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Melbourne Grammar School Senior School Campus Domain Road, Melbourne VIC Preliminary Tree Assessment

21 July 2023

Assessment and Report prepared by:

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21 July 2023

Elliot Green
Property Manager
Melbourne Grammar School
47 Domain Road
Melbourne VIC 3004

Preliminary Tree Assessment regarding fifteen (15) trees located within Melbourne Grammar School

Dear Elliot,

We are pleased to provide you with the following Preliminary Tree Assessment of fifteen (15) trees within the property of the Melbourne Grammar School.

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,

Luke Dawson
National Operations Manager
Dip. Hort. (Arb.), AQF Level 5

ADVERTISED PLAN

Version	Date	Author	Rationale
1	8 March 2023	Luke Dawson	First Issue
2	21 July 2023	Luke Dawson	Update to Conditions

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1 Introduction

1.1.1 Civica ArborSafe was engaged by Elliot Green of Melbourne Grammar School in relation to completion of a Preliminary Tree Assessment (report) on fifteen (15) trees located at Melbourne Grammar School.

1.1.2 The initial data contained in this report was intended to provide information on site trees and how they may pose a constraint on proposed development. Report findings and recommendations provided are based upon guidance provided within the Australian Standard AS 4970–2009: *Protection of Trees on Development Sites*.

1.1.3 Observations and recommendations provided within this report are based upon information provided by the client and an arborist site visit.

2 Scope

2.1.1 Carry out a visual examination of the nominated trees located within the vicinity of the proposed development.

2.1.2 Inspect the nominated trees and their growing environment in the context of the proposed development.

2.1.3 Provide an objective appraisal of the subject trees in relation to their species, estimated age, health, structural condition and viability within the landscape.

2.1.4 Based on the findings of this investigation, provide independent recommendations on the retention value of the trees.

2.1.5 Identify and reduce potential conflicts between tree protection and site development by providing accurate information on the area required for tree protection and the restricted activities within the area for each tree prior to any proposed construction.

3 Methodology

3.1 Data Collection

3.1.1 Luke Dawson and James Mackenzie of Civica ArborSafe carried out a site inspection of the subject trees on 7 March 2023.

3.1.2 Trees that are the subject of this report were identified during discussions with the client.

3.1.3 The subject trees were inspected from ground level. No foliage or soil samples were taken. No aerial or internal investigations were undertaken.

3.1.4 Tree height and canopy width were estimated and have been provided in a variety of ranges with 5m 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.

3.2 Tree Protection Zones

3.2.1 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*.

3.2.2 The TPZ is defined as 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 (Note DBH is nominally measured as 1.4m from ground level).

TPZ radius = DBH × 12

3.2.3 The SRZ is the area around the base of a tree required for the tree's stability in the ground. The woody root growth and soil cohesion in this area are necessary to hold the tree upright. The SRZ is nominally circular with the trunk at its centre and is expressed by its radius in metres.

SRZ radius = $(D \times 50)^{0.42 \times 0.64}$

3.3 Retention Values

3.3.1 Retention values are determined based upon 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 its 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 B – Explanation of Tree Assessment Terms.

4 Observations

4.1 Aerial Images

Figure 1. The red lines indicate approximate site boundaries. All trees within these areas that are likely to be impacted by future development or may be a constraint on development have been assessed and are documented in this report. (Nearmap, 2022)

4.2 Site Trees

4.2.1 A total of fifteen (15) trees were inspected and are the subject of this report. Complete attributes for each tree can be found in Appendix D – Preliminary Tree Assessment Data.

4.2.2 The subject trees form part of the existing ArborPlan Tree Management System for the Melbourne Grammar School site and as such have been tagged, positioned on aerial imagery and visually assessed annually since 2013.

4.2.3 The subject trees have been numbered in line with the existing ArborPlan tree numbering system and are depicted in Figure 2. 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 entire Melbourne Grammar School site, tree numbers are not in sequential order.

