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REPORT

Arboricultural Impact Assessment

PREPARED FOR

NSW Department of Education

Eagle Vale High School
27 Drysdale Street
Eagle Vale NSW 2558

14th July 2025
Version 7

PREPARED BY

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1. EXECUTIVE SUMMARY

1.1 An Arboricultural Impact Assessment (AIA) prepared by McArdle Arboricultural Consultancy Pty Ltd, was commissioned for NSW Department of Education to determine the potential impacts of a proposal development on trees. The assessment provides recommendations to minimise the impacts on trees where viable.

1.2 This Arboricultural Impact Assessment (AIA) has been prepared to support the Review of Environmental Factors (REF) being prepared on behalf of the NSW Department of Education (the department) for a new school building at Eagle Vale High School (the activity), located at 27 Drysdale Street, Eagle Vale (the site). The new building comprises a hall, ancillary learning spaces, service connections and construction works in connection with the activity, including tree removal. The purpose of the REF is to assess the potential environmental impacts of the proposed activity.

1.3 The assessment was conducted on the 15th of March 2024 and revised in 22nd of May 2025, by Jim McArdle AQF 5 Arborist Dip. Arb (Ryde).

1.4 One hundred and ninety-nine (199) trees and tree groups, consisting of two hundred and four (204) trees, were assessed on site, including neighbouring properties and public domain and summarised as follows.

- a) One-hundred and sixty-five (165) trees and groups consisting of one hundred and seventy (170) trees, are **outside the building scope** are numbered trees 1-106 and 141-199.
- b) Thirty-four (34) trees are **within the building scope**; these are numbered 107- 140.

1.5 This assessment is based on the thirty-four (34) trees **within the building scope**, numbered 107- 140.

Table 1: Retention Values for tree within the building envelope

High (5)	Moderate (18)	Low-Moderate Thirty-four (3)	Low (7)	Very Low 1
117, 119, 126, 139, 140.	107, 108, 109, 111, 112, 114, 115, 116, 118, 120, 121, 122, 124, 130, 132, 136, 137, 138.	113, 123, 125.	110, 127, 128, 129, 131, 133, 135.	134.

Table 2: Summary of proposed tree retention and removal plan.

Tree Management Plan	
Remove 11 trees	Retain 23 trees
Exempt species 110 Structurally hazardous 134 Major impacts 116, 117, 118, 119, 120, 121, 122, 123, 124.	107, 108, 109, 111, 112, 113, 114, 115, 125, 126, 127, 128, 129, 130, 131, 132, 133, 135, 136, 137, 138, 139, 140.

1.6 Ten (10) new tree planting are required new tree planting of 45L volume pots after construction, to compensate for the tree removals.

2. INTRODUCTION

2.1 Aims

2.1.1 The purpose of this report is to evaluate the condition of trees, their value for retention and identify any potential effects of the proposed development. To provide feasible alternatives to mitigate detrimental effects on trees and provide suggestions for the management and protection of the trees throughout the development process.

2.1.2 To designate and preserve Tree Protection Zones (TPZ) for trees proposed for retention, to maintain their vitality and ensure that the tree protection measures are compliant throughout the duration of works.

2.2 Scope

2.2.1 This Arboricultural Impact Assessment (AIA) has been prepared to support the Review of Environmental Factors (REF) being prepared on behalf of the NSW Department of Education (the department) for a new school building at Eagle Vale High School (the activity), located at 27 Drysdale Street, Eagle Vale (the site). The new building comprises a hall, ancillary learning spaces and associated spaces such as storage, offices and amenities. The purpose of the REF is to assess the potential environmental impacts of the proposed activity.

2.2.2 **Proposed Activity Description:** The proposed activity comprises the construction and operation of a new school building at Eagle Vale High School including the following:

- a multipurpose hall and ancillary learning spaces.
- associated spaces such as storage, offices and amenities.
- service connections and
- construction works in connection with the activity, including tree removal.

2.2.3 One hundred and ninety-nine (199) trees and tree groups, consisting of two hundred and four (204) trees, were assessed on site, including neighbouring properties and public domain and summarised as follows.

- a) One-hundred and sixty-five (165) trees and groups consisting of one hundred and seventy (170) trees, are **outside the building scope** are numbered trees 1-106 and 141-199.
- b) Thirty-four (34) trees are **within the building scope**; these are numbered 107- 140.

2.2.4 The assessment was conducted by Jim McArdle, a licensed and registered AQF Level 5 arborist. He holds a B.Ed. (Science) from ACU and a Dip. of Arboriculture (Ryde), qualified in Tree Risk Assessment (TRA) and Quantified Tree Risk Assessment (QTRA). He currently serves as President with the Tree Contractors Association of Australia (TCAA) and is a member with Arboriculture Australia. He is author of *Arborist in Australia* (TCAA Australian Series 2025,) and a regular contributor to *Arbor Age Magazine* (2022–2025).

2.2.5 Tree management measures are regulated by Campbelltown City Council Development Control Plan (DCP) 2015 and Local Environmental Plan (LEP) 2015.

2.2.6 The Visual Tree Assessment (VTA) does not include below ground root excavation and no expert laboratory analyses - including internal diagnostics, inaccessible trunk and aerial inspections – were conducted. No pathology tests or soil analyses were conducted. Sketches, diagrams, graphs and photographs in this report, being intended as visual aids, are not necessarily to scale.

2.2.7 There is no additional tree-related documentation provided by the client, our analysis is based solely on our observations which include post-site research and comparisons of similar sites.

2.3. Methodology

2.3.1 The inspection was primarily conducted using ground-based collection of data to identify visible signs of tree health, structure and potential hazards. Collection data methods may include a mallet for sound test, trowel, screwdriver for compaction and probing cavities to identify pathogens pests and disease. The assessments do not involve laboratory analysis and include the following methods.

2.3.2 **Visual Tree Assessment (VTA)** (Mattheck and Breloer 1996) is a method assessing for biological and lower-level mechanical functions and signs of decay, damage or defects (Appendix A).

2.3.3 **Tree Useful Life Expectancy (TULE)** (Barrell 2001, adapted with permission for TCAA 2014) determines the time a tree can be expected to be usefully retained in normal circumstance. **Long TULE** is >40 years; **Medium TULE** is 15-40 years; **Short TULE** is 5-15 years; **No retention potential** is 0-5 years; **Remove** next 5 years; **Move or Replace** and **small, young, regularly clipped** (Appendix B).

2.3.4 **Tree AZ Categories** (Barrell 2019) classifies importance of trees on development sites, (Appendix B). **Category A:** suitable for retention and **Category Z:** not worthy of constraint (Appendix C).

2.3.5 **Retention Value Rating** (Morton 2011) determined by considering both TULE and the Landscape Significance. **High** Retention are a priority for retention. **Moderate** Retention are retained where possible. **Low** Retention are generally not a constraint to development and **Very Low** Retention may have potential hazards (Appendix C).

