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Assessment and report by:

Job No:

10 October 2025

Brenton Riordan
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1600 Sturt Street
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Arboricultural Impact Assessment Report regarding 16 trees located within the vicinity of the proposed Mornane Centre development at Loreto College, 1600 Sturt Street, Ballarat

Dear Brenton,

We are pleased to provide the following Arboricultural Impact Assessment Report for 16 trees within the grounds of Loreto College.

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*".

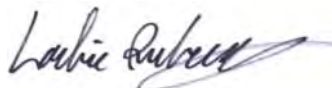
Should you have any queries relating to this report, its recommendations, or the options considered please do not hesitate to contact us on 1300 272 671.

Regards,



Dylan Adcock

Consulting Arborist
Dip. Arb., AQF Level 5



Lachlan Andrews

Consulting Arborist
BA. App. Sci. (Hort.), *Dip. App. Sci. (Hort.)*, *Adv. Cert. (Hort.)* AQF Level 7

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Version	Date	Author	Rationale
1	10 October 2025	Dylan Adcock	First Issue

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1 Executive summary

- 1.1 The following is an Arboricultural Impact Assessment Report regarding 16 trees located within the grounds of Loreto College, Ballarat. The subject site was identified by Loreto College (hereinafter referred to as the client) as possessing trees that may be impacted upon by proposed development works.
- 1.2 In part, the project scope was to nominate the subject trees that are suitable for retention/preservation, or require removal to facilitate the proposed development works, as well as identify and reduce potential conflicts between the subject trees and proposed site development. Accurate information on the area required for tree retention and methods/techniques suitable for tree protection during demolition and/or construction have been provided.
- 1.3 Thirteen trees were recommended for retention, with site exclusion being the main protection measure to be employed and minimal impacts and long-term negative impacts envisaged.
- 1.4 Tree 34 has specific protection measures over and above the recommended generic measures. These include project arborist involvement during initial excavation works within the TPZ, restrictions on machinery use within the TPZ area and enhancement of the growing environment within the TPZ area.
- 1.5 Tree retention status in relation to the proposed development (refer to Section 5.4 for full details of Retention Value categories):

RV	Description	Total	Remove		Retain	
			located within development footprint	irrespective of future development	with specific protection	with generic protection
A	High retention value trees	3				23, 24 and 25
B	Moderate retention value trees	6	35 and 37			30, 31, 33 and 38
C	Low retention value trees	7	36		34	32, 52, 196, 197 and 198
U	Trees to be removed irrespective of proposed development	0				

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2 Introduction

- 2.1 Civica ArborSafe was engaged by Brenton Riordan of Loreto College in relation to the completion of an Arboricultural Impact Assessment Report regarding 16 trees located within Loreto College and outside of it along the Sturt Street frontage.
- 2.2 This report was requested to assist in the planning and design of a new building to be known as the Mornane Centre that is proposed for construction within the site that may adversely affect the subject trees.
- 2.3 The report was intended to provide detailed information on relevant subject trees to inform the project planners around potential development constraints, the area required for tree retention and methods/techniques suitable for tree protection during construction.
- 2.4 Report findings and information provided are based upon guidance provided within the Australian Standard AS 4970–2009: *Protection of Trees on Development Sites*.
- 2.5 Observations and recommendations provided within this report are based upon information provided by the client and an arborist site visit.

3 Scope

- 3.1 Carry out a visual assessment of trees nominated by the client and/or trees located within the vicinity of the proposed development works that have the potential to be impacted upon.
- 3.2 Inspect the nominated trees and their growing environment in the context of the existing site usage and the proposed development.
- 3.3 Provide base data on the subject trees in relation to their species, estimated age, health, structural condition, and useful life expectancy (ULE).
- 3.4 Based on the findings of the previous assessments, provide an objective appraisal on the Retention Value (RV) of the trees.
- 3.5 Identify and reduce potential conflicts between the subject trees and the proposed site development by providing accurate information on the area required for successful tree retention and methods/techniques suitable for tree protection during demolition and/or construction.

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4 Methodology

4.1 Data collection

- 4.1.1 Lachlan Andrews of Civica ArborSafe carried out a site inspection of the subject trees on 29 July 2025.
- 4.1.2 Trees that are the subject of this report were identified during discussions with the client and reviewing relevant supplied development documentation.
- 4.1.3 Trees within Loreto College 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. Trees located along the Sturt Street frontage are managed by the City of Ballarat and have not been tagged.
- 4.1.4 The subject trees were inspected from the ground using the initial component of Visual Tree Assessment (VTA) (Mattheck, C. and Breloer, H., 1994). No foliage or soil samples were taken and no aerial, underground or internal investigations were undertaken.
- 4.1.5 Tree height and crown width were estimated and have been provided in a variety of ranges with 5 metre increments. Trunk diameter at breast height (DBH) and trunk diameter at the root crown (DRC) were measured with a diameter tape and provided to the nearest centimetre.

- 4.1.6 Data collected on site was analysed by Lachlan Andrews, following which the information was collated into report format and relevant recommendations were formulated.
- 4.1.7 The Tree Protection Zone (TPZ) and Structural Root Zone (SRZ) methods have been derived from the Australian Standard AS 4970–2009: *Protection of Trees on Development Sites*.
- 4.1.8 Tree Protection Zone (TPZ) encroachment calculations were undertaken using QGIS. All measurements were based on supplied georeferenced plans showing accurately surveyed tree locations and proposed development footprints. Notional Root Zones (NRZ's) were digitally plotted as buffers around each tree within QGIS.
- 4.1.9 Proposed structures or works were overlaid, and spatial analysis tools within QGIS were used to calculate the extent and area of any NRZ encroachment. The percentage of encroachment into each NRZ was calculated by comparing the encroachment area against the total NRZ area. This method allows for high accuracy and consistency in spatial measurement and provides a clear visual representation of the encroachments for reporting purposes.
- 4.1.10 All photographs were taken at the time of the site inspection by the inspecting arborist. Photographs have not been altered for brightness or contrast, nor have they been cropped. Other images used within this report have been sourced from ArborPlan or via the internet. The source of all images has been referenced accordingly.
- 4.1.11 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 new building positioned on the current playing sports field, directly to the west of Mary's Mount Centre (Figure 1).

