	10	2.0	12.57	1.5	<5	<5	Good	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
523	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	5	10	2.0	12.57	1.5	<5	<5	Good	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
524	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	5	10	2.0	12.57	1.5	<5	<5	Good	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
525	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	5	10	2.0	12.57	1.5	<5	<5	Good	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
526	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	5	10	2.0	12.57	1.5	<5	<5	Good	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
527	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	5	10	2.0	12.57	1.5	<5	<5	Good	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
528	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	5	10	2.0	12.57	1.5	<5	<5	Good	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
529	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	5	10	2.0	12.57	1.5	<5	<5	Good	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
530	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	5	10	2.0	12.57	1.5	<5	<5	Fair	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
531	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	10	10	2.0	12.57	1.5	<5	<5	Good	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
532	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	10	10	2.0	12.57	1.5	<5	<5	Good	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
533	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	10	10	2.0	12.57	1.5	<5	<5	Good	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
534	<i>Cupressus sempervirens 'Stricta'</i>	Pencil Pine	Exotic evergreen	1	10	10	2.0	12.57	1.5	<5	<5	Good	Good	Semi-Mature	>50			Removed to facilitate construction (ie Scaffolding etc)	C	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
535	<i>Grevillea robusta</i>	Silky Oak	Native	1	15	20	2.0	12.57	1.7	5-10	<5	Good	Good	Juvenile	15-25	Inappropriate location;		09-11-2023 : Dylan Adcock : TLE limited by location close to building.	C	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
536	<i>Corymbia maculata</i>	Spotted Gum	Native	1	18	35	2.2	14.66	2.1	5-10	<5	Fair	Poor	Semi-Mature	15-25	Co-dominant stems; Included bark;		Tree form Co-dominant from base. Low impact Deco gravel path to be installed across the TPZ.	C	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
537	<i>Ligustrum lucidum</i>	Chinese Privet	Exotic deciduous	1	5	15	2.0	12.57	1.5	<5	<5	Good	Poor	Juvenile	10-15	Undesirable species;	Weed species;	09-11-2023 : Dylan Adcock : Recognised weed species within Yarra Council.	U	Remove tree irrespective of future development.
538	<i>Cupressocyparis leylandii</i>	Leyland Cypress	Exotic evergreen	1	50	80	6.0	113.10	3.0	5-10	5-10	Good	Fair	Mature	25-50	Co-dominant stems;	Screen value; Attractive landscape feature; Within group; Hedge tree; Potential heritage value;	09-11-2023 : Dylan Adcock : Tree forms significant part of hedge.	A	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
539	<i>Cupressocyparis leylandii</i>	Leyland Cypress	Exotic evergreen	1	20	30	2.4	18.10	2.0	5-10	5-10	Good	Fair	Mature	25-50	Co-dominant stems;	Screen value; Attractive landscape feature; Within group; Hedge tree; Potential heritage value;	Located outside development area in an existing restricted sized garden bed.	A	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
540	<i>Cupressocyparis leylandii</i>	Leyland Cypress	Exotic evergreen	1	20	30	2.4	18.10	2.0	5-10	5-10	Good	Fair	Mature	25-50	Co-dominant stems;	Screen value; Attractive landscape feature; Within group; Hedge tree; Potential heritage value;	Located outside development area in an existing restricted sized garden bed.	A	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
541	<i>Cupressocyparis leylandii</i>	Leyland Cypress	Exotic evergreen	1	20	30	2.4	18.10	2.0	5-10	5-10	Good	Fair	Mature	25-50	Co-dominant stems;	Screen value; Attractive landscape feature; Within group; Hedge tree; Potential heritage value;	Located outside development area in an existing restricted sized garden bed.	A	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
542	<i>Cupressocyparis leylandii</i>	Leyland Cypress	Exotic evergreen	1	20	30	2.4	18.10	2.0	5-10	5-10	Good	Fair	Mature	25-50	Co-dominant stems;	Screen value; Attractive landscape feature; Within group; Hedge tree; Potential heritage value;	Located outside development area in an existing restricted sized garden bed.	A	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
543	<i>Cupressocyparis leylandii</i>	Leyland Cypress	Exotic evergreen	1	20	30	2.4	18.10	2.0	5-10	5-10	Good	Fair	Mature	25-50	Co-dominant stems;	Screen value; Attractive landscape feature; Within group; Hedge tree; Potential heritage value;	Located outside development area in an existing restricted sized garden bed.	A	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
544	<i>Cupressocyparis leylandii</i>	Leyland Cypress	Exotic evergreen	1	20	30	2.4	18.10	2.0	5-10	5-10	Good	Fair	Mature	25-50	Co-dominant stems;	Screen value; Attractive landscape feature; Within group; Hedge tree; Potential heritage value;	Located outside development area in an existing restricted sized garden bed.	A	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
545	<i>Cupressocyparis leylandii</i>	Leyland Cypress	Exotic evergreen	1	20	30	2.4	18.10	2.0	5-10	5-10	Good	Fair	Mature	25-50	Co-dominant stems;	Screen value; Attractive landscape feature; Within group; Hedge tree; Potential heritage value;	Located outside development area in an existing restricted sized garden bed.	A	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).