4.2.4 All subject trees are located within the Melbourne Grammar School.

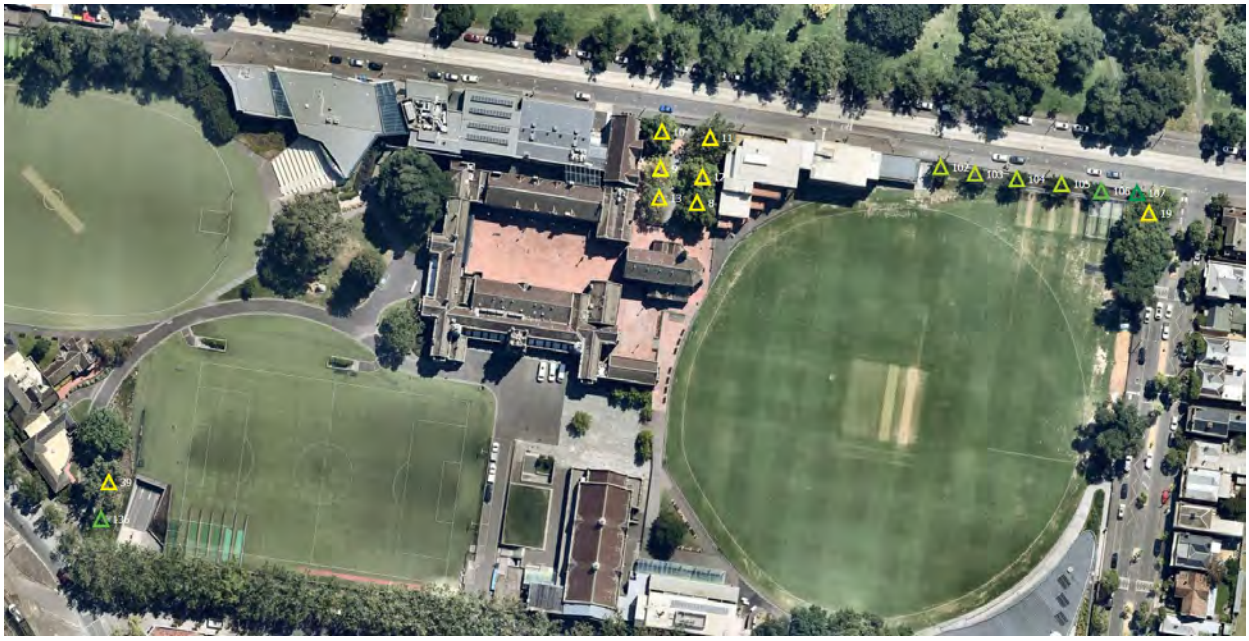


Figure 2. Trees subject to this report as represented in the ArborPlan Tree Management system.
Note tree icon colour represents existing risk status (not Retention Value). (ArborPlan, March 2023).

5 Tree Retention Values

5.1 Determining Tree Retention Values

5.1.1 Tree Retention Value has been determined based on a combination of tree attributes. Tree retention value is categorised as per the British Standard BS 5837–2012: *Trees in Relation to Design, Demolition and Construction*. Attribute considered when determining the retention value include tree health, structure and form, life expectancy, suitability of the tree in the context of local landscape. Arboricultural, Cultural, Environmental and Heritage significance are all also considered within the subcategories identified.

5.1.2 Collectively tree attributes are reviewed and used to categorise tree value in a development context. Additional information explaining Tree Retention Values can be found in Appendix C – Tree Retention Values.

5.2 Category A Trees (High Retention Value)

5.2.1 Zero (0) trees were determined to be Category A Trees. 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.

5.3 Category B Trees (Moderate Retention Value)

5.3.1 Thirteen (13) trees were considered to have a Moderate Retention Value. 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 ten years. They may make moderate amenity contributions to the landscape and make low/moderate environmental contributions. Trees with this retention value warrant minor design consideration in an attempt to allow for their retention.

