

Tree Protection Specifications and Plan

Site location:

45-53 Macleay Street Potts Point
NSW

Prepared for:

Time & Place

Prepared by: Jack Williams

Urban Arbor Pty Ltd

Ref: 250818_45-53 Macleay_TPP

Date prepared: 18 August 2025

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1. INTRODUCTION

- 1.1 Urban Arbor have been instructed by Time & Place to provide a tree protection plan for trees at the site in relation to a proposed demolition works at the site.
- 1.2 The following documents have been provided to assist in preparing this report;
 - A) Demolition Plan, SJB Architects, 8 August 2025.
 - B) Detail Survey, Veris, 23 March 2020.
- 1.3 The site and tree inspections were carried out on 13 August 2025. Access was available to the subject site and adjoining public areas only. All tree data contained in this report was collected during this site inspection.

2. SCOPE OF THE REPORT

- 2.1 This report has been undertaken to meet the following objectives.
 - 2.1.1 Prepare a Tree Protection Plan outlining required tree protected measures for all trees within 5 metres of proposed demolition works in accordance with AS4970-2025.

3. LIMITATIONS AND METHODOLOGY

- 3.1 The following information was collected during the assessment of the subject tree(s):
 - Tree common name.
 - Tree botanical name.
 - Tree age class.
 - DSH (Trunk/stem diameter at standard height) - Measured at a height of 1.4 metres or the nearest measurable point in millimetres. Where measurement at a height of 1.4 metres is not possible, another height may be specified.
 - Estimated height – metres.
 - Estimated crown spread (radius of crown) – metres.
 - Health.
 - Structural condition.
 - Amenity value.
 - Estimated remaining contribution years (SULE)¹.
 - Retention value (Tree AZ)².
 - Notes/comments

¹ Barrell, J. (2001), 'SULE: Its use and status in the new millennium' in *Management of Mature Trees proceedings of the 4th NAAA*

² Barrell Tree Consultancy, *Tree AZ Version 10.10-ANZ*, <http://www.treeaz.com/>.

- 3.2 An assessment of the trees condition was made using the visual tree assessment (VTA) model (Mattheck & Breloer 1994)³
- 3.3 All diagrams, plans and photographs included in this report are visual aids only, and are not to scale unless otherwise indicated.
- 3.4 Tree diameter was measured using a DBH tape or in some cases estimated. Tree height and tree canopy spread was measured with a clinometer or in some cases estimated. All other measurements were estimations unless otherwise stated. The other tools used during the assessment were a nylon mallet, compass, camera and a steel probe.
- 3.5 All DBH measurements, tree protection zones, and structural root zones were calculated in accordance with methods set out in AS4970 Protection of trees on development sites (2025).⁴
- 3.6 Urban Arbor neither guarantees, nor is it responsible for, the accuracy of information provided by others that is contained within this report.
- 3.7 The ultimate safety of any tree cannot be categorically guaranteed. Even trees apparently free of defects can collapse or partially collapse in extreme weather conditions. Trees are dynamic, biological entities subject to changes in their environment, the presence of pathogens and the effects of ageing. These factors reinforce the need for regular inspections. It is generally accepted that hazards can only be identified from distinct defects or from other failure-prone characteristics of a tree or its locality.

4. TREE INFORMATION

- 4.1 **Tree Protection Plan (TPP):** This is a scaled drawing that shows trees to be retained, the location of the TPZ areas and any tree protection specified in this section of the report, included in appendix 1. A copy of the TPP must form part of the development plans prior to the commencement of development works at the site. The location of the TPZ areas and the specified tree protection devices shown on the TPP should also be shown on other documents such as demolition, bulk earthworks, construction and landscape plans.