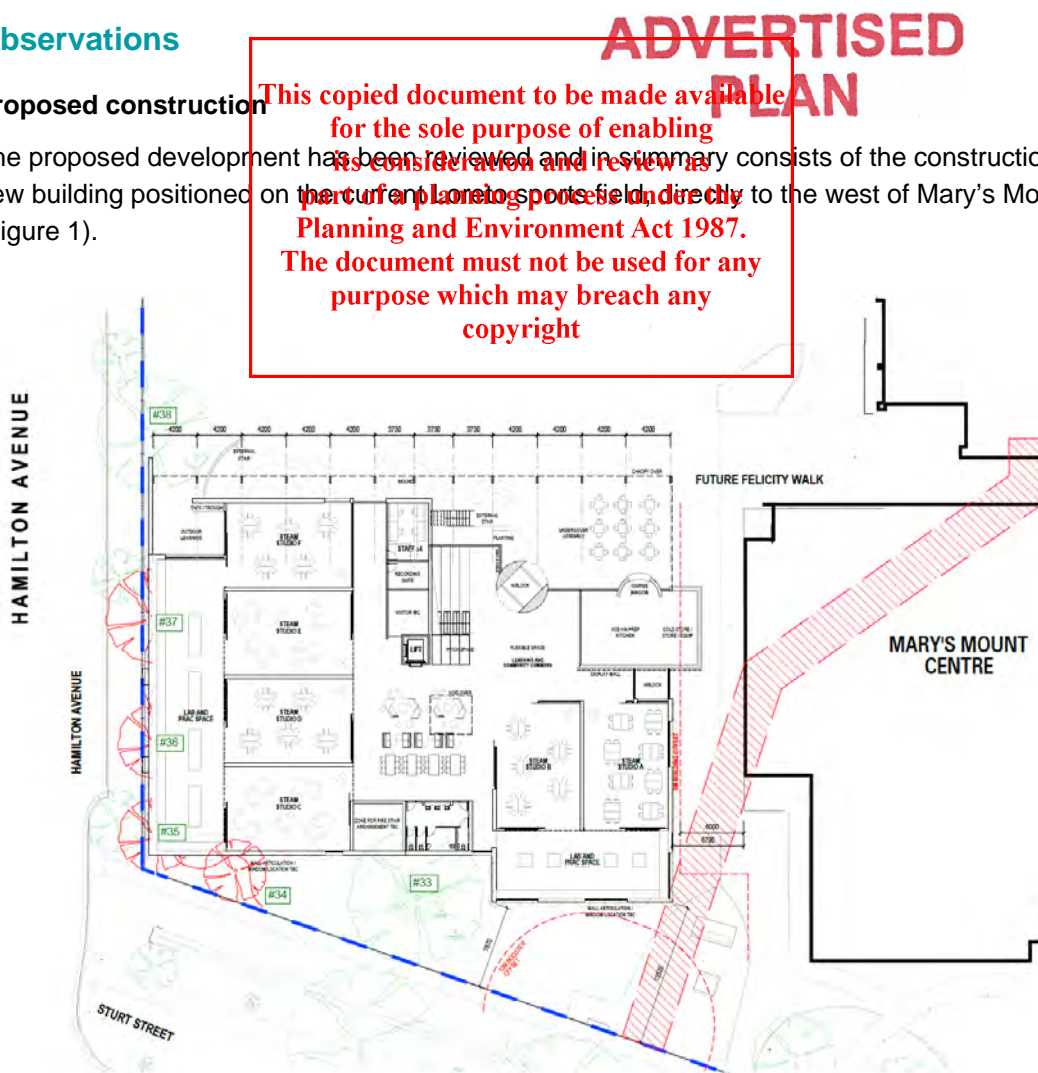


Figure 1. Excerpt from Proposed Ground Floor Plan (Dwg. No. A101, Rev. P4). MGS, September 2025.

5.1.2 Plans of the existing site and of the proposed development were provided to Civica ArborSafe in October 2025 and include (but are not limited to):

- Mornane Centre, Proposed Ground Floor Plan, Dwg. No. A101, Rev. P4. MGS, September 2025.

5.2 Site location and characteristics

5.2.1 The site was located within the grounds of Loreto College (Figure 2), which formed part of the City of Ballarat Local Government Area (LGA).

5.2.2 The topography of the site was relatively flat and covered a portion of the school's playing field, with the subject trees being positioned along the western and southern boundaries of the school as well as within the Sturt Street road reserve to the south. An open, bluestone gutter existed between the Sturt Street trees and the school's southern boundary.



Figure 2. Whole site image (location). Red lines delineate the site and area containing the subject trees that may be impacted by the proposed development works. Nearmap, July 2025.

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5.3 The subject trees

5.4 Tree numbering and location

5.4.1 The subject trees (Figure 3) have been numbered in line with the existing ArborPlan tree numbering system. As the subject trees form part of a previous survey undertaken for the entire site, trees were numbered between Tree 23 and Tree 198 but were not entirely sequential.