5.3.2 Category B trees are numbered 8, 9, 10, 11, 12, 13, 19, 39, 102, 103, 104, 105 and 106 and are shown in Figure 3.

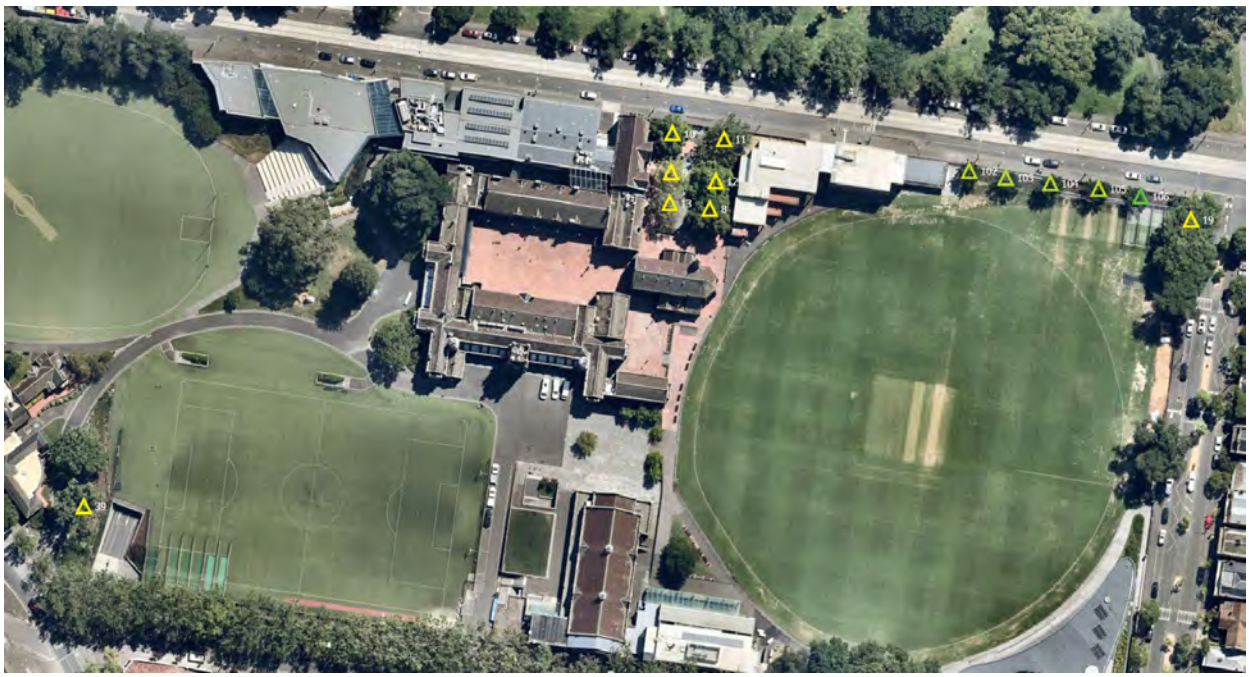


Figure 3. Aerial image showing location of Moderate Retention Value Trees. Note that icon colour indicates trees current risk rating (not Retention Value). Tree attributes are to be obtained from the Appendix D – Preliminary Tree Assessment Data. (ArborPlan, March 2023).

5.4 Category C Trees (Low Retention Value)

5.4.1 Two (2) trees were identified as being Category C Trees. 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.

5.4.2 Category C trees are numbered 107 and 136 and are shown in Figure 4.

Figure 4. Aerial image showing location of Low Retention Value Trees. Note that icon colour indicates trees current risk rating (not Retention Value). Tree attributes are to be obtained from the Appendix D – Preliminary Tree Assessment Data. (ArborPlan, March 2023).

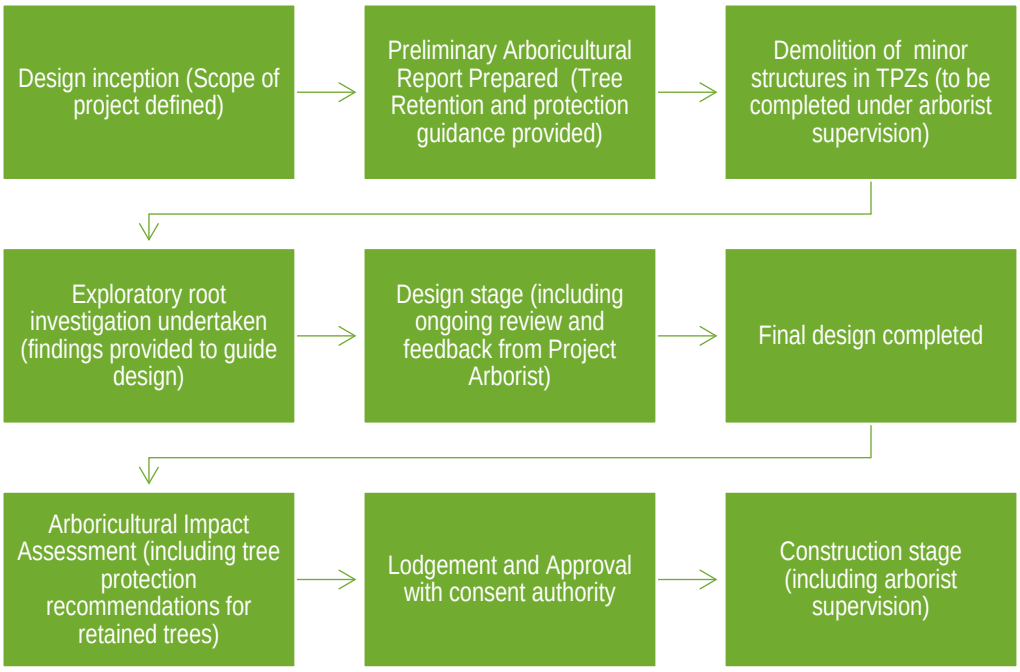
5.5 Category U Trees (Unsuitable for Retention)