Tree no.	Botanical Name	Common Name	Origin	Trees in group	DBH Total (cm)	DRC (cm)	Radial TPZ (m)	TPZ area (m2)	Radial SRZ (m)	Tree Height (m)	Canopy (m)	Health	Structure	Age	TLE (Yrs.)	Defects	Significance	Arborist comments	Tree Quality Score	Recommendation
546	<i>Cupressocyparis leylandii</i>	Leyland Cypress	Exotic evergreen	1	20	30	2.4	18.10	2.0	5-10	5-10	Good	Fair	Mature	25-50	Co-dominant stems;	Screen value; Attractive landscape feature; Within group; Potential heritage value; Hedge tree;	Located outside development area in an existing restricted sized garden bed.	A	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
547	<i>Corymbia citriodora</i>	Lemon-scented Gum	Native	1	62	90	7.4	173.90	3.2	10-15	10-15	Good	Fair	Mature	>50	Co-dominant stems; Previous failure(s);	Attractive landscape feature; Amenity value/shade;	Located outside development area in an existing restricted sized garden bed.	A	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
548	<i>Cupressocyparis leylandii</i>	Leyland Cypress	Exotic evergreen	1	20	30	2.4	18.10	2.0	5-10	5-10	Good	Fair	Mature	25-50	Co-dominant stems;	Screen value; Attractive landscape feature; Within group;	Located outside development area in an existing restricted sized garden bed.	A	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
549	<i>Yucca aloifolia 'Variegata'</i>	Margined Spanish Bayonet	Exotic evergreen	1	30	100	3.6	40.72	3.3	5-10	5-10	Good	Good	Semi-Mature	>50			Located outside development area in an existing restricted sized garden bed.	B	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
550	<i>Aloe barberae</i>	Tree Aloe	Exotic evergreen	1	40	80	4.8	72.38	3.0	5-10	5-10	Good	Good	Semi-Mature	>50			Located outside development area in an existing restricted sized garden bed.	C	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
551	<i>Brachychiton rupestris</i>	Bottle Tree	Native	1	78	129	9.4	275.23	3.7	5-10	5-10	Good	Fair	Mature	25-50	Co-dominant stems; Included bark;	Amenity value/shade; Attractive landscape feature; Outstanding example of species; Significant due to age/size; Potential heritage value;	Outstanding example of the species under cultivation in the Greater Melbourne area. 36.5% encroachment on theoretical circular TPZ but in fact considered 0% due to existing infrastructure (compacted bitumen carpark) covering this area and likely inhibiting growth of outer absorption roots into this space.	A	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
552	<i>Yucca filifera</i>	Palma China	Exotic evergreen	1	30	100	3.6	40.72	3.3	5-10	5-10	Good	Good	Semi-Mature	>50			Located outside development area in an existing restricted sized garden bed.	B	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
553	<i>Yucca aloifolia 'Variegata'</i>	Margined Spanish Bayonet	Exotic evergreen	1	15	100	2.0	12.57	3.3	5-10	5-10	Good	Good	Semi-Mature	>50			Located outside development area in an existing restricted sized garden bed.	B	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
554	<i>Yucca aloifolia 'Variegata'</i>	Margined Spanish Bayonet	Exotic evergreen	1	30	150	3.6	40.72	3.9	5-10	5-10	Good	Good	Semi-Mature	>50			Located outside development area in an existing restricted sized garden bed.	B	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
555	<i>Cedrus atlantica 'Glauca Pendula'</i>	Weeping Blue Atlas Cedar	Exotic evergreen	1	11	16	2.0	12.57	1.5	<5	<5	Good	Fair	Juvenile	25-50		Attractive landscape feature;	Located outside development area in an existing restricted sized garden bed.	B	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
556	<i>Cedrus atlantica 'Glauca Pendula'</i>	Weeping Blue Atlas Cedar	Exotic evergreen	1	11	16	2.0	12.57	1.5	<5	<5	Good	Fair	Juvenile	25-50		Attractive landscape feature;	Located outside development area in an existing restricted sized garden bed.	B	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