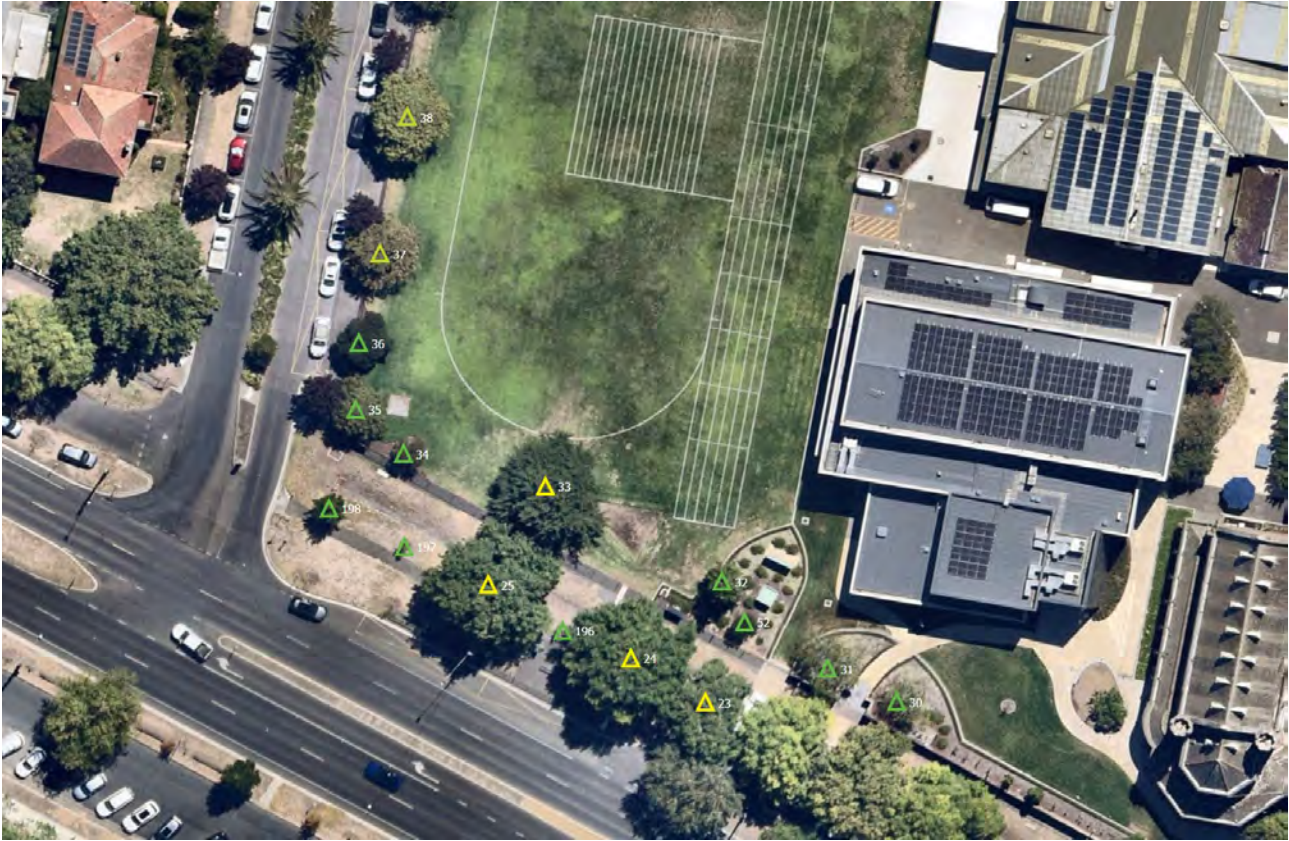


Figure 3. Site map showing the subject trees. Note that icon colour indicates a tree's current risk rating (not Retention Value). Tree attributes can be obtained from Appendix D – Tree Assessment Data. ArborPlan, July 2025.

5.5 Subject trees origin, species and age class

5.5.1 All the subject trees were exotic species that were predominantly deciduous in nature, with the exception of Trees 34, 36 and 52 that were exotic evergreen in their origin. No subject tree was therefore of a species that was indigenous to the Ballarat area.

5.5.2 Eight species were identified across the site with the most prevalent being *Ulmus x hollandica* (Dutch Elm), *Arbutus unedo* (Irish Strawberry Tree) and *Quercus cerris* (Turkey Oak).

5.5.3 The assessed tree population was varied in relation to its age class with eight (50.0%) of the existing surveyed trees rated as semi-mature and a further five trees (31.2%) being in the young/juvenile category. Three trees (18.8%) were rated as mature specimens, with no tree rated as being in the senescent stage of its life cycle.

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5.6 Presentation of the subject trees

- 5.6.1 Trees along the Sturt Street frontage primarily consisted of large and mature examples of *Ulmus x hollandica* that were numbered 23, 24 and 25. Tree 198 was also of this species and was situated at the western end of the surveyed area, however was small in stature and had been relatively recently planted. Individually and collectively Trees 23, 24 and 25 made strong and important contributions to the quality of the surrounding Sturt Street landscape and to the tree canopy of the surrounding area (Figure 4).
- 5.6.2 They were by and large assessed as being in a good state of health for their respective species, however as they were bereft of foliage as part of their cool season dormancy, a more accurate gauge of their health would best be made when they were displaying their full complement of foliage.
- 5.6.3 Minor, structural imperfections such as co-dominant stems sharing a common union were observed, however were not considered significant defects at this time.
- 5.6.4 Based on their current arboricultural attributes, these trees were allocated long useful life expectancies (ULE) of 25-50 years during which time their physical dimensions could be expected to increase, but at a slow rate based on their species and current level of maturity.



Figure 4. View of Trees 23, 24 and 25 (right to left), Loreto College. Lachlan Andrews, 29 July 2025.

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5.6.5 Trees within the school's grounds consisted of a range of small to medium-size trees, with the majority being positioned around the playing field's southern and western flanks. The most significant of these was Tree 33, a semi-mature *Quercus cerris* (Turkey Oak) (Figure 5) which made a sound contribution to the surrounding landscape. It was a healthy and well-structured tree (save for a minor structural imperfection within the upper, northern crown) and had good prospects for longevity with a ULE of greater than 50 years, during which time its physical dimensions could be expected to increase significantly and at a moderate rate.



Figure 5. View of Tree 33, Loreto College. Lachlan Andrews, 29 July 2025.

5.6.6 Other prominent trees within the Loreto College grounds were Trees 35, 37 and 38 which formed part of a wider planting stretching along the entire western flank of the playing field (Figure 6). Collectively this line of trees provided a high level of visual amenity that had the potential to remain in the landscape for many more decades. This line of trees contained three species: *Aesculus hippocastanum* (Common Horse Chestnut), *Acer pseudoplatanus* (Sycamore) and *Acer platanoides* (Norway Maple).

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Figure 6. View of trees along the western edge of the playing field, Loreto College. Lachlan Andrews, 29 July 2025.

- 5.6.7 Trees 35, 37 and 38 were observed to be in good states of health and structural condition, had physical dimensions of approximately 10 metres high and wide, were free of plant pests and/or diseases and were allocated lengthy ULE's of 25–50 years or greater than 50 years, during which time their physical dimensions could be expected to increase at a steady rate.

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6 Tree significance and retention values

6.1 Botanic and environmental status

6.1.1 A review of a VicPlan Planning Property Report indicated the proposed development work sits within an area designated as a Vegetation Protection Overlay (VPO2) (Victoria State Government, 2024) (Figure 7).

6.1.2 The VPO2 states “For the purpose of Clause 42.02-2, the vegetation specified is any tree that is at least 4 metres high and located in a private front garden or within the road reserve” and that:

- A permit is required to remove, destroy or lop vegetation.
- A permit is not required to prune a tree to improve its health or appearance, provided its normal growth habit is not retarded.