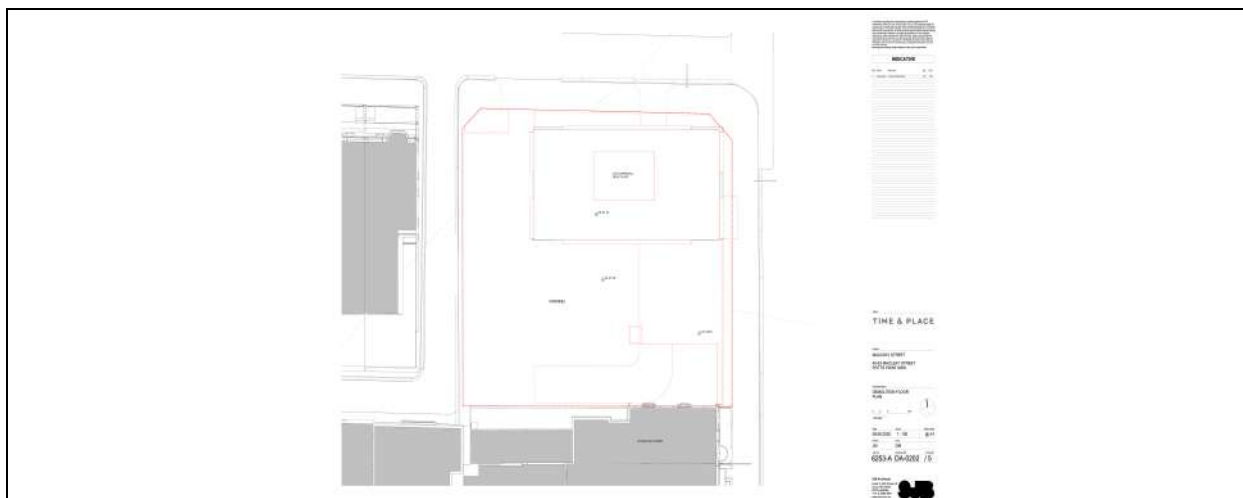
³ Mattheck, C & Breloer, H., *The body language of trees – A handbook for failure analysis*, The Stationary Office, London, England (1994)

⁴ Council Of Standards Australia, *AS4970 Protection of trees on development sites* (2009).

- 4.2 Tree Protection Zone (TPZ):** The TPZ is the principle means of protecting trees on development sites during the development works. The TPZ is identified as a specified area to prevent damage to trees either above or below ground during a development to maintain the viability of trees during development. The TPZ area is calculated by the project arborist. The TPZ is initially based on the Notional Root Zone (NRZ) radius, then modified where required due to a number of factors, including the location and distribution of roots, past and present structures (existing structures or tree form/shape), canopy projection, soil characteristics, tree condition/characteristics, species characteristics and construction methods.
- 4.3 Structural Root Zone (SRZ):** This is the area around the base of a tree required for the trees stability in the ground. An area larger than the SRZ always needs to be maintained to preserve a viable tree. There are several factors that can vary the SRZ which include height, crown area, soil type and soil moisture. It can also be influenced by other factors such as natural or built structures. Generally, work within the SRZ should be avoided. Soil level changes should also generally be avoided inside the SRZ of trees to be retained. Palms, other monocots, cycads and tree ferns do not have an SRZ.
- 4.4 Tree Data: Summary of tree information (see appendix 2 for detailed tree information)**

Tree No.	Species	Estimated Life Expectancy (SULE)	TPZ radius (m)	SRZ radius (m)
1	<i>Platanus x acerifolia</i>	1. Long	12.6	3.6
2	<i>Platanus x acerifolia</i>	1. Long	7.4	2.9
3	<i>Platanus x acerifolia</i>	1. Long	7.9	2.9
4	<i>Platanus x acerifolia</i>	1. Long	8.2	3.0
5	<i>Pyrus spp</i>	5. Small/Young	2.0	1.6
6	<i>Magnolia grandiflora</i>	5. Small/Young	2.2	1.6
7	<i>Pyrus spp</i>	5. Small/Young	2.0	1.5

- 4.5 Proposed Demolition Works:** The image below shows the proposed demolition works at the site.



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5. TREE PROTECTION SPECIFICATIONS