557	<i>Melia azedarach</i>	White Cedar	Native	1	27	35	3.2	32.98	2.1	<5	5-10	Good	Good	Semi-Mature	15-25		Attractive landscape feature; Amenity value/shade;	Located outside development area in an existing restricted sized garden bed.	B	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
558	<i>Schinus areira</i>	Peppercorn	Exotic evergreen	1	67	158	8.0	203.08	4.0	5-10	10-15	Fair	Fair	Mature	25-50	Deadwood/stubs > 60mm;		Crown appears to have been routinely suppressed to clear over head powerlines. Located outside development area in an existing restricted sized garden bed.	B	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
559	<i>Pinus radiata</i>	Monterey Pine	Exotic evergreen	1	87	116	10.4	342.41	3.5	10-15	10-15	Good	Good	Mature	25-50		Amenity value/shade;	10.5% encroachment on theoretical circular TPZ but in fact considered 0% due to existing infrastructure (compacted bitumen carpark) covering this area and likely inhibiting growth of outer absorption roots into this space.	A	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
560	<i>Schinus areira</i>	Peppercorn	Exotic evergreen	1	61	95	7.3	168.33	3.2	5-10	10-15	Fair	Fair	Mature	25-50		Amenity value/shade;	7.5% encroachment on theoretical circular TPZ but in fact considered 0% due to existing infrastructure (compacted bitumen carpark) covering this area and likely inhibiting growth of outer absorption roots into this space.	B	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
561	<i>Quercus palustris</i>	Pin Oak	Exotic deciduos	1	36	51	4.3	58.63	2.5	5-10	5-10	Good	Fair	Semi-Mature	>50	Co-dominant stems;	Amenity value/shade; Attractive landscape feature; Potential heritage value;	Located outside development area in an existing restricted sized garden bed.	B	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
562	<i>Araucaria bidwillii</i>	Bunya	Native	1	35	45	4.2	55.42	2.4	5-10	5-10	Good	Excellent	Semi-mature	>50		Attractive landscape feature; Potential heritage value;	Located outside development area in an existing restricted sized garden bed.	B	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
563	<i>Quercus palustris</i>	Pin Oak	Exotic deciduos	1	31	42	3.7	43.47	2.3	5-10	5-10	Good	Fair	Semi-Mature	>50	Co-dominant stems;	Amenity value/shade; Attractive landscape feature; Potential heritage value;	Located outside development area in an existing restricted sized garden bed.	B	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
564	<i>Cedrus deodara</i>	Himalayan Cedar	Exotic evergreen	1	120	135	14.4	651.44	3.8	10-15	15-20	Good	Fair	Mature	>50		Amenity value/shade; Attractive landscape feature; Dominant landscape feature; Outstanding example of species; Significant due to age/size; Heritage listed - significant tree;	Tree listed on the National Trust register of significant trees of Victoria. Located outside development area in an existing restricted sized garden bed.	A	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
565	<i>Cedrus deodara</i>	Himalayan Cedar	Exotic evergreen	1	128	135	15.0	706.86	3.8	10-15	15-20	Good	Fair	Mature	>50		Amenity value/shade; Attractive landscape feature; Dominant landscape feature; Outstanding example of species; Significant due to age/size; Heritage listed - significant tree;	Tree listed on the National Trust register of significant trees of Victoria. Located outside development area in an existing restricted sized garden bed.	A	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
566	<i>Cupressocyparis leylandii</i>	Leyland Cypress	Exotic evergreen	40	5	10	2.0	12.57	1.5	<5	<5	Good	Good	Juvenile	>50		Screen value; Attractive landscape feature; Hedge tree;	Approximately forty (40) trees forming a well maintained 2m high hedge across Southern boundary of carpark. Located outside development area in an existing restricted sized garden bed.	B	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).