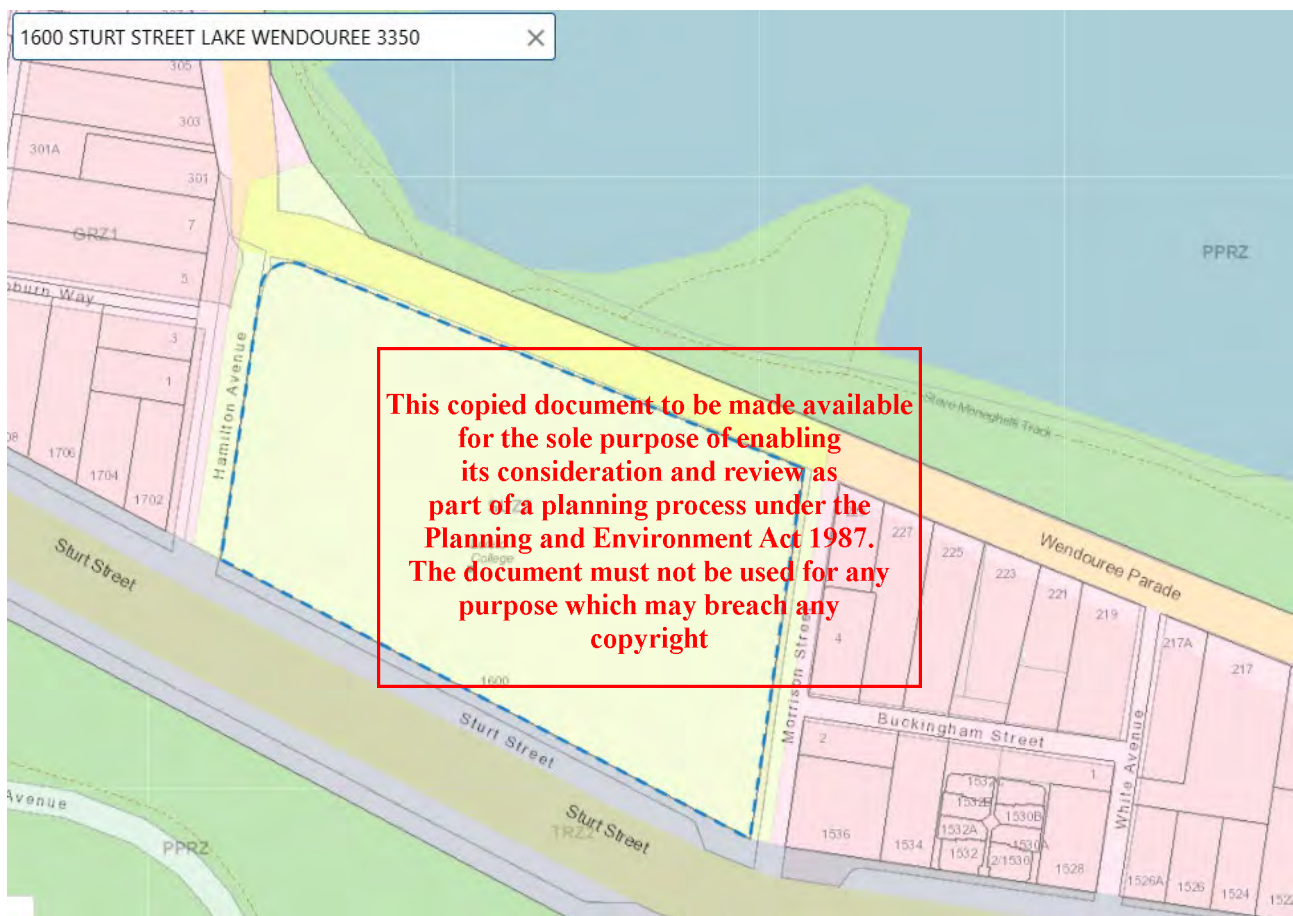


Figure 7. Image of VicPlan property report for 1600 Sturt Street, Lake Wendouree. VicPlan, 9 October 2025.

6.2 Retention values

6.2.1 Tree 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*. This standard categorises tree retention value, based upon an assessment of a tree’s quality (health and structure) and useful life expectancy, into one of four categories – A, B, C and U. Refer to Appendix C for further details.

6.2.2 Other criteria such as a tree’s physical dimensions, age class, location and its amenity, heritage and/or environmental significance and potential replacement time were also considered. A breakdown of the attributes required for classification in each category can be obtained from Appendix C.

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6.2.3 In relation to development applications, relevant consent authorities will generally consider:

- **Category A Retention Value** trees as significant and alterations to the design proposal and/or specific protection measures are generally recommended to facilitate successful tree retention post project completion.
- **Category B Retention Value** trees as a site constraint consideration. Trees in this retention category warrant proportional design consideration and amendment to ensure their viable retention post project completion.
- **Category C Retention Value** trees are not considered a site constraint and do not generally warrant design consideration or amendment.
- **Category U Retention Value** trees are considered a site opportunity, as such trees are generally of poor arboricultural quality and normally recommended for removal irrespective of proposed development.

Category	Tree numbers
A	23, 24 and 25
B	30, 31, 33, 35, 37 and 38
C	32, 34, 36, 52, 196, 197 and 198
U	

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7 Discussion

7.1 Determining TPZ encroachment

7.1.1 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 percent of the total TPZ area.

7.1.2 Trees with major encroachment may require removal or, in certain instances, be retained with specific protection requirements throughout the construction stage.

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

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

7.1.5 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 a combination of 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)

7.2 Impact of proposed development

7.2.1 A review of the proposed design has been undertaken in the context of tree retention and removal across the site.

7.2.2 The main development impact which affects trees, but not necessarily to the point of requiring immediate removal, is significant root damage/severance due to major TPZ encroachment. Root damage/severance largely occurs due to two 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).

7.2.3 Negative tree impacts can manifest as either a reduction in health and/or vigour due to root loss (absorption and/or transport roots) resulting in 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.

7.2.4 Compacted soils, especially artificially compacted soils, such as those commonly 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 road surface 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.

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- 7.2.5 The effect of compacted soils on plants is somewhat influenced by soil type but generally a reduction in soil pore space reduces the available area for oxygen and water within the soil profile. A reduction in available soil water and/or oxygen inhibits root activity within the soil, as they are essential for root elongation and growth, and the lack of these properties is considered a major limiting factor. Due to this reason, existing infrastructure, such as roads, situated in close proximity to the base of trees can act as root barriers thereby affecting the shape of the TPZ and allowing closer works than would otherwise be permitted.
- 7.2.6 The impact of 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. Soil level rises generally allows the tree more time to react to the changed growing environment whereas root severance has the same effect, reduction in root function and capability, but on an instantaneous time scale where there is no time for the tree to adjust.
- 7.2.7 The assumption of allowable encroachment and minimal long-term health or structural impacts to 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 tree's 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).
- 7.2.8 Three trees will be affected by direct conflict with the proposed construction footprint and would require removal under the current design i.e. Trees 35, 36 and 37.
- 7.2.9 A further one tree, Tree 34, has major encroachment and will require specific protection by way of non-destructive digging to identify extent of root development within proposed development envelope.
- 7.2.10 In total 13 trees are predicted to have no impact as works are set to occur outside of their calculated TPZ's and can therefore be retained with generic protection.

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8 Tree protection and management recommendations

8.1 Tree removal

8.1.1 Three trees would require removal, based on the supplied design proposal, to facilitate the development.

8.1.2 All three trees proposed for removal are located within the proposed building footprint and therefore their retention is not possible within the current, proposed plans.

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		2	35 and 37	1	36	0	

8.2 Tree retention

8.2.1 Thirteen trees were recommended for retention with generic, and in some cases specific, 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	34
Retain with generic protection requirements	3	23, 24 and 25	4	30, 31, 33 and 38	6	32, 52, 196, 197 and 198

8.3 Specific protection measures

8.3.1 Tree 34 has proposed construction works within 11 percent of its TPZ including the edge of its SRZ, however, due to the tree's smaller size and existing available soil beyond the calculated TPZ tree retention may be feasible within the proposed plans.

8.3.2 Where soil excavations represent a TPZ incursion in excess of 10 percent, or are proposed to occur within the SRZ, exploratory, root sensitive excavation techniques will invariably be recommended such as:

- Excavation using a high-pressure water jet and vacuum truck
- Excavation using an air spade with vacuum truck
- Excavation by hand

8.3.3 Where exploratory excavation(s) identifies significant root mass, a revision of tree retention/removal status may be required.

8.3.4 Roots discovered are to be treated with care and minor roots (less than 30-40 millimetres in diameter) pruned with a sharp, sterile handsaw or secateurs.