2.3.6 **Landscape Significance Rating** (Morton 1996) rates trees as **Significant** – based on heritage or ecological value. **Very high** – based on adjacent area surrounding the site. **High** - neighbourhood status but may have some conditions or health issues. **Moderate** - Good and Worthy of Preservation, may have minor health issues. **Low** - Worthy of Preservation, may have major conditions or health issues. **Very low** - Retain if possible and **Insignificant** - Exempt from retention (Appendix D).

2.3.7 **Planting Specifications from NATSPEC** (Clark 2003) and Australian Standard ® AS 2303-2018 Tree Stock for Landscape Use. (Appendix E).

2.3.8 Tree management and protection during development is in accordance with **Australian Standard ® AS 4970 (2009) Protection of Trees on Development Sites**.

2.3.9 Pruning of Amenity Trees is in accordance with **Australian Standards ®AS 4373 (2007)**

2.3.10 Photos with GPS waypoints were captured using the SOLOCATOR app. An iPhone 16 is used for taking the photos and these were not digitally altered.

3. RESULTS

3.1 Site Analysis

3.1.1 Eagle Vale High School is located at 27 Drysdale Street, Eagle Vale. The real property description is Lot 482 DP 262742.

3.1.2 The site is semi-rectangular in shape with an area of 5.989ha per detail survey. Vehicular access is provided to the site from Drysdale Street in the southeast of the allotment. Pedestrian access is provided from both Drysdale Street and Malachite Road.

3.1.3 The land has a moderate incline from North to South, with significant level difference around the oval up toward the development footprint.

3.1.4 The subsoil texture in this region consists of medium clay and the topsoil texture is loam. (eSpade soils 2025) The weather in Sydney's west experiences hot summers and sees northerly winds in summer and westerly/southerly winds during cooler months (DIP weather 2025).



Figure 1: Aerial map of site. (source; Nearmaps 2025)

3.2 Legislation And Significance In The Environment

3.2.1 Commonwealth legislation regulates the **Biosecurity Act 2015**, (diseases and pests) and **Environmental Protection & Biodiversity Conservation Act 1999 (EPBC Act)** manages nationally significant species, ecological communities, and habitat protection.

3.2.2 The **NSW Biodiversity Conservation Act 2016 (BC Act)** repealed the **NSW Threatened Species Conservation Act, 1995** however, there are transitional arrangements in place between the two pieces of legislation.

3.2.3 The **NSW Environmental Planning and Assessment Act 1979 (EP&A Act)** provides the legislative framework. The **Department of Planning and Environment** is responsible for establishing the framework for **Environmental Planning Instruments (EPI)**, which include **Local Environmental Plans (LEP)** and **Development Control Plans (DCP)**. **Local Government Areas (LGA)** are responsible for implementing these instruments. Tree protection is managed through **Tree Preservation Orders (TPO)**, which are part of the EPIs. The **LEP** sets zoning and tree protection rules, while the **DCP** provides guidelines to manage trees during development.

3.2.4 **State Environmental Planning Policy (SEPP) (Biodiversity and Conservation) 2021** focuses protecting biodiversity, conserving natural areas, and managing sustainable development in sensitive environments and takes precedence over a Council's **LEP** and **DCP**.

3.2.5 **State Environmental Planning Policy (SEPP) (Transport and Infrastructure) 2021** focuses on the planning and development of transport and infrastructure projects in New South Wales, ensuring they align with sustainable growth, environmental protection, and community needs.

3.2.6 The **10/50 Vegetation Clearing Code** under the **NSW Rural Fires Act 1997** allows tree removal within 10 metres and shrub clearing within 50 metres of homes in **bushfire-prone areas** to reduce bushfire risk (NSW RFS 2025).

3.2.7 Trees are regulated under Campbelltown City Council, DCP 2015 and LEP 2015, and applies to trees defined as a perennial plant with a height of more than 3m, a circumference of at least 500mm at ground level and has a branch and foliage crown spread of at least 4m. (Campbelltown City Council 2025).

3.2.8 According to NSW Planning Portal 2025:

- The Local Aboriginal Land Council is THARAWAL.
- Land zoning is R2: Low Density Residential.
- Canopy Cover 2022 is classified as 10.90%

3.3 Planning Control Maps



Figure 2: Land Zoning C4 - Environmental Living.



Figure 3: Canopy Cover 2022 is classified as 10.90%.

3.4 Tree Schedule:

3.4.1 Trees Within the Building Scope, Trees 107-140

Table 3: Health and Structural Condition of Trees.

(* DBH- Diameter Breast Height, DRC- Diameter Root Collar. * TPZ- Tree Protection Zone. SRZ- Structural Root Zone. * A-Z & TULE-Tree Useful Life Expectancy. Palm's TPZ extends 1m beyond the fronds.

Tree No.	Location	Scientific Name Common Name	canopy (m)	Height (m)	DBH* DRC* (cm)	TPZ* SRZ* (m)	Visual Tree Assessment (VTA) – Tree Health & Condition	TULE* A-Z	Retention Value	Proposed Measures
107	Adjacent building.	<i>Melaleuca quinquenervia</i> Broad-Leaved Paperbark	10	12	40 42	4.8 2.3	Semi-mature, good condition but poor development, previously pruned, with an inclusion at 3m height.	2a A2	Moderate	Retain and protect.
108	Adjacent building.	<i>Melaleuca quinquenervia</i> Broad-Leaved Paperbark	8	12	35 36	4.2 2.1	Semi-mature, good condition but poor development, previously pruned.	2a A1	Moderate	Retain and protect
109	Adjacent building.	<i>Melaleuca quinquenervia</i> Broad-Leaved Paperbark	10	14	50 52	6.0 2.5	Mature, good condition.	2a A1	Moderate	Retain and protect
110	East of COLA.	<i>Cotoneaster spp.</i> Cotoneaster	8	6	10/10/10/10 25	2.4 1.9	Semi-mature, good condition but poor development, multi-stemmed.	2d Z3	Low	Remove (Exempt species).
111	East of COLA.	<i>Schinus molle</i> Peppercorn	NS 15 EW 10	7	20/25 48	3.8 2.4	Mature, with a lean and an unbalanced canopy to the south.	3a A1	Moderate	Retain and protect
112	East of COLA.	<i>Fraxinus angustifolia spp.oxycarpa</i> Claret Ash Claret Ash	8	10	22 28	2.6 1.9	Semi-mature, good condition but poor development.	2a A1	Moderate	Retain and protect
113	East of COLA.	<i>Fraxinus angustifolia spp.oxycarpa</i> Claret Ash	5	8	20 22	2.4 1.8	Semi-mature, good condition but poor development, with damaged roots, and 20% pre-existing hard-surface impacts.	2d A2	Low- Moderate	Retain and protect
114	East of COLA.	<i>Fraxinus angustifolia spp.oxycarpa</i> Claret Ash	10	12	36 38	4.3 2.2	Semi-mature, good condition, multi-stemmed, with a previous branch failure, and 50% pre-existing hard-surface impacts.	2d A2	Moderate	Retain and protect
115	East of COLA.	<i>Fraxinus angustifolia spp.oxycarpa</i> Claret Ash	8	10	29 30	3.5 2.0	Semi-mature, good condition, multi-stemmed, with a previous branch failure, and 50% pre-existing hard-surface impacts.	2d A2	Moderate	Retain and protect
116	South of sports court.	<i>Casuarina glauca</i> Swamp She-Oak	8	12	25 30	3.0 2.0	Immature, good condition but poor development.	2a A1	Moderate	Remove and replenish
117	South of sports court.	<i>Casuarina glauca</i> Swamp She-Oak	9	14	50 60	6.0 2.7	Semi-mature, good condition but poor development, with minor root damage.	2d A2	High	Remove and replenish
118	South of sports court.	<i>Casuarina glauca</i> Swamp She-Oak	8	20	38 43	4.6 2.3	Mature, good condition but poor development, with a suppressed canopy to the east.	2a A1	Moderate	Remove and replenish
119	South of sports court.	<i>Casuarina glauca</i> Swamp She-Oak	14	21	55 60	6.6 2.7	Mature, good condition but poor development, with extended laterals to the north.	2a A2	High	Remove and replenish
120	South of sports court.	<i>Casuarina glauca</i> Swamp She-Oak	6	14	25 30	3.0 2.0	Immature, good condition but poor development, previously pruned to the east, with a suppressed canopy.	2d A1	Moderate	Remove and replenish
121	South of sports court.	<i>Casuarina glauca</i> Swamp She-Oak	10	18	36 40	4.3 2.3	Semi-mature, good condition but poor development, with a minor branch failure at 3m height, and an unbalanced canopy to the north.	2d A2	Moderate	Remove and replenish
122	South of sports court.	<i>Casuarina glauca</i> Swamp She-Oak	10	17	35 36	4.2 2.1	Mature, good condition, previously pruned, with minor dehydration.	2d A2	Moderate	Remove and replenish
123	South of sports court.	<i>Fraxinus angustifolia spp.oxycarpa</i> Claret Ash	9	9	15/22/24 40	4.3 2.3	Semi-mature, moderate condition, previously pruned.	2d A2	Low- Moderate	Remove and replenish