5.5.1 Zero (0) trees were 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. These trees should be removed irrespective of any future development on the site.

6 Discussion

6.1 Project timelines

6.1.1 It is important to ensure that trees worthy of retention (i.e. Category A Trees and where possible Category B Trees) are considered throughout the design and construction stage. The following timeline is based upon guidance provided within the Australian Standard AS 4970–2009: *Protection of trees on development sites* with specific consideration to this project to identify appropriate involvement from the Project Arborist.



6.1.2 Note that no proposed designs have been reviewed as part of this report, indicating the project is at the Design Inception stage.

6.2 Demolition

6.2.1 Demolition of existing structures within the site will be required to facilitate the project. All demolition within the TPZ's of trees would need to be supervised by the Project Arborist. Demolition at an early stage in the development would allow root investigation to be undertaken which could be used to guide the design process.

6.3 Project design

6.3.1 Due to space available for the proposed construction and the size of the TPZ's of High and Moderate retention value trees, it is anticipated that works will be required within these TPZ's to ensure the project is viable.

6.3.2 When considering the TPZs at the design stage, it important to attain Arborist guidance as to the permissible extent of encroachment that would still allow for viable tree retention.

6.3.3 An encroachment of up to 10% of the TPZ area is deemed a minor encroachment by the Australian Standard AS 4970–2009: *Protection of Trees on Development Sites.* If the proposed encroachment is less than 10% of the area of the TPZ and is outside the Structural Root Zone (SRZ), detailed root investigations should not be required.

6.3.4 An encroachment of more than 10% of the TPZ area is deemed a major encroachment by the AS 4970–2009: *Protection of Trees on Development Sites.* If the proposed encroachment is greater than 10% of the TPZ or inside the SRZ the project arborist (an assigned AQF Level 5 Arborist) must demonstrate that the trees would remain viable.

6.3.5 Arborist consultation throughout the design stage will allow effective, constructive guidance to be provided throughout the process. This will ensure the final design will have fully considered all aspects of impact to site trees prior to commencement of the Arboricultural Impact Assessment.

6.4 Root Location

6.4.1 Root location is important in determining how and where any proposed structures can be constructed. If works are to proceed that would be considered a major encroachment (>10% of TPZ area) under the Australian Standard AS 4970–2009 then identification and recording of these roots would be required.

6.4.2 Exploratory root investigation should be carried out in a manner conducive to root retention and protection. This may include the use of air excavation (Air spade) and or hydro excavation (water jet and hydro vac etc.). Root investigation should be undertaken at pre-agreed locations that will most effectively guide future design. These may be at set offsets from the trunk of the tree in a radial pattern.

6.4.3 It is necessary to "root map" the proposed excavation line to ascertain the effects of any TPZ encroachment. Common methods for root mapping include:

- Exploratory excavation by hand.
- Exploratory excavation using a high pressure water jet and vacuum truck.
- Exploratory excavation using an Air Spade with vacuum truck.
- Ground Penetrating Radar*

(* Due to the high likelihood of foreign material in the soil profile, ground penetrating radar may not provide accurate results and exploratory excavation is the preferred option.)