- 5.1 Use of this report:** This section includes Tree Protection Specifications (TPS) to conform with AS4970-2025. The most current version of the TPS and TPP shall be included in the construction documentation. All contractors must be made aware of the Tree Protection Specifications (TPS) prior to commencing works at the site. This section of the report and a copy of the Tree Protection Plan (TPP) drawings must also be made available to any contractor prior to works commencing and during any on site operations.
- 5.2 Project Arborist:** Prior to any works commencing at the site, a Project arborist should be appointed. The Project arborist should be qualified to a minimum of AQF Level 5 and/or equivalent qualifications and experience and should assist with any development issues relating to trees that may arise. If at any time it is not feasible to carryout works in accordance with this, an alternative must be agreed in writing with the Project arborist.
- 5.3 Tree work:** All tree work should be carried out by a qualified and experienced Arborist with a minimum of AQF level 3 in arboriculture, in accordance with NSW Work Cover Code of Practice for the Amenity Tree Industry (1998) and AS4373 Pruning of amenity trees (2007).
- 5.4 Initial site meeting/on-going regular inspections:** The Project arborist is to hold a pre-construction site meeting with the principal contractor to discuss methods and importance of tree protection measures and resolve any issues in relation to tree protection that may arise. To conform with AS4970-2025, the Project arborist should carry out regular site inspections to ensure works are carried out in accordance with this document throughout the development process. Site inspections are recommended on a monthly frequency throughout the development.
- 5.5 Site Specific Tree Protection Recommendations:** The table below provides recommendations for each tree, including site specific tree protection requirements. All tree to be retained must be protected in accordance with general requirements of AS4970-2009 of for the duration of the development, details of which are discussed further in this section of the report. See appendix 1 for a site plan of proposed tree protection measures.

Tree ID	Tree Species	TPZ Radius (m)	SRZ Radius (m)	Tree Protection Required
1	<i>Platanus x acerifolia</i>	12.6	3.6	Retain and protect. Trunk protection prior to works commencing in accordance with section 5.6.1.
2	<i>Platanus x acerifolia</i>	7.4	2.9	Retain and protect. Trunk protection prior to works commencing in accordance with section

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				5.6.1. Temporary ground protection in accordance with section 5.6.2 maybe required if the area of the TPZ located within the site is in use by construction vehicles after the existing structures are removed.
3	<i>Platanus x acerifolia</i>	7.9	2.9	Retain and protect. Trunk protection prior to works commencing in accordance with section 5.6.1. Temporary ground protection in accordance with section 5.6.2 maybe required if the area of the TPZ located within the site is in use by construction vehicles after the existing structures are removed.
4	<i>Platanus x acerifolia</i>	8.2	3.0	Retain and protect. Trunk protection prior to works commencing in accordance with section 5.6.1. Temporary ground protection in accordance with section 5.6.2 maybe required if the area of the TPZ located within the site is in use by construction vehicles after the existing structures are removed.
5	<i>Pyrus spp</i>	2.0	1.6	Retain and protect. Trunk protection prior to works commencing in accordance with section 5.6.1.
6	<i>Magnolia grandiflora</i>	2.2	1.6	Retain and protect. Trunk protection prior to works commencing in accordance with section 5.6.1.
7	<i>Pyrus spp</i>	2.0	1.5	Retain and protect. Trunk protection prior to works commencing in accordance with section 5.6.1.

5.6 Tree Protection Specifications:

- 5.6.1 Trunk and Branch Protection:** The trunk must be protected by wrapped hessian or similar material to limit damage. Timber planks (50mm x 100mm x 1800mm or similar) should then be placed around tree trunk. The timber planks should be spaced at 100mm intervals and must be fixed against the trunk with tie wire or strapping and connections finished or covered to protect pedestrians from injury. The hessian and timber planks must not be fixed to the tree in any instance. The trunk and branch protection shall be installed prior to any work commencing on site and shall be maintained in good condition for the entire development period.
- 5.6.2 Ground Protection:** Ground protection is required to protect the underlying soil structure and root system in areas where it is not practical to restrict access to whole TPZ, while allowing space for construction. Ground protection must consist of good quality composted wood chip/leaf mulch to a depth of between 150-300mm, laid on top of geo textile fabric, with boards overlaid to spread the weight and avoid load points. If vehicles are to be using the area, additional protection will be required such as rumble boards or track mats to spread the weight of the vehicle and avoid load