Tree No.	Location	Scientific Name Common Name	canopy (m)	Height (m)	DBH* DRC* (cm)	TPZ* SRZ* (m)	Visual Tree Assessment (VTA) – Tree Health & Condition	TULE* A-Z	Retention Value	Proposed Measures
124	South of sports court.	<u>Casuarina glauca</u> Swamp She-Oak	14	23	70 92	8.4 3.2	Mature, moderate condition, previously pruned, top heavy.	3a A2	Moderate	Remove and replenish
125	Adjacent building.	<u>Ulmus parvifolia</u> Chinese Elm	6	5	20 32	2.4 2.1	Immature, good condition.	2a A1	Low- Moderate	Retain and protect.
126	Hydrant.	<u>Casuarina glauca</u> Swamp She-Oak	14	25	70 94	8.4 3.2	Mature, good condition but poor development, with twin stems.	2d A1	High	Retain and protect.
127	In planter.	<u>Casuarina glauca</u> Swamp She-Oak	5	6	10/10 15	2.0 1.5	Immature, good condition but poor development, with an inclusion at the base of the tree.	3a A2	Low	Retain and protect.
128	Adjacent access.	<u>Acacia spp.</u> Wattle	4	6	10/10/10/10 26	2.4 1.9	Mature, good condition but poor development, heavily pruned.	3d A1	Low	Retain and protect.
129	Adjacent access.	<u>Acacia spp.</u> Wattle	4	5	10/10 15	2.0 1.5	Semi-mature, good condition but poor development.	3a A1	Low	Retain and protect.
130	Adjacent access.	<u>Casuarina glauca</u> Swamp She-Oak	14	20	50 55	6.0 2.6	Semi-mature, good condition.	2a A1	Moderate	Retain and protect.
131	Adjacent access.	<u>Acacia spp.</u> Wattle	8	6	10/10 15	2.0 1.5	Immature, good condition but poor development, previously pruned.	3d A1	Low	Retain and protect.
132	Hydrant.	<u>Casuarina glauca</u> Swamp She-Oak	8	14	25/25 38	4.2 2.2	Semi-mature, good condition but poor development, with twin stems.	2d A1	Moderate	Retain and protect.
133	Eastern fence.	<u>Casuarina glauca</u> Swamp She-Oak	5	10	15/15 25	2.5 1.9	Immature, good condition.	2a A1	Low	Retain and protect.
134	1m from fence.	<u>Casuarina glauca</u> Swamp She-Oak	6	14	23 24	2.8 1.8	Immature, with a cavity at 3m height, and over 20% dieback.	4c Z10	Very Low	Remove and replenish (Poor Condition).
135	Eastern fence.	<u>Casuarina glauca</u> Swamp She-Oak	8	15	15/30 32	4.1 2.1	Semi-mature, with a cavity and a fracture at 1m height.	3a A2	Low	Retain and protect.
136	Eastern fence.	<u>Casuarina glauca</u> Swamp She-Oak	8	13	40 42	4.8 2.3	Semi-mature, with a suppressed and unbalanced canopy to the east and west.	3a A1	Moderate	Retain and protect.
137	Eastern fence.	<u>Casuarina glauca</u> Swamp She-Oak	10	22	30 34	3.6 2.1	Semi-mature, moderate condition, with damaged branch to the west.	2d A2	Moderate	Retain and protect.
138	Eastern fence.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	10	16	51 52	6.1 2.5	Semi-mature, good condition, with an inclusion between twin leaders at 4m height.	2a A2	Moderate	Retain and protect.
139	Eastern fence.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	14	24	47 50	5.6 2.5	Immature, good condition but poor development.	2d A1	High	Retain and protect.
140	Eastern fence.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	14	22	58 60	7.0 2.7	Immature, good condition but poor development, with minor dehydration.	2d A2	High	Retain and protect.

3.4.2 Trees Outside the Building Scope, Trees 1-106 And 141-199.

Table 4: Health and Structural Condition of Trees.

(* DBH- Diameter Breast Height, DRC- Diameter Root Collar. * TPZ- Tree Protection Zone. SRZ- Structural Root Zone. * A-Z & TULE-Tree Useful Life Expectancy. Palm's TPZ extends 1m beyond the fronds.