6.4.4 Findings from the root investigation should be compiled into a comprehensive report which identifies significant roots that should be retained and less significant roots that may be appropriate for severance. This information is important to qualify the developable area during the design process.

7 Recommendations

7.1 Site survey

7.1.1 A site survey should be completed using a registered surveyor. Tree numbers contained within this report and located on the individual tree tags onsite should be used in the survey.

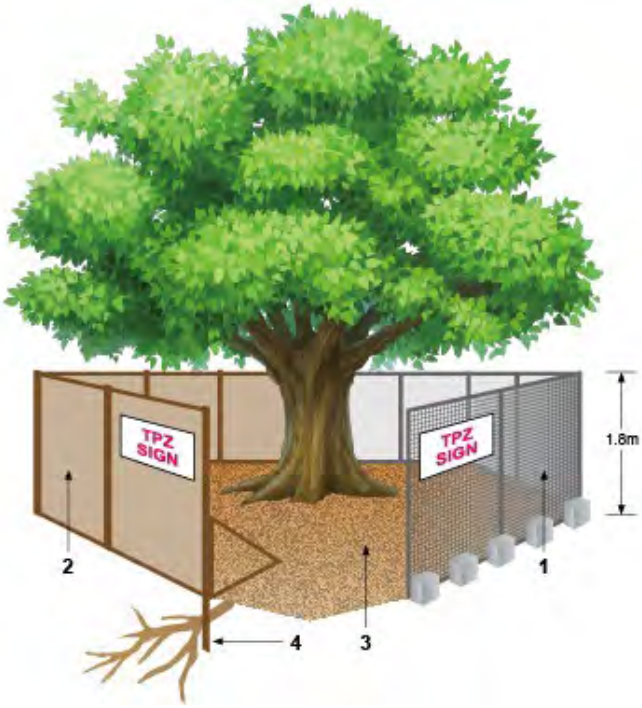
7.1.2 The TPZ, SRZ and Retention Value of all retainable trees (Category A, B and C) should be displayed accurately on the site survey and subsequent plans, using appropriate colour coding where possible, for the development using the information contained in the attached Tree Data Sheet.

7.2 Demolition

7.2.1 If demolition of existing site structures is to be undertaken prior to the finalisation of the design stage, it should be carried out with care under Arborist supervision. The use of machinery should be undertaken from areas of hardstand to avoid potential root compaction. Given the works will take place within the TPZ of a number of trees, protective fencing should be installed to avoid unnecessary damage to tree roots.

7.2.2 Protective fencing is to be installed as far as practicable from the trunk of any retained trees. Fencing should be installed as per the image below before any machinery or materials are brought to site and before commencement of works (including demolition).

7.2.3 Once installed, protective fencing must not be removed or altered without approval from the Project Arborist. The TPZ fencing should be secured to restrict access as depicted in Figure 5. Tree Protection Zone 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.