Figure 11. Site map showing retained trees with suggested Tree Protection Fence locations (Shown in red). (Guymer Bailey Landscape November 2023).

- Install Tree Protection Fencing excluding the proposed landscaped areas from the general building site.
- Restrict activities within the TPZ as detailed within section 7.4 of this Report.
- Use trunk and ground protection if the protection fencing requires removal.
- Install Tree protection signage.



Figure 12. Whole site map. ArborSafe, March 2024.

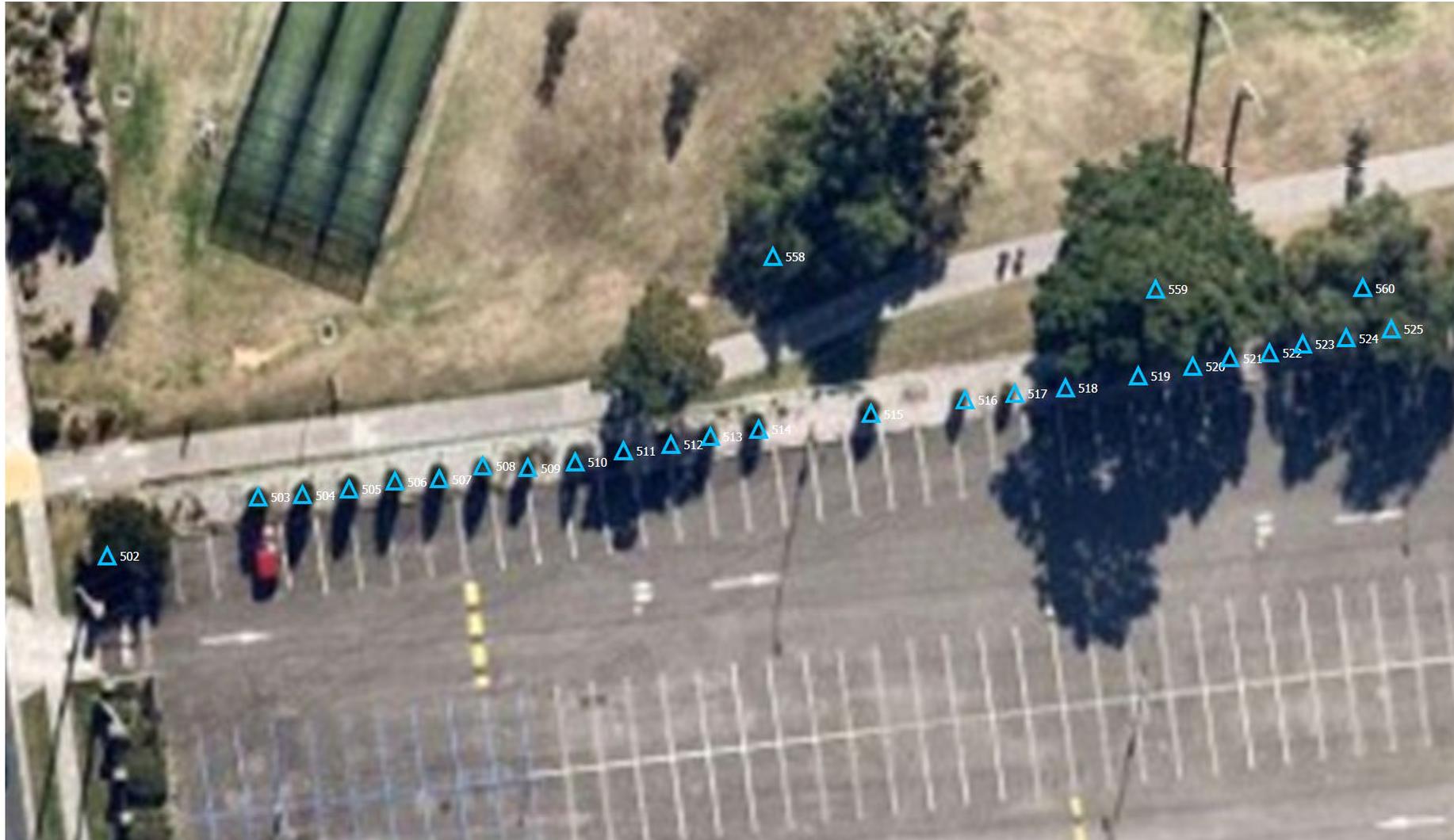


Figure 13. Map 1. ArborSafe, March 2024.