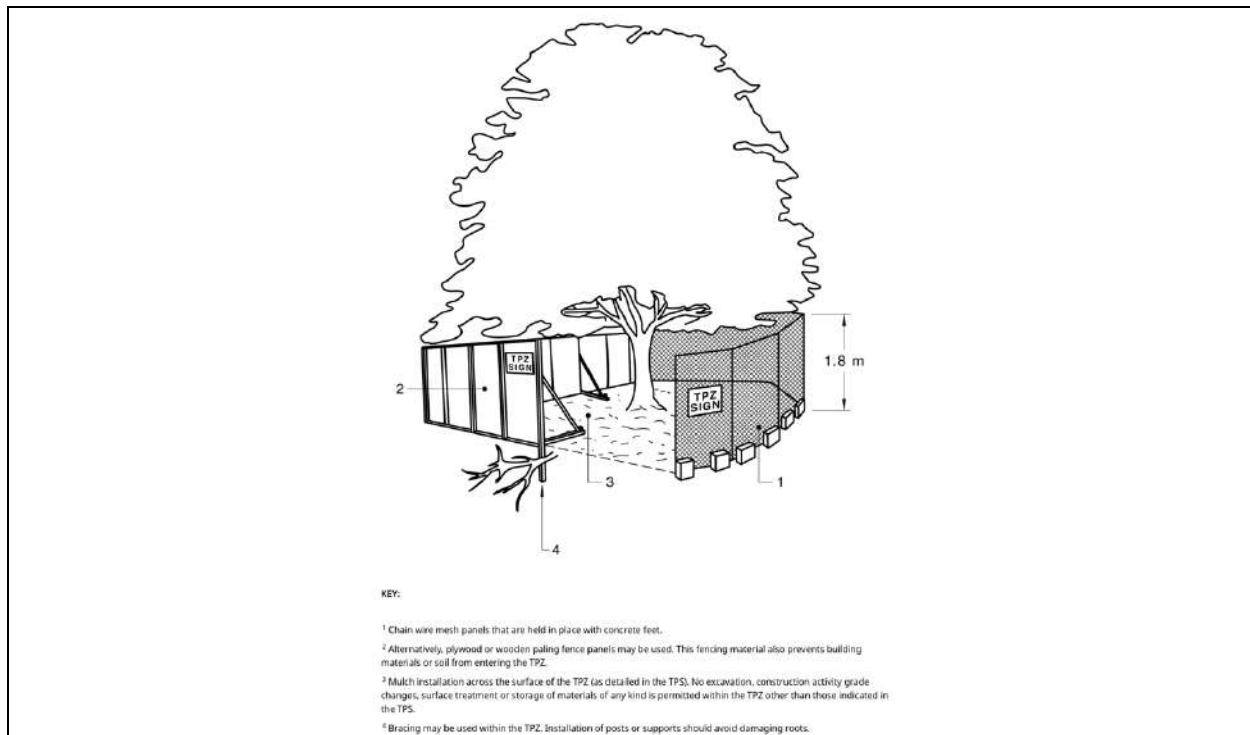
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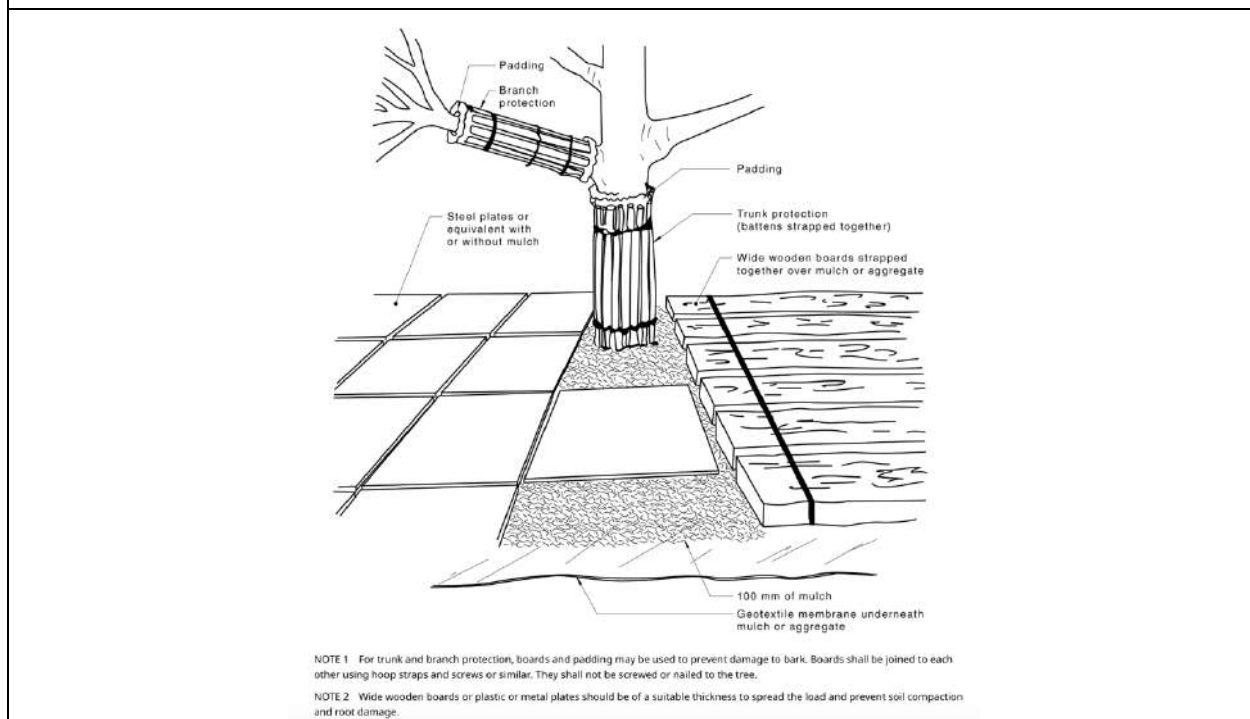
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points. Existing hard surfacing, such as driveways and hard surfacing, can provide adequate ground protection if retained. Ground protection is to be specified and approved by the project arborist as required.