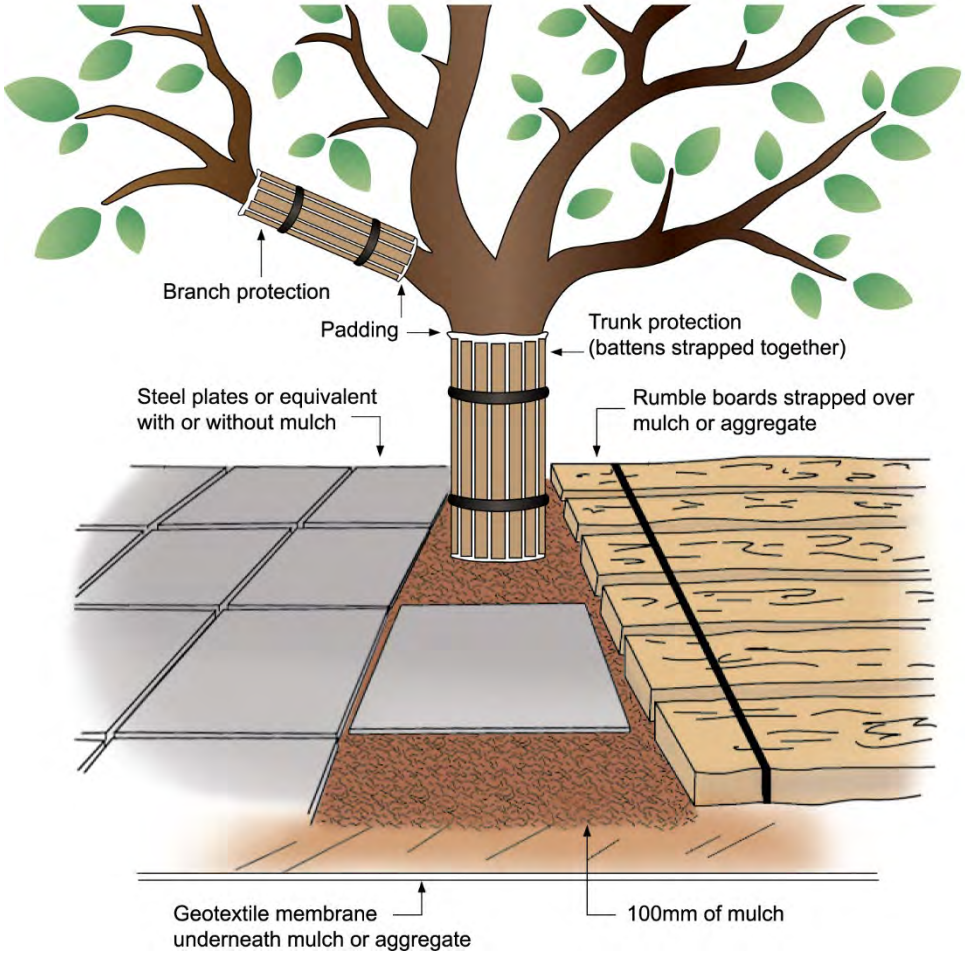
Legend:

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 5. Depicts standard fencing techniques. (AS 4970–2009).

7.2.4 Where demolition access into the TPZ of 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.

7.2.5 Trunk protection must also be installed as per Figure 6. Trunk and ground protection should be undertaken in line with AS 4790–2009 as per the image below and installed prior to the commencement of works and remain in place until after construction works have been completed.



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

7.3 Exploratory Root Investigation

7.3.1 If during the design stage TPZ encroachment of High to Medium Retention Value trees, or trees which are valued to retain as part of the project, is anticipated to occur, exploratory root investigation is recommended to determine the size and location of tree roots. Root investigation should be undertaken using one of two options: 1: air-spade; 2. Hydro-excavation using hydro-vac.

7.3.2 Roots discovered should be measured and their diameter, depth and distance from trunk recorded and collated into a root map.

7.4 Underground Services

7.4.1 An investigation as to the location, condition and size of underground services should also be undertaken and plotted on drawings. Any utility that needs replacement or upgrading, which is located within the TPZ of a tree appropriate for retention should be identified at the design stage.

7.5 Building Design

7.5.1 The Project Arborist should be used to provide feedback and guidance as to the effects of the proposed design upon the tree population during the early design stage.

7.5.2 Sensitive construction methods may be permissible within the TPZ's marked for retention. Tree sensitive construction measures such as pier and beam, suspended slabs, cantilevered building sections, screw piles and contiguous piling can minimize the impact on the root zones of trees marked for retention. The Project Arborist will be able to provide feedback upon these approaches and advise as to their viability in relation to tree retention.

7.6 Prepare an Arboricultural Impact Assessment

7.6.1 Once designs are finalised, an Arboricultural Impact Assessment should be prepared to detail the impacts of the development on the tree population on an individual tree basis. The Arboricultural Impact assessment should provide information on tree removal and retention as well as specific guidance on an individual trees basis as to required protection measures.

8 References

- Australian Standard AS 4970–2009: *Protection of Trees on Development Sites*, Standards Australia, GPO Box 476, Sydney, New South Wales, 2001
- British Standard BS 5837–2012: *Trees in Relation to Design, Demolition and Construction*.

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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 and/or the Department, referral agencies and notified persons to discharge their duties under both the Planning and Environment Act 1987 and Freedom of Information Act 1982, 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.

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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.

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.	• 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. Note: Category U trees can have existing or potential conservation value* which might make it desirable to preserve.		
	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.