Tree No.	Location	Scientific Name Common Name	canopy (m)	Height (m)	DBH* DRC* (cm)	TPZ* SRZ* (m)	Visual Tree Assessment (VTA) – Tree Health & Condition	TULE* A-Z	Retention Value	Proposed Measures
1	Carpark, adjacent office.	<u>Fraxinus angustifolia spp.oxycarpa</u> Claret Ash	8	8	28 34	3.4 2.1	Semi-mature, good condition but poor development, with root damage, a lean to the west, and epicormics at the base of the tree.	2d A2	Moderate	Outside of scope
2	Carpark, adjacent office.	<u>Fraxinus angustifolia spp.oxycarpa</u> Claret Ash	7	8	20 22	2.4 1.8	Immature, poor condition, with over 20% dieback, and 10% dehydration.	4a Z10	Very Low	Outside of scope (Poor Condition).
3	Carpark, adjacent office.	<u>Fraxinus angustifolia spp.oxycarpa</u> Claret Ash	7	8	20 24	2.4 1.8	Immature, with a lean to the north, and soil compaction.	3a A2	Low-Moderate	Outside of scope
4	Carpark, adjacent office.	<u>Fraxinus angustifolia spp.oxycarpa</u> Claret Ash	8	8	22 25	2.6 1.9	Immature, good condition but poor development, with 10% dehydration, and soil compaction.	2d A2	Low-Moderate	Outside of scope
5	Adjacent building.	<u>Fraxinus angustifolia spp.oxycarpa</u> Claret Ash	8	9	30 36	3.6 2.1	Semi-mature, moderate condition, with a lean, and minor root damage.	2d A2	Moderate	Outside of scope
6a	Garden, planter.	<u>Grevillea spp.</u> Grevillea	4	5	5/5 10	2.0 1.5	Immature, good condition.	2a A1	Low	Outside of scope
6b	Garden, planter.	<u>Grevillea spp.</u> Grevillea	4	4	5/5 10	2.0 1.5	Immature, good condition but poor development.	2a A1	Low	Outside of scope
7	Carpark.	<u>Casuarina glauca</u> Swamp She-Oak	8	15	37 40	4.4 2.3	Semi-mature, good condition but poor development, with an unbalanced canopy to the east.	2d A1	Moderate	Outside of scope
8	Carpark.	<u>Casuarina glauca</u> Swamp She-Oak	10	15	78 83	9.4 3.1	Semi-mature, good condition but poor development, with twin stems, 10% dehydration, and a beam crack in a branch to the east at 5m height.	2a A2	Moderate	Outside of scope
9	Planter.	<u>Fraxinus angustifolia spp.oxycarpa</u> Claret Ash	5	7	22 25	2.6 1.9	Semi-mature, moderate condition, with over 20% dieback.	3d A2	Low	Outside of scope
10	Planter.	<u>Fraxinus griffithii</u> Himalayan Ash	3	5	10 12	2.0 1.5	Immature, good condition but poor development.	2d A1	Low	Outside of scope
11	Planter.	<u>Fraxinus angustifolia spp.oxycarpa</u> Claret Ash	4	5	15 20	2.0 1.7	Semi-mature, poor condition, heavily pruned, with epicormics, and 10% dehydration.	3d Z10	Low	Outside of scope (Poor Condition).
12	Planter.	<u>Fraxinus angustifolia spp.oxycarpa</u> Claret Ash	8	8	20 22	2.4 1.8	Semi-mature, good condition but poor development.	2a A1	Moderate	Outside of scope
13	Adjacent building.	<u>Casuarina glauca</u> Swamp She-Oak	9	20	33 38	4.0 2.2	Semi-mature, good condition but poor development.	2d A1	Moderate	Outside of scope
14	4m from building.	<u>Casuarina glauca</u> Swamp She-Oak	NS 13 EW 10	20	39 42	4.7 2.3	Semi-mature, good condition but poor development.	2d A1	Moderate	Outside of scope
15	3m from gate.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	14	22	49 52	5.9 2.5	Semi-mature, good condition but poor development, with minor dehydration, and a slight lean to the north.	2a A2	Moderate	Outside of scope
16	4m from building.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	NS 15 EW 14	20	59 64	7.1 2.7	Mature, good condition but poor development, with insect attack.	2d A2	High	Outside of scope
17	West of building.	<u>Fraxinus angustifolia spp.oxycarpa</u> Claret Ash	7	7	10 (x 4)/15 30	3.0 2.0	Semi-mature, moderate condition, previously pruned at the base of the tree.	2d A1	Low-Moderate	Outside of scope

Tree No.	Location	Scientific Name Common Name	canopy (m)	Height (m)	DBH* DRC* (cm)	TPZ* SRZ* (m)	Visual Tree Assessment (VTA) – Tree Health & Condition	TULE* A-Z	Retention Value	Proposed Measures
18	West of building.	<u>Acacia baileyana</u> Cootamundra Wattle	6	4	12 14	2.0 1.5	Immature, with a lean to the west, root damage, and lifting roots.	4c Z3	Very Low	Outside of scope (Exempt species).
19a	Within 3m of building.	<u>Acacia baileyana</u> Cootamundra Wattle	6	6	5-15 25	2.0 1.9	Juvenile to immature, good condition.	2d Z3	Very Low	Outside of scope (Exempt species)
19b	Within 3m of building	<u>Banksia integrifolia</u> Coast Banksia	6	6	5-15 25	2.0 1.9	Juvenile to immature, good condition	2d A1	Very Low	Outside of scope.
19c	Within 3m of building	<u>Triadica sebifera</u> Chinese Tallow	6	6	5-15 25	2.0 1.9	The Chinese Tallow is a toxic plant species.	5e Z10	Very Low	Outside of scope (exempt species)
20	West of building.	<u>Acacia implexa</u> Hickory Wattle	6	6	12 14	2.0 1.5	Immature, with twin stems from 2m height.	2d A1	Low	Outside of scope
21	On embankment.	<u>Corymbia citriodora</u> Lemon-Scented Gum	NS 14 EW 16	20	38 44	4.6 2.3	Semi-mature, good condition but poor development, with exudation to the north at the base of the tree.	2d A1	Moderate	Outside of scope
22	On embankment.	<u>Acacia implexa</u> Hickory Wattle	3	5	10/12 15	2.0 1.5	Immature, good condition but poor development.	2d A1	Low	Outside of scope
23	4m east of western fence.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	10	14	36 40	4.3 2.3	Immature, good condition but poor development, with an unbalanced canopy to the north, and an inclusion at 7m height.	2a A2	Low-Moderate	Outside of scope
24	West of carpark.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	8	16	29 30	3.5 2.0	Immature, suppressed by Tree 25.	2d A2	Low-Moderate	Outside of scope
25	West of carpark.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	NS 18 EW 20	25	46 50	5.5 2.5	Semi-mature, with 10% dehydration, and an inclusion at 7m height.	4c Z10	Low	Outside of scope (Poor Condition).
26	West of carpark.	<u>Corymbia citriodora</u> Lemon-Scented Gum	6	10	10/12 20	2.0 1.7	Immature, with exudation.	2d A1	Low	Outside of scope
27	West of carpark.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	9	12	28 30	3.4 2.0	Immature, good condition, with minor termite damage.	2d A2	Low-Moderate	Outside of scope
28	Western fence.	<u>Eucalyptus tereticornis</u> Forest Red Gum	NS 16 EW 13	17	23/53 63	7.0 2.7	Semi-mature, moderate condition, with a cavity to the east at 5m height, an inclusion in a northern leader, and a branch fail to the south.	3d A2	Moderate	Outside of scope Aerial Inspection.
29	South of ag plot.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	8	9	35 38	4.2 2.2	Immature, with physical damage from wire.	2d A2	Low-Moderate	Outside of scope
30	West of ag plot.	<u>Eucalyptus tereticornis</u> Forest Red Gum	10	21	55 57	6.6 2.6	Mature, with insect attack, 10% dehydration, and a suppressed canopy.	3d A2	Moderate	Outside of scope
31	West of ag plot.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	NS 10 EW 8	10	40 42	4.8 2.3	Mature, good condition but poor development, with an inclusion at 8m height.	2d A2	Moderate	Outside of scope
32	West of ag plot.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	8	12	30 33	3.6 2.1	Immature, with a suppressed and unbalanced canopy to the west.	2d A1	Moderate	Outside of scope
33	West of ag plot.	<u>Eucalyptus tereticornis</u> Forest Red Gum	15	24	67 68	8.0 2.8	Semi-mature, with fungal attack to the east at 8m height, and a cavity to the south.	4a A2	Moderate	Outside of scope Resistograph Drill Test.
34	West of ag plot.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	12	18	36 40	4.3 2.3	Immature, with an unbalanced canopy to the east.	2a A1	Moderate	Outside of scope