An image from AS4970-2025, with example tree protection fencing and signage.



An image from AS4970-2025, with example ground and trunk/branch protection.

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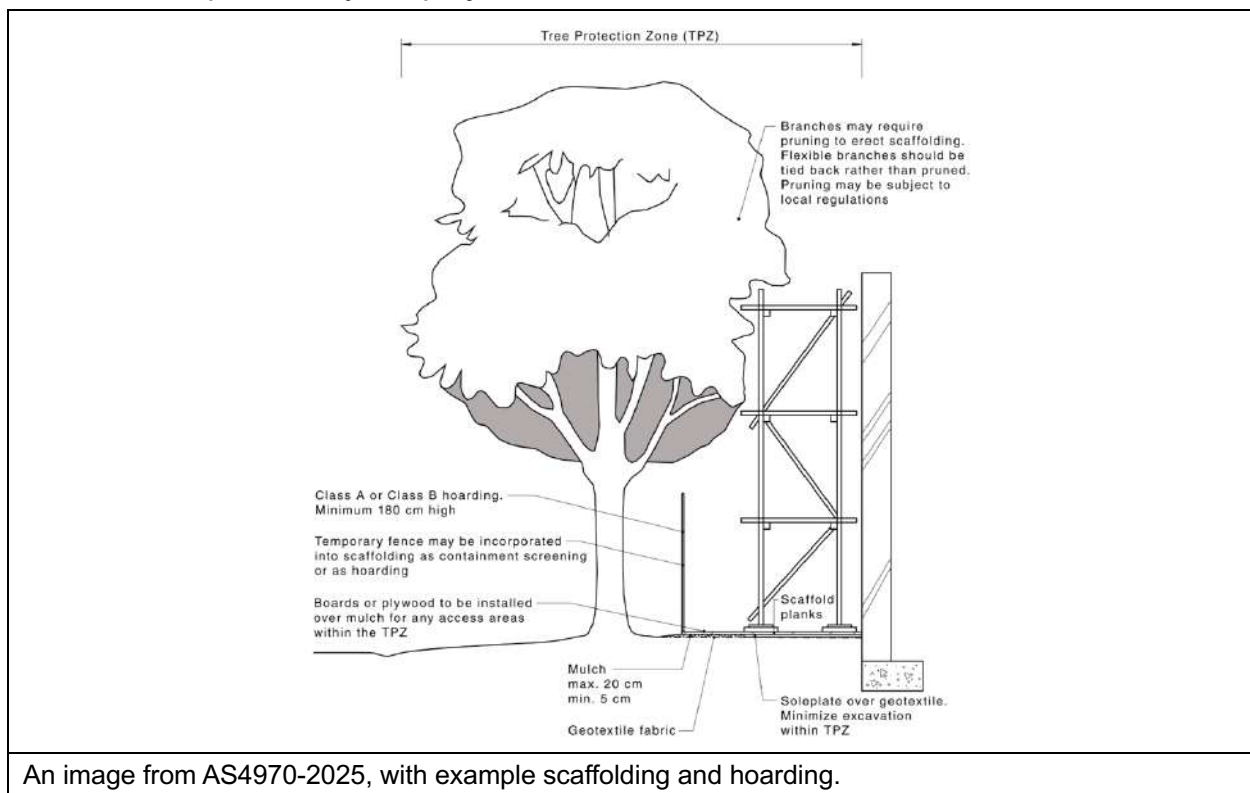
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5.7 Installation of Scaffolding and Hoarding: Where practical these should be located outside the TPZ area. When it is not practical, they should be aligned to minimise crown impacts and pruning. Any required crown pruning must be assessed, specified and carried out in accordance with AS4373 Pruning of amenity trees (2007) and is subject to approval by the relevant authorities.