8.3.5 All significant roots (greater than 30-40 millimetres in diameter) are to be preserved/protected from desiccation, recorded, photographed and reported to the project arborist for review. At the discretion of the project arborist they may decide that retention of such roots is required for the sake of future tree health, or may determine such roots can be pruned without any significant impact on future health.

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8.4 Generic protection and reporting measures

8.4.1 All subject trees designated for retention require generic protection during the demolition and/or 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

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8.5 Activities prohibited within the TPZ

- Machine excavation including trenching
- Storage
- Preparation of chemicals, including cement products
- Parking of vehicles and plant
- Refueling
- 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

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8.6 Protective fencing specification

8.6.1 Tree protective protection fencing is to be installed at the designated TPZ or maximum practicable extent. As a guide fencing is to be erected as per the image below before any machinery or materials are brought to site and before commencement of works (including demolition).

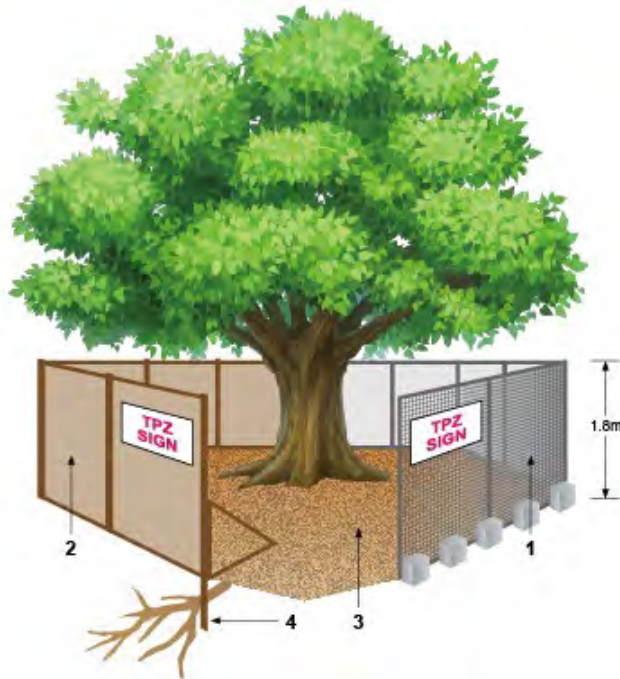
8.6.2 In some areas of the site (i.e. protection of trees on neighbouring properties) existing boundary fencing and/or external site fencing may be used as an alternative to protective fencing.

8.6.3 Once erected, tree protection fencing must not be removed or altered without approval from the project arborist and/or the responsible authority and is to be secured to restrict unauthorised access.

8.6.4 Tree protection fencing is to be a minimum of 1.8 metres high and mesh or wire between posts must be highly visible. Fence posts and supports should have a diameter greater than 20 millimetres and should ideally be freestanding, otherwise be located clear of tree roots.

8.6.5 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 the project arborist and/or the responsible authority.

8.6.6 The subject trees themselves must also not to 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.

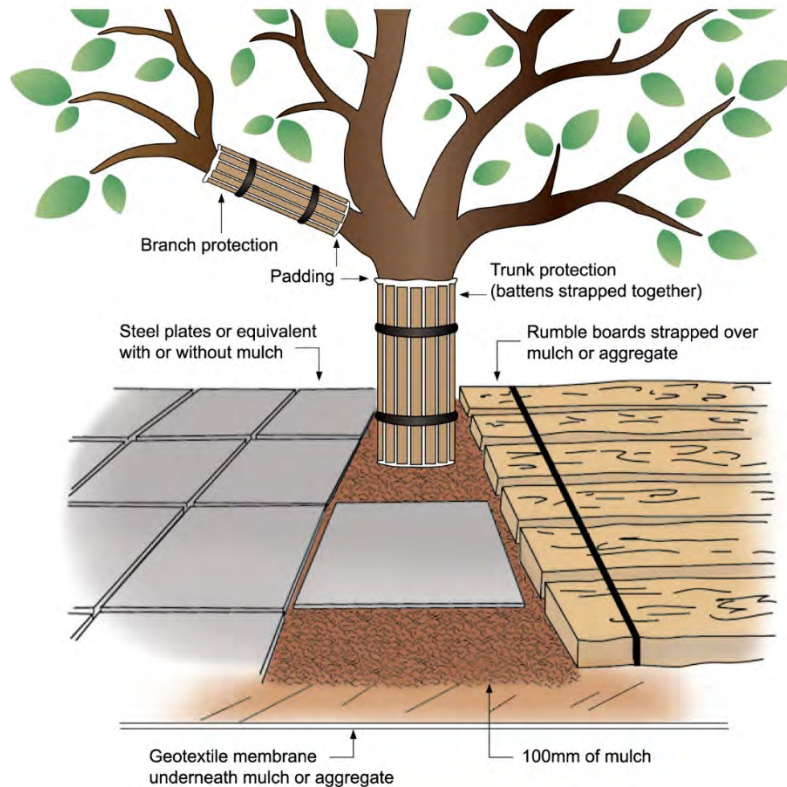
Figure 8. Depicts standard fencing techniques. AS 4970–2009.

8.7 Trunk and ground protection

- 8.7.1 Where proposed works are within the TPZ of retained subject trees, standard protective fencing may not always be a viable method of protection. In these instances trunk protection and/or ground protection should be installed prior to the commencement of site establishment and remain in place until after all proposed works have been completed.
- 8.7.2 Where construction access into the TPZ of retained subject trees cannot be avoided, the root zone of each affected tree must be protected using steel plates or rumble boards strapped over mulch/aggregate until such a time as permanent, above-ground surfacing (cellular confinement system or similar) is installed.
- 8.7.3 Trunk and ground protection is to be undertaken in accordance with the Australian Standard AS 4790–2009: *Protection of Trees on Development Sites* as per the image below.

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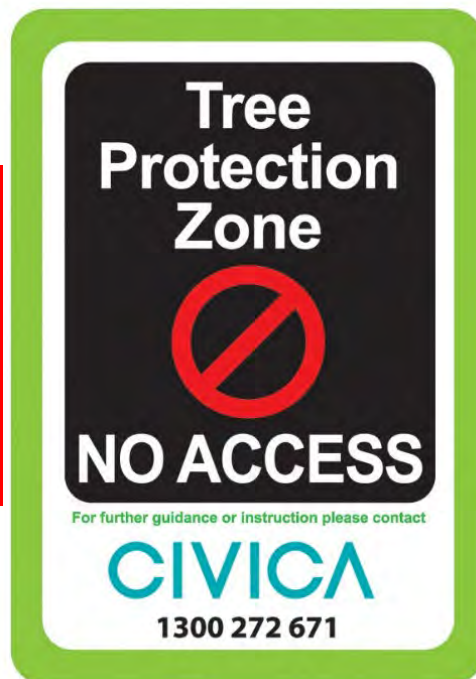
Notes:

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.

8.8 Tree protection signs

- 8.8.1 Signs identifying the TPZ (Figure 10) are to be placed at approximate 10 metres intervals around the edge of the TPZ fencing and must be visible from within the development site.