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35	West of ag plot.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	12	25	37 48	4.4 2.4	Semi-mature, good condition but poor development.	2d A1	Moderate	Outside of scope
36	West of ag plot.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	14	27	32 37	3.8 2.2	Semi-mature, good condition, with an inclusion at 13m height.	2d A2	Moderate	Outside of scope
37	West of ag plot.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	12	22	32 34	3.8 2.1	Semi-mature, good condition but poor development, with a suppressed and unbalanced canopy to the west.	2d A1	Moderate	Outside of scope
38	West of ag plot.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	NS 12 EW 14	22	33 46	4.0 2.4	Semi-mature, good condition.	2d A1	Moderate	Outside of scope
39	West of ag plot.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	12	15	30 37	3.6 2.2	Semi-mature, good condition but poor development.	2d A1	Moderate	Outside of scope
40	Carpark.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	12	13	35 40	4.2 2.3	Semi-mature, good condition but poor development.	2d A1	Moderate	Outside of scope
41	Carpark.	<u>Casuarina glauca</u> Swamp She-Oak	NS 7 EW 5	12	32 36	3.8 2.1	Semi-mature, good condition but poor development, previously pruned.	2d A1	Low-Moderate	Outside of scope
42	Carpark.	<u>Casuarina glauca</u> Swamp She-Oak	10	15	39 42	4.7 2.3	Mature, good condition but poor development, with swelling at the base of the tree.	2a A1	Moderate	Outside of scope
43	Carpark.	<u>Casuarina glauca</u> Swamp She-Oak	10	16	39 52	4.7 2.5	Mature, good condition but poor development, with previously pruned crown lifted, with weighted leaders to the north.	2d A2	Moderate	Outside of scope
44	Carpark.	<u>Angophora floribunda</u> Rough-Barked Apple	16	21	57 57	6.8 2.6	Mature, with a cavity to the south at 3m height, and a split inclusion.	4d Z10	Moderate	Outside of scope (Hazardous).
45	Carpark.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	10	15	35 36	4.2 2.1	Immature, with a minor cavity to the west at 6m height, and insect attack.	2a A2	Moderate	Outside of scope
46	Southern fence.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	NS 10 EW 8	15	24 36	2.9 2.1	Immature, good condition but poor development, with an inclusion at 7m height, and a spreading habit.	2d A2	Moderate	Outside of scope
47 (x 5)	Southern fence.	<u>Casuarina glauca</u> Swamp She-Oak	3	6	10 10	2.0 1.5	Juvenile, good condition but poor development, with epicormics, and a parasitic vine.	1a A2	Low	Outside of scope
48	Southern fence.	<u>Casuarina glauca</u> Swamp She-Oak	4	8	18 20	2.2 1.7	Immature, good condition but poor development, with 25% pre-existing hard-surface impacts.	2a A2	Low-Moderate	Outside of scope
49	Southern fence.	<u>Casuarina glauca</u> Swamp She-Oak	6	10	23 24	2.8 1.8	Immature, good condition but poor development, with 25% pre-existing hard-surface impacts, and an unbalanced canopy to the west.	2d A2	Low-Moderate	Outside of scope
50	Southern fence.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	10	22	8/10/53 57	6.6 2.6	Immature, good condition but poor development, with termite damage, and insect attack.	2a A2	Moderate	Outside of scope
51	Southern fence.	<u>Casuarina glauca</u> Swamp She-Oak	4	6	8/8/10 14	2.0 1.5	Immature, good condition but poor development.	2d A1	Low	Outside of scope
52	Southern fence.	<u>Casuarina glauca</u> Swamp She-Oak	5	6	10 (x 5) 25	2.6 1.9	Immature, moderate condition, with a suppressed canopy, a lean and an unbalanced canopy to the west.	3d A2	Low	Outside of scope
53	Southern fence.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	14	24	50 53	6.0 2.5	Semi-mature, in decline, with termite damage.	3a A2	Moderate	Outside of scope
53a	Neighbour's tree.	<u>Melaleuca styphelioides</u> Prickly-Leaved Paperbark	10	11	25/25 35	4.2 2.1	Mature, good condition but poor development.	2a A1	Moderate	Outside of scope