The ground below the scaffolding should be protected by boarding (e.g. scaffold board or plywood sheeting), to collect falling contaminants such as mortar and render. Where access is required below the scaffolding, ground protection should be installed to minimise soil compaction. The ground protection should be left in place until the scaffolding is removed; see above for details of ground protection measures. Excavation for sole plates or footings of the scaffold should be minimised or otherwise specified by the project arborist when within the NRZ.



5.8 Demolition: The demolition of all existing structures inside or directly adjacent to the TPZ of trees to be retained must be undertaken in consultation with the Project Arborist. Any machinery is to work from inside the footprint of the existing structures or outside the TPZ, reaching in to minimise soil disturbance and compaction. If it is not feasible to locate demolition machinery outside the TPZ of trees to be retained, ground protection will be required. The demolition should be undertaken inwards into the footprint of the existing structures, sometimes referred to as the 'top down, pull back' method.

- 5.9 **Restricted Activities inside the TPZ:** The following activities must be avoided inside the TPZ of all trees to be retained unless approved by the Project Arborist. If at any time these activities cannot be avoided an alternative must be agreed in writing with the Project Arborist to minimise the impact to the trees.
- A) Machine excavation.
 - B) Ripping or cultivating of soil.
 - C) Storage of spoil, soil, or any such materials.
 - D) Preparation of chemicals, including preparation of cement products.
 - E) Dumping of waste.
 - F) Wash down and cleaning of equipment.
 - G) Placement of fill.
 - H) Lighting of fires.
 - I) Soil level changes.
 - J) Any physical damage to the crown trunk, or root system.
 - K) Parking of vehicles.
- 5.10 **Sediment and Contamination:** All contamination run off from the development such as but not limited to concrete, sediment and toxic wastes must be prevented from entering the TPZ at all times.
- 5.11 **Tree Wounding/Injury:** Any wounding or injury that occurs to a tree during the construction process will require the project Arborist to be contacted for an assessment of the injury and provide mitigation/remediation advice. It is generally accepted that trees may take many years to decline and eventually die from root damage. All repair work is to be carried out by the project Arborist, at the contractor's expense.
- 5.12 **Completion of Development Works:** After all construction works are complete the project Arborist should assess that the subject trees have been retained in the same condition and vigour. If changes to condition are identified the project Arborist should provide recommendations for remediation.

6. CONSTRUCTION HOLD POINTS FOR TREE PROTECTION

6.1 Hold Points: Below is a sequence of hold points requiring Project Arborist certification throughout the development process. It provides a list of holds points that must be check and certified. All certification must be provided in written format upon completion of the development. The final certification must include details of any instructions for remediation undertaken during the development. The principal contractor should be responsible for implementing all tree protection measures.

Hold Point	Stage	Date Completed and Signature of Project Arborist Responsible
Project Arborist to hold pre-construction site meeting with principal contractor to discuss methods and importance of tree protection measures and resolve any issues in relation to feasibility of tree protection requirements that may arise.	Prior to development work commencing	
Project Arborist to assess and certify that tree protection has been installed in accordance with AS4970-2025 prior to works commencing at site.	Prior to development work commencing.	
In accordance with AS4970-2025 the project arborist should carryout regular site inspections to ensure works are carried out in accordance with the recommendations. Site inspections are recommended on a monthly frequency.	On-going throughout the development	
The demolition of existing structures inside the TPZ of any tree to be retained, such as the existing buildings and hard surfaces must be supervised by the project Arborist.	Demolition	
After all demolition works are complete the project Arborist should assess that the subject trees have been retained in the same condition and vigour. If changes to condition are identified the project Arborist should provide recommendations for remediation.	Upon completion of development	

7. BIBLIOGRAPHY/REFERENCES

- Council Of Standards Australia, *AS 4970 Protection of trees on development sites* (2025).
- Council Of Standards Australia, *AS 4373 Pruning of amenity trees* (2007).
- Mattheck, C. & Breloer, H., *The body language of trees - A handbook for failure analysis*, 5th Edition, The Stationary Office, London, England (2015).
- Matheny, N. & Clark, J. R, *A technical guide to preservation of trees during land development*, International Society of Arboriculture, P.O Box 3029, Champaign, IL, USA (1998).