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Figure 10. Depicts an example of a tree protection sign. AS 4970–2009.

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8.9 Proposed pruning

8.9.1 Two trees have proposed development within a portion of their crown. It is anticipated that minor pruning only will be required of no greater than approximately 10 percent of the tree's total crown mass.

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
Pruning recommendations	1	33	0		1	34

8.9.2 It is anticipated that minor pruning only will be required, largely centred on reduction and/or crown lifting to facilitate site access construction of the building edge, of no greater than 10 percent of any one trees total crown area. Such pruning is considered to have minimal long term health impact to the trees given their current good health and age.

8.9.3 To ensure that a high standard of works is achieved, all tree pruning and/or removal works must be completed in accordance with the Australian Standard AS 4373–2007: *Pruning of Amenity Trees* and Arboriculture Australia's MIS:308 *Tree Pruning* and be undertaken by a suitably qualified arborist (minimum AQF Level 3).

8.9.4 Branch reduction pruning (where required) must be terminal in nature and focus on the removal of smaller diameter branches where feasible and remove no greater than 10 percent of total canopy (Foliage) mass. Branches no greater than 50 millimetres in diameter are to be removed unless specifically approved by the project arborist.

8.10 Project arborist

8.10.1 A project arborist must be commissioned to oversee all tree protection measures, approved works within TPZ's (where necessary) and complete regular monitoring and compliance certification.

8.10.2 The project arborist must be suitably experienced and competent in arboriculture, having acquired through training, a minimum qualification in this field under the Australian Qualification Framework (AQF) of Level 5, or an equivalent.

8.10.3 Regular site inspections are to be conducted by the project arborist at several, key points during the project to ensure all tree protection recommendations are being adhered to during demolition and/or construction. Such inspections will also allow for any alterations in tree health and/or additional tree protection or remediation measures to be identified and addressed.

8.11 Project milestones

8.11.1 The following visits and milestones are recommended as a guide as to when on-site inspections by the project arborist are 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 (5) 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 (5) 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 be signed by both parties.
4	Final sign off	Following completion of all works.	Practical completion of works and prior to tree protection removal.

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8.12 Compliance reporting

- 8.12.1 Following each site inspection, the project arborist is to prepare a report detailing the health and structural condition of the subject trees designated for retention. These reports should certify whether the works are being undertaken in accordance with the consent/conditions relating to tree protection and management.
- 8.12.2 These reports should contain photographic evidence (where applicable) to demonstrate that all tree protection and management recommendations are being carried out as specified.
- 8.12.3 Matters to be monitored and contained in these reports must include tree health and structural condition, the appropriateness and effectiveness of tree protection measures and any potential impact(s) on retained subject trees relating to conducted works which may arise from changes to the endorsed plans.
- 8.12.4 After completion, the reports shall be submitted to the project manager (as well as the clients' nominated representative where required).
- 8.12.5 If any tree protection conditions are found to have been breached, clear remedial action specifications must be specified, and the responsible authority notified.

8.13 Underground service installation

- 8.13.1 The installation of underground services (including drainage) must not encroach within the TPZ of any retained subject tree unless authorised by the project arborist and/or the responsible authority in which case underground boring will invariably be recommended.
- 8.13.2 The boring of services is to occur at a minimum depth of 800 millimetres (top of pipe) below the existing grade for trees with a trunk DBH of less than 100 centimetres, 950 millimetres for trees with a trunk DBH of 100–150 centimetres and 1100 millimetres for trees with a trunk DBH of greater than 150 centimetres.
- 8.13.3 To minimise soil disturbance associated with service installation, communal service lines must be used where appropriate. The entry and exit pits for boring must also be positioned outside the designated TPZ for each tree.

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8.14 Offset tree planting

- 8.14.1 Offset plantings must reflect the number of subject trees removed and the initial loss of amenity and biomass at a ratio of 1:1, or a rate designated by the responsible authority. Replacement trees are to be sourced from a reputable supplier and planted after the completion of all proposed works and at a time of year conducive to successful tree planting and establishment.
- 8.14.2 Replacement tree species must suit their location on the site in terms of their potential physical dimensions at maturity and their tolerance(s) to the surrounding environmental conditions e.g. water and climate sensitive selections. To avoid unethical or unprofessional species selection and/or their placement within the landscape, replacement species must be selected in consultation with a consulting arborist, who can also assist in implementing successful tree planting and establishment techniques.
- 8.14.3 Replacement tree species must have the genetic potential to reach physical dimensions at maturity that are comparable to those trees which have been removed.
- 8.14.4 A mixture of family, genus and species within the replacement tree planting list is considered desirable to help build resilience within the overall tree population on site, and surrounding area.
- 8.14.5 Newly planted trees will likely require maintenance and after planting care for a period of 2–3 years to ensure successful establishment. Plantings which fail during the establishment period are to be removed and replaced like for like.
- 8.14.6 Maintenance schedules may include (but not be limited to) watering, mulching, staking, guarding and formative pruning.

8.15 Additional excavation/trenching within TPZ's

- 8.15.1 In the event additional excavation is required within the TPZ of subject trees designated for retention/preservation, this is only to be conducted with the express consent of the project arborist and/or the responsible authority.
- 8.15.2 Upon review these excavations may be required to be conducted using techniques that are sensitive to tree roots to avoid unnecessary damage.

8.16 Plant health care

- 8.16.1 When managing a tree affected by development incursions within its TPZ, plant tonic and growth stimulant drenching may be required. Plant tonic and growth stimulant drenching is the process of adding diluted products directly to the root area of a tree to promote and assist trees to cope with loss of roots during the development process. They also assist trees to provide better resistance to sap sucking insects and fungal attack/disease and improve the establishment of beneficial microbial populations and nutrient uptake.

8.17 Irrigation

- 8.17.1 Regular checks are required to ensure retained trees are receiving the correct amount of water. The majority of a tree's fine water absorbing roots are located in the top 10–30 centimetres of soil. To undertake a basic soil moisture test, a small hole to a depth of approximately 40 centimetres at the dripline of the tree. If the soil is moist at this depth, water is not needed. Slow irrigation that provides an even coverage and targets the absorbing roots is the key to successful irrigation and encourages a deeper tree root system. Irrigation near the trunk is unnecessary as for most trees there are generally fewer water absorbing roots in this area. Irrigating the soil from half-way between the trunk and the dripline as well as beyond the dripline will provide water where it will most effectively be used.
- 8.17.2 Preferably, trees should be watered during the cooler evening and early morning period when temperatures are lower, humidity is higher, and the air is calmer thereby reducing water evaporation from the soil surface. Irrigation in the middle of the day is not harmful to most trees however it is less efficient.
- 8.17.3 Avoid watering trees during peak, daytime temperatures to minimise evaporation and potential foliar damage.