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54	Southern fence.	<u>Fraxinus angustifolia spp.oxycarpa</u> Claret Ash	7	8	24 26	2.9 1.9	Semi-mature, good condition but poor development.	3d A1	Low	Outside of scope
55	Southern fence.	<u>Grevillea robusta</u> Silky Oak	6	11	24 26	2.9 1.9	Immature, good condition but poor development.	2d A1	Low	Outside of scope
56	Southern fence.	<u>Fraxinus angustifolia spp.oxycarpa</u> Claret Ash	8	8	20 25	2.4 1.9	Immature, good condition but poor development.	2a A1	Low	Outside of scope
57	Southern fence.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	12	23	42 50	5.0 2.5	Semi-mature, good condition but poor development, with a minor inclusion at 8m height.	2d A2	Moderate	Outside of scope
58	Southern fence.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	20	16	37 40	4.4 2.3	Semi-mature, with an unbalanced canopy to the south-east, and 10% dehydration.	3a A2	Moderate	Outside of scope
59	Southern fence.	<u>Eucalyptus longifolia</u> Woollybutt	4	13	16/26 30	3.6 2.0	Immature, good condition but poor development.	2d A1	Moderate	Outside of scope
60	Southern fence.	<u>Casuarina glauca</u> Swamp She-Oak	2	6	10 10	2.0 1.5	Juvenile, good condition.	1a A1	Low	Outside of scope
61	Southern fence.	<u>Casuarina glauca</u> Swamp She-Oak	5	10	18 20	2.2 1.7	Immature, good condition but poor development, with a suppressed canopy.	2a A1	Low	Outside of scope
62	Southern fence.	<u>Casuarina glauca</u> Swamp She-Oak	5	8	10/15 23	2.2 1.8	Immature, good condition.	2a A1	Low	Outside of scope
63	Southern fence.	<u>Casuarina glauca</u> Swamp She-Oak	6	12	24 25	2.9 1.9	Immature, with twin leaders, decay, and a parasitic vine.	3d A2	Low- Moderate	Outside of scope
64	Southern fence.	<u>Casuarina glauca</u> Swamp She-Oak	4	8	10 12	2.0 1.5	Immature, good condition.	2a A1	Low	Outside of scope
65	Southern fence.	<u>Casuarina glauca</u> Swamp She-Oak	6	10	12/20 28	2.8 1.9	Immature, good condition but poor development, with a lean to the west.	2d A1	Low- Moderate	Outside of scope
66	Southern fence.	<u>Casuarina glauca</u> Swamp She-Oak	6	14	22 26	2.6 1.9	Immature, good condition but poor development, with response wood from a branch failure, twin leaders, and an unbalanced canopy.	3a A2	Low- Moderate	Outside of scope
67	Southern fence.	<u>Casuarina glauca</u> Swamp She-Oak	8	16	29 32	3.5 2.1	Immature, good condition but poor development, with a parasitic vine.	2d A2	Moderate	Outside of scope
68	Southern fence.	<u>Casuarina glauca</u> Swamp She-Oak	8	18	33 38	4.0 2.2	Semi-mature, good condition but poor development.	2d A1	Moderate	Outside of scope
69	Southern fence.	<u>Grevillea robusta</u> Silky Oak	10	20	33 38	4.0 2.2	Semi-mature, good condition but poor development.	2d A1	Moderate	Outside of scope
70	Southern fence.	<u>Casuarina glauca</u> Swamp She-Oak	2	5	8 10	2.0 1.5	Juvenile, good condition.	2a A1	Low	Outside of scope
71	Southern fence.	<u>Casuarina glauca</u> Swamp She-Oak	2	6	2/5 6	2.0 1.5	Juvenile, good condition but poor development, with a parasitic vine.	2d A2	Very Low	Outside of scope
72 (x 7)	Southern fence.	<u>Acacia implexa</u> Hickory Wattle	3-6	3-5	5-10 5-11	2.0 1.5	Juvenile, good condition.	3a A1	Low	Outside of scope
73	Southern fence.	<u>Eucalyptus moluccana</u> Grey Box	8	18	30 36	3.6 2.1	Immature, good condition but poor development.	2a A1	Moderate	Outside of scope

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74	Southern fence.	<i>Species unknown</i> (stag)	0	4	6 10	2.0 1.5	Dead, with no hollows.	4a Z4	Very Low	Outside of scope (Exempt, dead).
75	Southern fence.	<i>Acacia implexa</i> Hickory Wattle	6	6	10/12 15	2.0 1.5	Semi-mature, good condition but poor development, with borers.	3d A2	Low	Outside of scope
76	Southern fence.	<i>Eucalyptus sideroxylon</i> Mugga Ironbark	6	6	15 20	2.0 1.7	Immature, good condition but poor development, with insect attack.	3a A2	Low	Outside of scope
77	Southern fence.	<i>Eucalyptus moluccana</i> Grey Box	6	17	33 35	4.0 2.1	Semi-mature, good condition but poor development.	2a A1	Moderate	Outside of scope
77a	Access gate.	<i>Acacia implexa</i> Hickory Wattle	5	10	20 25	2.4 1.9	Immature, good condition but poor development.	2a A1	Low	Outside of scope
78	Southern fence.	<i>Melaleuca styphelioides</i> Prickly-Leaved Paperbark	5	6	5/5/5 12	2.0 1.5	Juvenile, excellent condition.	1a A1	Low	Outside of scope
79	Front garden.	<i>Acacia implexa</i> Hickory Wattle	8	8	25 26	3.0 1.9	Immature, moderate condition, with a failed branch.	2d A2	Low- Moderate	Outside of scope
80	Front garden.	<i>Eucalyptus longifolia</i> Woollybutt	4	5	10/10 20	2.0 1.7	Immature, good condition but poor development.	2a A1	Low	Outside of scope
81	Front garden.	<i>Fraxinus angustifolia sbspp.</i> <i>oxycarpa</i> Claret Ash	6	6	15/15/15 20	3.1 1.7	Immature, good condition but poor development.	2a A1	Low	Outside of scope
82	Front garden.	<i>Eucalyptus sideroxylon</i> Mugga Ironbark	14	26	50 50	6.0 2.5	Mature, good condition but poor development.	2a A1	High	Outside of scope
83	Front garden.	<i>Eucalyptus sideroxylon</i> Mugga Ironbark	12	20	40 42	4.8 2.3	Semi-mature, with an inclusion at 6m height.	2d A2	Moderate	Outside of scope
84	Side gate.	<i>Acacia implexa</i> Hickory Wattle	5	5	5/5 10	2.0 1.5	Immature, good condition.	3a A1	Low	Outside of scope
85	Side gate.	<i>Acacia implexa</i> Hickory Wattle	4	5	8 8	2.0 1.5	Immature, good condition.	3a A1	Low	Outside of scope
86	Side gate.	<i>Acacia implexa</i> Hickory Wattle	7	6	10/10 12	2.0 1.5	Immature, good condition.	3a A1	Low	Outside of scope
87	Access path.	<i>Melia azedarach</i> White Cedar	8	6	10/15/15 30	2.8 2.0	Immature, good condition, with an inclusion at the base of the tree. This is a toxic plant species.	5e Z10	Low	Outside of scope (Toxic).
88	Access path.	<i>Eucalyptus moluccana</i> Grey Box	6	12	25 26	3.0 1.9	Immature, excellent condition.	1a A1	Moderate	Outside of scope
89	Access path.	<i>Eucalyptus moluccana</i> Grey Box	6	10	20 22	2.4 1.8	Immature, excellent condition.	1a A1	Low- Moderate	Outside of scope
90	Adjacent building.	<i>Eucalyptus sideroxylon</i> Mugga Ironbark	12	24	48 50	5.8 2.5	Semi-mature, good condition but poor development, with termite damage.	2d A2	Moderate	Outside of scope
91	Adjacent entrance.	<i>Fraxinus angustifolia spp.oxycarpa</i> Claret Ash	9	9	30 34	3.6 2.1	Immature, good condition but poor development, heavily pruned, with an extended lateral to the south.	2a A2	Low- Moderate	Outside of scope