8. LIST OF APPENDICES

- Appendix 1: Tree Protection Plan (TPP)
- Appendix 2: Tree Inspection Schedule



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Site Location: 45-53 Macleay St
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SCALE :
1 : 200

@ A3

DATE :
18/08/2025

Plan Title: Appendix 1 - TPP

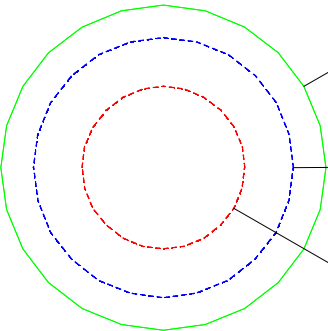
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Map Legend



Trunk protection



Tree Crown

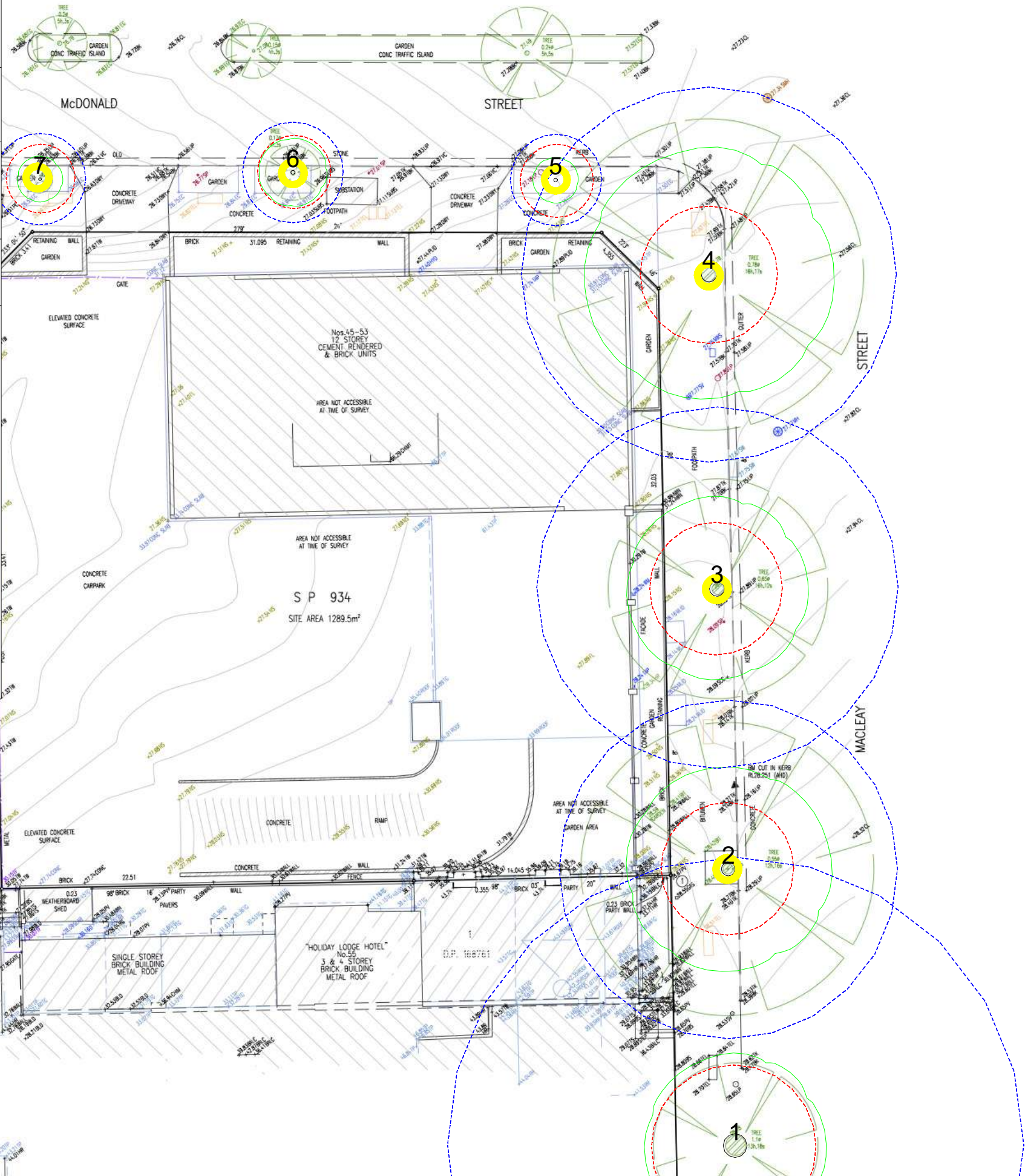
Tree Protection Zone

Structural Root Zone

0

20m

M.G.A. COORDINATES		
BOUNDARY COR	EASTING	NORTHING
1	335 874.861	6250 997.033
2	335 843.390	6251 035.316



Appendix 2 - Tree Inspection Schedule

Tree ID	Common Name	Botanical Name	Age Class	Height (m)	Canopy Spread Radius (m)	Stem 1	Stem 2	Stem 3	Stem 4	DBH (mm)	DAB (mm)	Health	Structure	Amenity Value	SULE	Retention Value	TPZ Radius (m)	SRZ Radius (m)	Notes
1	London Plane	<i>Platanus x acerifolia</i>	Mature	16	4	1050				1050	1190	Good	Fair	High	1. Long	A1	12.6	3.6	Asymmetric crown shape, pruned away from existing building.
2	London Plane	<i>Platanus x acerifolia</i>	Mature	16	4.5	620				620	740	Good	Good	High	1. Long	A1	7.4	2.9	None.
3	London Plane	<i>Platanus x acerifolia</i>	Mature	15	4	660				660	750	Good	Good	High	1. Long	A1	7.9	2.9	None.
4	London Plane	<i>Platanus x acerifolia</i>	Mature	17	5.5	680				680	790	Good	Fair	High	1. Long	A1	8.2	3.0	Asymmetric crown shape, pruned away from existing building.
5	Ornamental Pear	<i>Pyrus spp</i>	Semi-mature	4	1	150				150	170	Good	Fair	Low	5. Small/Young	Z1	2.0	1.6	Asymmetric crown shape.