8.18 Mulching

- 8.18.1 Mulching regulates soil moisture and temperature levels, suppresses weeds, minimises soil compaction and reduces run off during periods of heavy rain. Acquiring wood chip mulch from programmed tree works (and by purchasing it from local tree contractors) is a proactive way to improve the growing conditions around trees that ultimately will result in improved tree health and vitality.
- 8.18.2 Mulch should aim to cover an area at least as large as a tree's crown projection (and preferably larger) for it to be effective. It should also be laid at a uniform thickness of 75–100 millimetres and kept clear of the trunk. Mulch should also be placed over damp to wet soil and never over dry soil. Application during the cooler months of the year is ideal. In areas where grass exists where you wish to mulch, spray the grass first with a non-selective herbicide and allow it to wilt and die before placement. This practice will negate grass growing up through the mulch over time.
- 8.18.3 Mulching within the crown projection of trees not only improves long term tree and soil health but also acts to reduce tree risk potential by reducing targets that may pass and/or congregate under their crowns. This in turn will minimise the likelihood of injury in the event of unanticipated branch failure.

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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.

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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 on 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).

Crown 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.

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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.

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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.

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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)		
	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.
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.	<p>Trees that have a severe structural defect that are not remediable such that their failure is expected within 12 months.</p> <p>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).</p> <p>Trees that are dead or are showing signs of significant, immediate and irreversible overall decline.</p> <p>Trees infected with pathogens of significance to the health and or safety of other trees nearby</p> <p>Low quality trees suppressing adjacent trees of better quality.</p> <p>Noxious weeds or species categorised as weeds within the local area.</p> <p>Note: Category U trees can have existing or potential conservation value* which might make it desirable to preserve.</p>		

* 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.

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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.

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Appendix D. Tree assessment data

Tree no.	Eastings (GDA94)	Northing (GDA94)	Botanic Name	Common Name	Origin	Trees in group	DBH Total (cm)	DRB (cm)	Radial TPZ (m)	TPZ area (m ²)	Radial SRZ (m)	Tree Height (m)	Canopy (m)	Health	Structure	Age	TLE (Yrs.)	Defects	Significance	Action (irrespective of development)	Arborist comments	% TPZ Encroachment	Tree Quality Score	Tree Retention value subcategory	Recommendation
23	749348.1	5839575.6	<i>Ulmus x hollandica</i>	Dutch Elm	Exotic Deciduous	1	56	66	6.7	139.35	2.8	10-15	10-15	Good	Fair	Mature	25-50	Deadwood/stubs > 60mm; Epicormic growth; Previous failure(s); Soil compaction; Soil problems; Wound(s);	Attractive landscape feature; Amenity value/shade; Significant due to age/size; Dominant landscape feature;		Tree in good health & has good prospects for longevity.	0	A	1.2	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
24	749339.32	5839581.13	<i>Ulmus x hollandica</i>	Dutch Elm	Exotic Deciduous	1	74	93	8.8	244.39	3.2	10-15	10-15	Good	Fair	Mature	25-50	Co-dominant stems; Damaging infrastructure; Deadwood/stubs > 30mm; Epicormic growth; Previous failure(s); Soil compaction; Soil problems; Wound(s);	Attractive landscape feature; Amenity value/shade; Significant due to age/size; Dominant landscape feature;		Tree has good prospects for longevity.	0	A	1.2	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
25	749322.57	5839590.24	<i>Ulmus x hollandica</i>	Dutch Elm	Exotic Deciduous	1	63	79	7.5	176.71	3.0	10-15	10-15	Good	Fair	Mature	25-50	Damaging infrastructure; Deadwood/stubs < 30mm; Epicormic growth; Hanger(s); Previous failure(s); Wound(s);	Attractive landscape feature; Amenity value/shade; Significant due to age/size; Dominant landscape feature;		Small diameter hangers of little consequence. Tree has good prospects for longevity.	0	A	1.2	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
30	749370.61	5839575.7	<i>Gleditsia triacanthos</i> var. <i>inermis</i> 'Sunburst'	Golden Honey Locust	Exotic Deciduous	1	23	26	2.8	23.93	1.9	5-10	5-10	Good	Fair	Semi-Mature	25-50	Borers/termite; Crossing/rubbing branches; Mechanical damage to root(s); Soil compaction; Soil grade changes; Wound(s);	Amenity value/shade; Attractive landscape feature;	Pest & disease control; Remove selective branches;		0	B	1.2	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
31	749362.53	5839579.79	<i>Gleditsia triacanthos</i> var. <i>inermis</i> 'Sunburst'	Golden Honey Locust	Exotic Deciduous	1	28	30	3.3	34.21	2.0	5-10	5-10	Good	Good	Semi-Mature	25-50	Crossing/rubbing branches; Deadwood/stubs < 30mm; Mechanical damage to root(s); Soil compaction; Soil grade changes; Wound(s);	Amenity value/shade; Attractive landscape feature;	Remove selective branches;		0	B	1.2	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
32	749350.08	5839590.64	<i>Liquidambar styraciflua</i>	Sweet Gum	Exotic Deciduous	1	23	28	2.7	22.90	1.9	5-10	<5	Good	Fair	Juvenile	>50	Co-dominant stems; Soil compaction; Soil grade changes;	Amenity value/shade;	Formative pruning;		0	C	1.2	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
33	749329.26	5839602.47	<i>Quercus cerris</i>	Turkey Oak	Exotic Deciduous	1	45	57	5.3	89.58	2.6	10-15	10-15	Good	Fair	Semi-Mature	>50	Co-dominant stems; Crossing/rubbing branches; Included bark;	Amenity value/shade; Attractive landscape feature;	End weight reduction;		6	B	1.2	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
34	749312.52	5839606.56	<i>Arbutus unedo</i>	Irish Strawberry Tree	Exotic Evergreen	1	20	23	2.4	18.10	1.8	<5	<5	Poor	Good	Semi-Mature	5-10	Deadwood/stubs < 30mm; Dieback; Excessive thinning; Nutrient deficiency; Pests/insects; Poor pruning; Wound(s);	Amenity value/shade;			11	C	1.2	Retain tree with specific protection requirements (i.e. Generic measures plus supervision of works within the TPZ and/or use of root sensitive construction techniques).
35	749306.94	5839612.07	<i>Aesculus hippocastanum</i>	Common Horse Chestnut	Exotic Deciduous	1	31	39	3.7	43.47	2.2	5-10	5-10	Good	Good	Semi-Mature	>50	Exposed root(s); Mechanical damage to root(s); Wound(s);	Attractive landscape feature; Amenity value/shade;			51	B	1.2	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
36	749307.31	5839620.31	<i>Arbutus unedo</i>	Irish Strawberry Tree	Exotic Evergreen	1	33	34	3.9	47.78	2.1	<5	5-10	Good	Good	Semi-Mature	>50	Deadwood/stubs < 30mm; Pests/insects;	Amenity value/shade; Attractive landscape feature;	Pest & disease control; Uplift for pedestrian access;		67	C	1.2	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
37	749309.83	5839631.45	<i>Acer pseudoplatanus</i>	Sycamore	Exotic Deciduous	1	32	40	3.8	46.32	2.2	5-10	5-10	Good	Good	Semi-Mature	25-50	Deadwood/stubs > 30mm; Epicormic growth; Exposed root(s); Mechanical damage to root(s); Poor pruning; Previous failure(s); Wound(s);	Amenity value/shade; Attractive landscape feature;	Remove deadwood/stubs > 30mm;		64	B	1.2	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
38	749313.02	5839648.42	<i>Acer platanoides</i>	Norway Maple	Exotic Deciduous	1	43	50	5.2	83.65	2.5	5-10	10-15	Good	Good	Semi-Mature	25-50	Deadwood/stubs < 30mm; Decay; Exposed root(s); Girdling root(s); Mechanical damage to root(s); Wound(s);	Amenity value/shade; Attractive landscape feature;			0	B	1.2	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
52	749352.69	5839585.61	<i>Arbutus unedo</i>	Irish Strawberry Tree	Exotic Evergreen	1	13	17	2.0	12.57	1.6	<5	<5	Good	Good	Juvenile	25-50	Crossing/rubbing branches; Epicormic growth; Mechanical damage to root(s); Pests/insects; Wound(s);	Active nesting by fauna; Amenity value/shade;			0	C	1.2	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
196	749331.26	5839584.55	<i>Quercus cerris</i>	Turkey Oak	Exotic Deciduous	1	4	7	2.0	12.57	1.5	<5	<5	Good	Good	Young	25-50	Soil problems; Wound(s);			Small tree in good health.	0	C	1.2	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
197	749312.64	5839594.98	<i>Quercus cerris</i>	Turkey Oak	Exotic Deciduous	1	5	8	2.0	12.57	1.5	<5	<5	Good	Good	Young	25-50	Mechanical damage; Soil problems; Wound(s);			The lower trunk wound is consistent with machinery damage.	0	C	1.2	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
198	749303.77	5839599.74	<i>Ulmus x hollandica</i>	Dutch Elm	Exotic Deciduous	1	16	21	2.0	12.57	1.7	5-10	<5	Good	Good	Young	>50	Co-dominant stems; Wound(s);	Amenity value/shade;		A healthy, well-formed tree with good prospects for longevity.	0	C	1.2	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).