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92	3m from building.	<u>Fraxinus angustifolia spp.oxycarpa</u> Claret Ash	6	8	20 24	2.4 1.8	Immature, with 50% pre-existing hard-surface impacts.	2a A2	Low- Moderate	Outside of scope
93	3m from building.	<u>Fraxinus angustifolia spp.oxycarpa</u> Claret Ash	6	9	20 25	2.4 1.9	Immature, good condition but poor development, with 40% pre-existing hard-surface impacts.	2d A2	Low- Moderate	Outside of scope
94	3m from building.	<u>Fraxinus angustifolia spp.oxycarpa</u> Claret Ash	6	7	20 22	2.4 1.8	Immature, good condition but poor development, previously pruned, with epicormics.	2d A2	Low- Moderate	Outside of scope
95	3m from building.	<u>Fraxinus angustifolia spp.oxycarpa</u> Claret Ash	6	7	20 22	2.4 1.8	Immature, good condition but poor development.	2a A1	Low- Moderate	Outside of scope
96	3m from building.	<u>Fraxinus angustifolia spp.oxycarpa</u> Claret Ash	6	8	20 22	2.4 1.8	Immature, good condition but poor development.	2a A1	Low	Outside of scope
97	3m from building.	<u>Fraxinus angustifolia spp.oxycarpa</u> Claret Ash	8	6	10 12	2.0 1.5	Immature, good condition but poor development.	2a A1	Low	Outside of scope
98	Carpark.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	10	10	43 47	5.2 2.4	Semi-mature, good condition but poor development.	2a A1	Moderate	Outside of scope
99	Carpark.	<u>Acacia baileyana</u> Cootamundra Wattle	7	5	12 14	2.0 1.5	Immature, good condition.	3a Z3	Low- Moderate	Outside of scope (Exempt species).
100	Carpark.	<u>Eucalyptus viminalis</u> Manna Gum	12	18	10/32 46	4.1 2.4	Semi-mature, with termite damage, and insect attack.	3a A2	Moderate	Outside of scope
101	Fence.	<u>Prunus persica</u> Peach	4	4	20 20	2.4 1.7	Immature, good condition but poor development.	2d Z3	Low	Outside of scope (Exempt species).
102	Ag plot.	<u>Fraxinus angustifolia spp.oxycarpa</u> Claret Ash	14	12	60 66	7.2 2.8	Post-mature, heavily pruned, poor condition.	4a Z5	Very Low	Outside of scope (Poor Condition).
103	Ag plot.	<u>Fraxinus angustifolia spp.oxycarpa</u> Claret Ash	12	12	45 48	5.4 2.4	Post-mature, moderate condition, heavily pruned, with physical damage.	3d A2	Moderate	Outside of scope
104	Ag plot.	<u>Eucalyptus tereticornis</u> Forest Red Gum	2	9	45 48	5.4 2.4	Dead, heavily pruned. A nesting box is attached to the tree.	4a Z4	Low	Outside of scope (Exempt, dead). Relocate nesting box.
105	Adjacent building.	<u>Fraxinus angustifolia spp.oxycarpa</u> Claret Ash	6	6	12 14	2.0 1.5	Immature, good condition, with 50% pre-existing hard-surface impacts.	2d A2	Low	Outside of scope
106	Adjacent building.	<u>Fraxinus angustifolia spp.oxycarpa</u> Claret Ash	6	6	14 14	2.0 1.5	Immature, good condition, with 50% pre-existing hard-surface impacts.	2d A2	Low	Outside of scope
141	North of sports court.	<u>Casuarina glauca</u> Swamp She-Oak	NS 18 EW 17	25	50 55	6.0 2.6	Mature, good condition but poor development.	2a A1	High	Outside of scope
142	North of sports court.	<u>Casuarina glauca</u> Swamp She-Oak	NS 10 EW 8	26	38 42	4.6 2.3	Mature, moderate condition, with twin leaders.	2d A1	Moderate	Outside of scope
143	North of sports court.	<u>Casuarina glauca</u> Swamp She-Oak	11	14	44 52	5.3 2.5	Mature, moderate condition, heavily pruned.	2d A2	High	Outside of scope
144	North of sports court.	<u>Schinus molle</u> Peppercorn	8	10	12/20 24	2.8 1.8	Immature, moderate condition, with physical damage from an impact.	3a A2	Low	Outside of scope

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145	Eastern fence.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	14	23	47 50	5.6 2.5	Mature, good condition but poor development, with an inclusion at 6m height.	2a A2	Moderate	Outside of scope
146	Eastern fence.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	14	25	53 54	6.4 2.6	Mature, good condition but poor development.	2d A1	High	Outside of scope
147	Eastern fence.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	12	23	52 54	6.2 2.6	Mature, good condition but poor development, with a lean to the west, and a suppressed canopy.	2d A1	Moderate	Outside of scope
148	North-eastern corner.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	16	22	53 54	6.4 2.6	Mature, with damaged roots to the south.	2d A2	High	Outside of scope
149	Cricket net.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	8	14	26/30 35	4.8 2.1	Immature, good condition but poor development, with inclusions at 1m and 5m height.	3c-4c A2	Low- Moderate	Outside of scope Aerial Inspection.
150	Cricket net.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	5	7	20 20	2.4 1.7	Immature, good condition but poor development, with multiple branch attachments at 2m height.	2d A1	Low	Outside of scope
151	Northern fence.	<u>Fraxinus angustifolia spp. oxycarpa</u> Claret Ash	4	5	10/10 15	2.0 1.5	Immature, good condition but poor development, heavily pruned.	2d A1	Low	Outside of scope
152	Northern fence.	<u>Angophora floribunda</u> Rough-Barked Apple	12	12	15/20/20/30 50	5.3 2.5	Semi-mature, good condition but poor development.	2a A1	Moderate	Outside of scope
153	Northern fence.	<u>Angophora floribunda</u> Rough-Barked Apple	8	14	10/10/35 40	4.6 2.3	Semi-mature, with a cavity and scarring at the base of the tree.	2d A2	Low- Moderate	Outside of scope
154	Northern fence.	<u>Angophora floribunda</u> Rough-Barked Apple	14	20	50 52	6.0 2.5	Mature, good condition but poor development, with an included southern leader.	2a A2	Moderate	Outside of scope
155	Northern fence.	<u>Eucalyptus tereticornis</u> Forest Red Gum	6	8	25 27	3.0 1.9	Immature, good condition but poor development.	2d A1	Low- Moderate	Outside of scope
156	Northern fence.	<u>Eucalyptus tereticornis</u> Forest Red Gum	8	22	42 44	5.0 2.3	Immature, good condition but poor development, with damaged roots.	2a A2	Moderate	Outside of scope
157	Northern fence.	<u>Elaeocarpus reticulatus</u> Blueberry Ash	10	15	20/30/35 55	6.0 2.6	Mature, with multiple stems, and a cavity at the base of the tree.	4c A	Low- Moderate	Outside of scope
158	Northern fence.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	12	18	38 40	4.6 2.3	Semi-mature, good condition but poor development, with damaged roots from soil compaction.	2d	Moderate	Outside of scope
159	North-western corner.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	10	19	39 40	4.7 2.3	Semi-mature, good condition but poor development.	2a	Moderate	Outside of scope
160	North-western corner.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	10	26	37 38	4.4 2.2	Immature, good condition but poor development.	2d	Moderate	Outside of scope
161	North-western corner.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	14	24	41/42 64	7.1 2.7	Semi-mature, good condition but poor development, heavily pruned.	2d	Moderate	Outside of scope
162	Outside fence.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	NS 8 EW 7	14	35 38	4.2 2.2	Semi-mature, good condition but poor development, with an unbalanced canopy to the north.	2a	Moderate	Outside of scope
163	Western fence.	<u>Eucalyptus scoparia</u> Wallangarra White Gum	18	29	65 70	7.8 2.9	Semi-mature, good condition but poor development, with cavities to the east at 14m and 18m height.	2d	Moderate	Outside of scope
164	Western fence.	<u>Eucalyptus scoparia</u> Wallangarra White Gum	8	22	39 40	4.7 2.3	Semi-mature, good condition but poor development.	2d	Moderate	Outside of scope