Table 2. 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. Preliminary Tree Assessment Data

Tree no.	*Botanical Name*	Common Name	Origin	Trees in group	DBH Total (cm)	DRB (cm)	Radial TPZ (m)	TPZ area (m2)	Radial SRZ (m)	Tree Height (m)	Canopy (m)	Health	Structure	Age	TLE (Yrs.)	Defects	Significance	Action (irrespective of development)	Arborist comments	Tree Quality Score	Tree Retention value subcategory
8	*Platanus x acerifolia*	London Plane	Exotic Deciduous	1	50	63	**6.0**	113.10	**2.7**	10-15	10-15	Good	Good	Semi-Mature	15-25	Co-dominant stems; Deadwood/stubs < 30mm; Previous failure(s); Wound(s);	Amenity value/shade; Attractive landscape feature;	Remove selective branches;	07-03-2023 : Luke Dawson : Tree assessed. Recent failure in upper Southwest crown. Remove wounded stem back to suitable growth point below wound.	B	
9	*Platanus x acerifolia*	London Plane	Exotic Deciduous	1	40	45	**4.8**	72.38	**2.4**	10-15	10-15	Fair	Good	Semi-Mature	15-25	Deadwood/stubs > 30mm; Dieback; Disease pathogens; Girdling root(s); Soil problems;	Amenity value/shade; Attractive landscape feature;	Irrigation; Plant health care; Soil testing;	07-03-2023 : Luke Dawson : Tree assessed. Tree health appears notably reduced compared to neighbouring trees of same size/species. 26-02-2020 : Ido Monk : Tree assessed. Tree continues to present with noticeably reduced health, as does the Azealia underplanting. Undertake soil investigation identifying any issues that may inhibit plant health.	B	
10	*Platanus x acerifolia*	London Plane	Exotic Deciduous	1	41	51	**4.9**	76.05	**2.5**	10-15	10-15	Good	Fair	Semi-Mature	25-50	Co-dominant stems; Deadwood/stubs < 30mm; Included bark; Previous failure(s); Soil compaction; Wound(s);	Amenity value/shade; Attractive landscape feature;	Irrigation;	31-03-2022 : Justin Herbert : Tree assessed.	B	
11	*Platanus x acerifolia*	London Plane	Exotic Deciduous	1	51	66	**6.1**	117.67	**2.8**	10-15	10-15	Good	Fair	Semi-Mature	15-25	Co-dominant stems; Dieback; Epicormic growth; Included bark; Mechanical damage to root(s);	Amenity value/shade; Attractive landscape feature;	End weight reduction; Other action;	31-03-2022 : Justin Herbert : Tree assessed. 26-02-2020 : Ido Monk : Tree assessed. Pruning will likely require consent from power authority. 06-03-2019 : Justin Herbert : Tree assessed. Previous comments remain applicable. 05-04-2018 : Ido Monk : Tree assessed. Pruning entered as being undertaken on northern stem, however no pruning cuts observed from ground level. Contact contractor for verification. 23-03-2017 : Ido Monk : 2017Reduce stem to the north by ~20%. Focus on removing multiple, smaller diameter, terminal branches where pruning targets allow.	B	
12	*Platanus x acerifolia*	London Plane	Exotic Deciduous	1	42	53	**5.0**	79.80	**2.5**	10-15	10-15	Good	Good	Semi-Mature	25-50	Deadwood/stubs < 30mm;	Amenity value/shade; Attractive landscape feature;	Irrigation;	31-03-2022 : Justin Herbert : Tree assessed.	B	
13	*Platanus x acerifolia*	London Plane	Exotic Deciduous	1	46	50	**5.5**	95.73	**2.5**	10-15	10-15	Fair	Fair	Semi-Mature	10-15	Co-dominant stems; Deadwood/stubs > 60mm; Dieback; Included bark; Pests/insects; Previous failure(s); Soil compaction; Wound(s);	Amenity value/shade; Attractive landscape feature;	Irrigation; Other action; Pest & disease control; Remove deadwood/stubs > 30mm;	07-03-2023 : Luke Dawson : Tree assessed. Deadwood accumulating in lower crown. 31-03-2022 : Justin Herbert : Tree assessed. Foliage infected with what appears to be a Mite species. Ensure old and fallen autumn foliage is collected and disposed of. A systemic insecticide may be required next Spring should infestation persist. Reinspect in mid Spring 2022.	B	