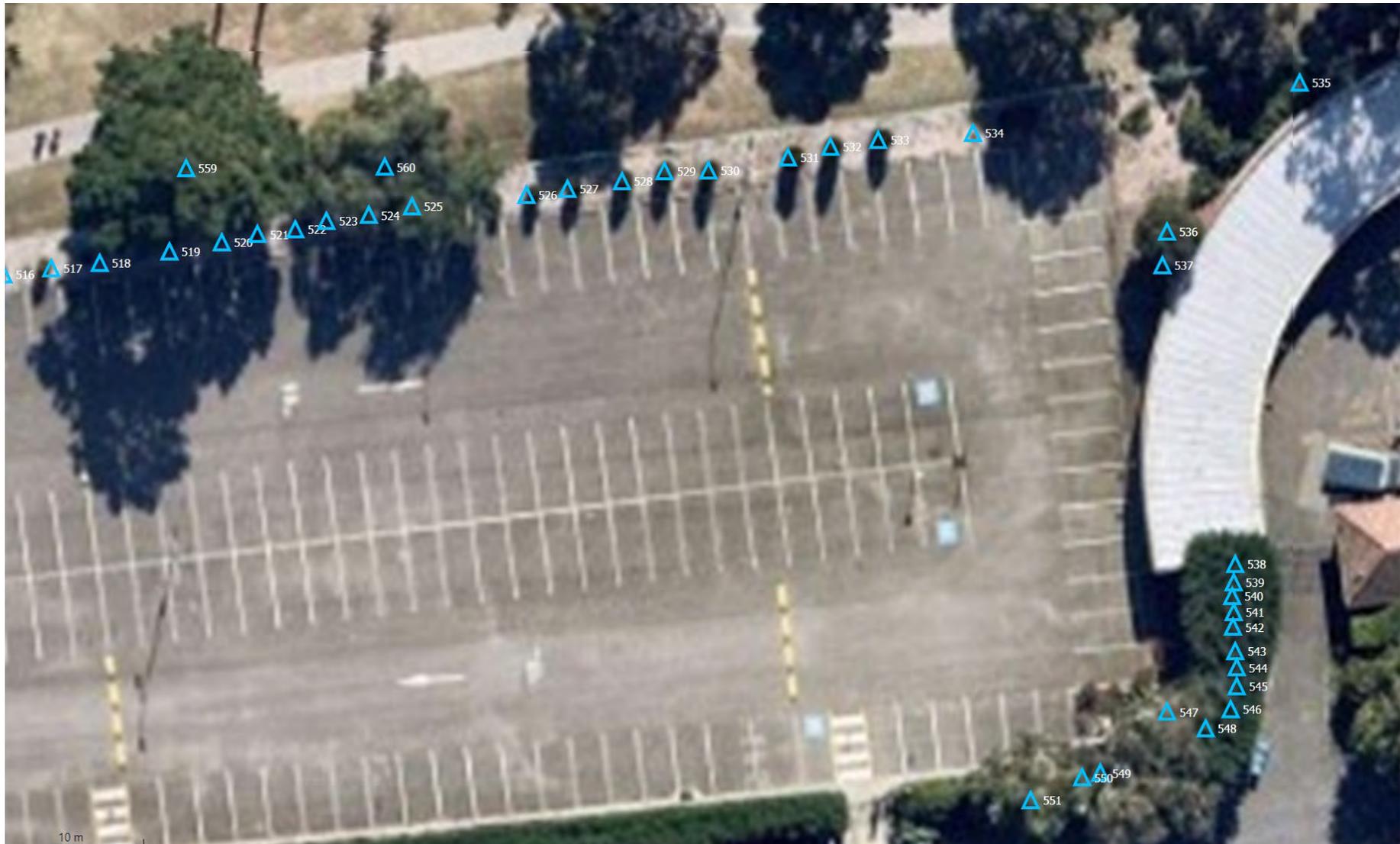


Figure 14. Map 2. ArborSafe, March 2024.



Figure 15. Map 3. ArborSafe, March 2024.



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