6	Southern Magnolia	<i>Magnolia grandiflora</i>	Semi-mature	3.5	1.5	180				180	190	Good	Good	Low	5. Small/Young	Z1	2.2	1.6	None.
7	Ornamental Pear	<i>Pyrus spp</i>	Semi-mature	3.5	1	130				130	150	Good	Good	Low	5. Small/Young	Z1	2.0	1.5	None.

Explanatory Notes

Tree Species - Where species is unknown it is indicated with an 'spp'.

Age Class - Over mature (OM), Mature (M), Early mature (EM), Semi mature (SM), Young (Y).

Diameter at Breast Height (DBH) - Measured with a DBH tape or estimated at approximately 1.4m above ground level.

Diameter Above root Buttresses (DAB): Measured with a DBH tape or estimated above root buttresses (DAB) for calculating the SRZ.

Height - Height from ground level to top of crown. All heights are estimated unless otherwise indicated.

Spread - Radius of crown at widest section. All tree spreads are estimated unless otherwise indicated.

Tree Protection Zone (TPZ) - DBH x 12. Measured in radius from the centre of the trunk. Rounded to nearest 0.1m. For monocots, the TPZ is set at 1 metre outside the crown projection.

Structural Root Zone (SRZ) - $(DAB \times 50)^{0.42} \times 0.64$. Measured in radius from the centre of the trunk. Rounded up to nearest 0.1m.

Health - Good/Fair/Poor/Dead

Structure - Good/Fair/Poor

Safe Useful Life Expectancy (SULE) - 1. Long (40+years), 2. Medium (15 - 40 years), 3. Short (5 - 15 years), 4. Remove (under 5 years), 5. Small/young.

Amenity Value - Very High/High/Medium/Low/Very Low.

Retention Value: Tree AZ, see appendix 3 for categories.