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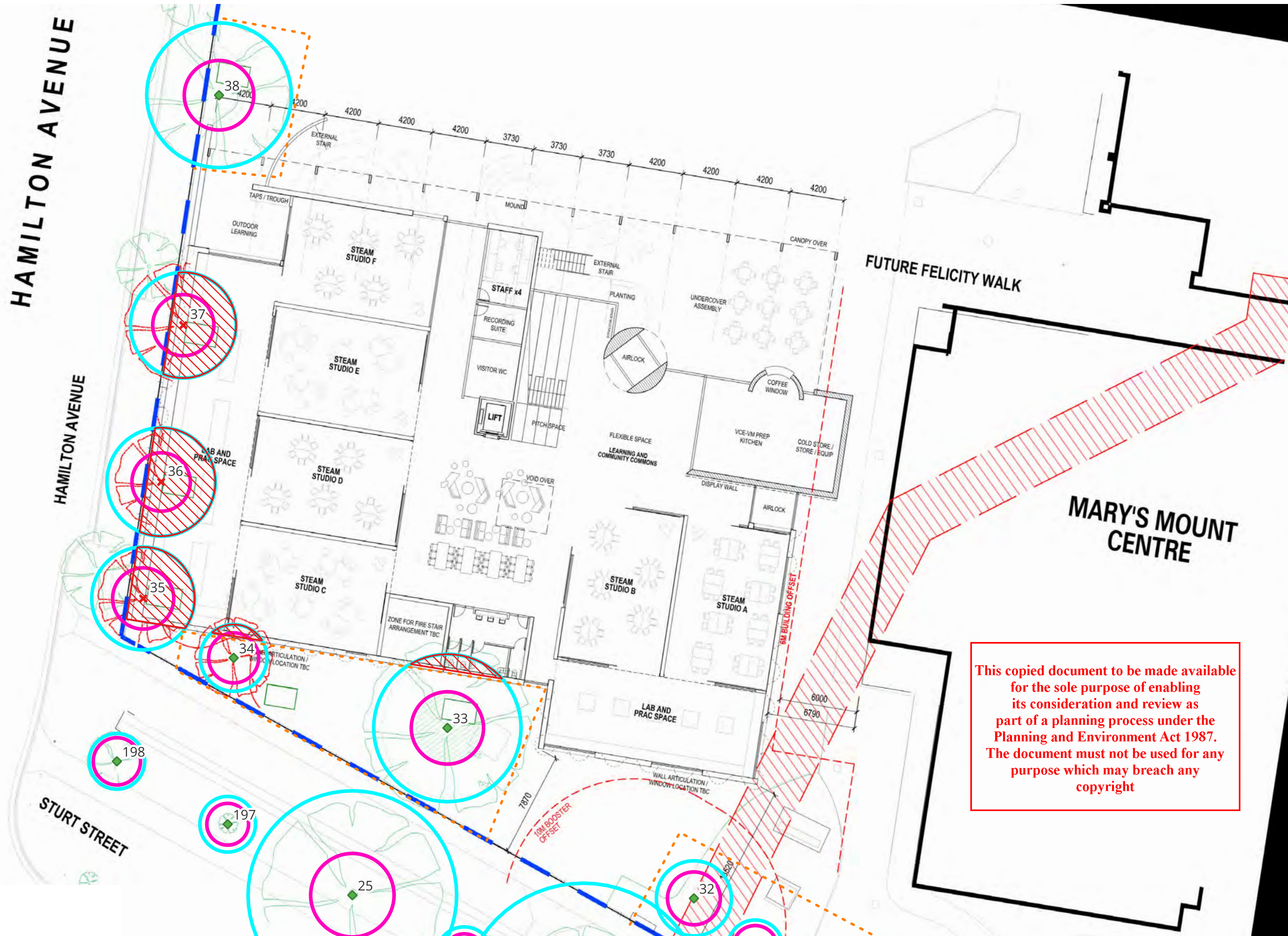
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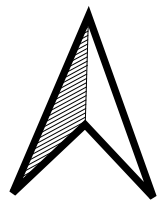
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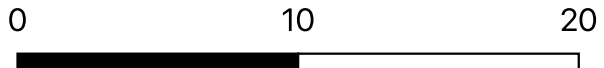


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APPENDIX __ - TREE PROTECTION PLAN

PROJECT
202510- AIA-J07078

DATE
2025-10-09

CLIENT
Loreto College Ballarat

MAP NO.
1/1

Legend

Recommendation		
✗	Remove	SRZs
◆	Retain	Encroachment
□	TPZs	TPZ Fencing

TREE LOCATION DISCLAIMER
Tree locations are approximate

DATA SOURCES
Civica ArborPlan
MORNANE CENTRE - LORETO BALLARAT - 25026 - A101-P4

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