19	*Ulmus x hollandica*	Dutch Elm	Exotic Deciduous	1	84	77	**10.1**	319.21	**3.0**	10-15	10-15	Good	Fair	Mature	15-25	Cavity(s); Co-dominant stems; Deadwood/stubs > 30mm; Decay; Dieback; Epicormic growth; Poor pruning; Wound(s);	Amenity value/shade; Attractive landscape feature;	Remove deadwood/stubs > 30mm;	31-03-2022 : Justin Herbert : Tree assessed.	B	2
39	*Platanus x acerifolia*	London Plane	Exotic Deciduous	1	124	128	**14.9**	695.59	**3.7**	15-20	20-30	Fair	Fair	Mature	10-15	Deadwood/stubs > 100mm; Dieback; Epicormic growth; Mechanical damage to root(s); Previous failure(s); Soil compaction; Wound(s);	Amenity value/shade; Attractive landscape feature; Significant due to age/size;	Irrigation; Plant health care; Remove deadwood/stubs > 30mm; Replace Tag;	09-03-2021 : Justin Herbert : Tree assessed. Further deadwood formation in southern crown. 26-02-2020 : Ido Monk : Tree assessed. Tree establishing retrenched crown, remove deadwood as it forms and continue to treat annually.	B	
102	*Ulmus x hollandica*	Dutch Elm	Exotic Deciduous	1	33	39	**4.0**	49.27	**2.2**	5-10	5-10	Good	Fair	Juvenile	>50	Epicormic growth;	Amenity value/shade;		31-03-2022 : Justin Herbert : Tree assessed.	B	2
103	*Ulmus x hollandica*	Dutch Elm	Exotic Deciduous	1	36	42	**4.3**	58.63	**2.3**	5-10	<5	Good	Good	Juvenile	>50	Epicormic growth;	Amenity value/shade;	Other action;	31-03-2022 : Justin Herbert : Tree assessed. Rope remains and should be removed.	B	2
104	*Ulmus x hollandica*	Dutch Elm	Exotic Deciduous	1	35	43	**4.2**	55.42	**2.3**	5-10	5-10	Good	Good	Juvenile	>50	Epicormic growth; Exposed root(s); Included bark;	Amenity value/shade;	End weight reduction;	31-03-2022 : Justin Herbert : Tree assessed. 26-02-2020 : Ido Monk : Tree assessed. Continue to shape from netting as required. Reduce western scaffold branch by ~15%.	B	2
105	*Ulmus x hollandica*	Dutch Elm	Exotic Deciduous	1	39	45	**4.7**	70.08	**2.4**	5-10	<5	Good	Fair	Juvenile	>50	Co-dominant stems; Epicormic growth; Included bark; Pests/insects; Weak union(s);	Amenity value/shade;	End weight reduction;	31-03-2022 : Justin Herbert : Tree assessed. 26-02-2020 : Ido Monk : Tree assessed. Further pruning to focus on 2x subdominant stems, reducing overall height/dominance by ~15% each. 23-03-2017 : Ido Monk : 2017Formative pruning recommended whilst tree is relatively young.	B	2
106	*Ulmus x hollandica*	Dutch Elm	Exotic Deciduous	1	31	40	**3.8**	44.61	**2.3**	5-10	<5	Good	Fair	Juvenile	15-25	Co-dominant stems; Epicormic growth; Pests/insects;	Amenity value/shade;		31-03-2022 : Justin Herbert : Tree assessed. 26-02-2020 : Ido Monk : Tree assessed. Reduce 2x subdominant stems by ~15% each.	B	2
107	*Ulmus x hollandica*	Dutch Elm	Exotic Deciduous	1	13	17	**2.0**	12.57	**1.6**	<5	<5	Fair	Good	Young	15-25	Epicormic growth; Wound(s);	Amenity value/shade;	Irrigation;	31-03-2022 : Justin Herbert : Tree assessed.	C	
136	*Ulmus procera*	English Elm	Exotic Deciduous	1	13	17	**2.0**	12.57	**1.6**	5-10	<5	Good	Fair	Juvenile	>50	Dieback;	Attractive landscape feature;	Mulching; Replace Tag;	07-03-2023 : Luke Dawson : Tree assessed. Small juvenile tree within garden bed.	C	

For further information
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