Tree No.	Location	Scientific Name Common Name	canopy (m)	Height (m)	DBH* DRC* (cm)	TPZ* SRZ* (m)	Visual Tree Assessment (VTA) – Tree Health & Condition	TULE* A-Z	Retention Value	Proposed Measures
165	Western fence.	<u>Melaleuca styphelioides</u> Prickly-Leaved Paperbark	5	6	10/10 15	2.0 1.5	Immature, good condition but poor development.	2d	Low	Outside of scope
166	Western fence.	<u>Syagrus romanzoffiana</u> Cocos Palm	6	8	20 25	4.0# 1.9	Semi-mature, good condition.	2a Z3	Low- Moderate	Outside of scope (Exempt species).
167	Western fence.	<u>Syagrus romanzoffiana</u> Cocos Palm	6	8	35 45	4.2# 2.4	Semi-mature, good condition.	2a Z3	Low- Moderate	Outside of scope (Exempt species).
168	Western fence.	<u>Syagrus romanzoffiana</u> Cocos Palm	5	8	30 40	3.6# 2.3	Semi-mature, good condition.	2a Z3	Low- Moderate	Outside of scope (Exempt species).
169	Western fence.	<u>Ligustrum spp.</u> Privet	5	6	5/5 10	2.0 1.5	Immature, good condition but poor development.	5e Z3	Very Low	Outside of scope (Exempt species).
170	Western fence.	<u>Callistemon viminalis</u> Weeping Bottlebrush	4	5	10/10/10 20	2.0 1.7	Immature, moderate condition, previously pruned, with physical damage from an impact.	3a	Low	Outside of scope
171	Western fence.	<u>Fraxinus angustifolia spp. oxycarpa</u> Claret Ash	3	3	10 11	2.0 1.5	Immature, with an unbalanced canopy.	2d	Low	Outside of scope
172	Western fence.	<u>Gleditsia triacanthos</u> Honey Locust	6	6	10/12 25	2.0 1.9	Semi-mature, with damaged and lifting roots.	4c Z6	Very Low	Outside of scope (Hazardous).
173	Western fence.	<u>Callistemon viminalis</u> Weeping Bottlebrush	4	4	10 12	2.0 1.5	Juvenile, good condition.	2a	Low	Outside of scope
174	Western fence.	<u>Callistemon viminalis</u> Weeping Bottlebrush	4	4	5/8 10	2.0 1.5	Juvenile, good condition.	2a	Low	Outside of scope
175	Western fence.	<u>Melia azedarach</u> White Cedar	8	8	16/25/25 35	4.7 2.1	Semi-mature, good condition but poor development. This is a toxic plant species.	5e Z10	Low	Outside of scope (Toxic species).
176	Western fence.	<u>Casuarina glauca</u> Swamp She-Oak	12	22	44 50	5.3 2.5	Mature, good condition but poor development, previously pruned and crown lifted.	2a	Moderate	Outside of scope
177	Oval.	<u>Eucalyptus tereticornis</u> Forest Red Gum	8	32	39 40	4.7 2.3	Semi-mature, good condition.	2d	Moderate	Outside of scope
178	Oval.	<u>Eucalyptus tereticornis</u> Forest Red Gum	NS 10 EW 12	33	52 56	6.2 2.6	Semi-mature, good condition but poor development, with damaged roots.	2d	High	Outside of scope
179	Oval.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	12	17	42 45	5.0 2.4	Semi-mature, good condition but poor development, with damaged roots, and multiple branch attachments at 5m height.	2d	Moderate	Outside of scope
180	Oval.	<u>Jacaranda mimosifolia</u> Jacaranda	2	4	5 10	2.0 1.5	Juvenile, good condition.	1a	Low	Outside of scope
181	Oval.	<u>Casuarina glauca</u> Swamp She-Oak	8	18	34 40	4.1 2.3	Semi-mature, good condition but poor development, with epicormics.	2d	Moderate	Outside of scope
182	Oval.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	12	18	32 33	3.8 2.1	Immature, good condition but poor development.	2d	Moderate	Outside of scope
183	South of oval.	<u>Casuarina glauca</u> Swamp She-Oak	8	12	22/25 33	4.0 2.1	Semi-mature, good condition, with twin stems that are rubbing against each other.	2d	Moderate	Outside of scope
184	South of oval.	<u>Casuarina glauca</u> Swamp She-Oak	6	11	22 24	2.6 1.8	Immature, good condition but poor development.	2a	Low- Moderate	Outside of scope

Tree No.	Location	Scientific Name Common Name	canopy (m)	Height (m)	DBH* DRC* (cm)	TPZ* SRZ* (m)	Visual Tree Assessment (VTA) – Tree Health & Condition	TULE* A-Z	Retention Value	Proposed Measures
185	South of oval.	<u>Fraxinus angustifolia spp.oxycarpa</u> Claret Ash	6	8	22 25	2.6 1.9	Semi-mature, good condition but poor development.	2d	Low- Moderate	Outside of scope
186	South of oval.	<u>Fraxinus angustifolia spp.oxycarpa</u> Claret Ash	4	5	12 12	2.0 1.5	Immature, good condition but poor development, heavily pruned.	2d	Low	Outside of scope
187	South of oval.	<u>Casuarina glauca</u> Swamp She-Oak	8	16	28 30	3.4 2.0	Immature, good condition but poor development, with an inclusion.	2a	Low- Moderate	Outside of scope
188	South of oval.	<u>Casuarina glauca</u> Swamp She-Oak	5	10	30 33	3.6 2.1	Immature, good condition but poor development, with minor dehydration.	2d	Moderate	Outside of scope
189	Adjacent building.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	8	20	30/60 62	8.0 2.7	Mature, good condition but poor development, with insect attack, minor dehydration, and soil compaction.	2d	Moderate	Outside of scope
190	Adjacent building.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	NS 16 EW 14	20	40/42 61	7.0 2.7	Mature, good condition but poor development, with twin stems, and soil compaction.	2d	Moderate	Outside of scope
191	Adjacent building.	<u>Melaleuca quinquenervia</u> Broad-Leaved Paperbark	10	14	46 50	5.5 2.5	Semi-mature, with damaged roots, and pre-existing hard-surface impacts.	2a	Moderate	Outside of scope
192	South of oval.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	12	22	47 48	5.6 2.4	Semi-mature, good condition but poor development, with soil compaction.	2d	Moderate	Outside of scope
193	South of oval.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	10	15	34 44	4.1 2.3	Semi-mature, good condition but poor development, with an inclusion.	2d	Moderate	Outside of scope
194	South of oval.	<u>Eucalyptus sideroxylon</u> Mugga Ironbark	NS 16 EW 14	21	45/53 83	8.4 3.1	Mature, with an inclusion at 1m height, damaged roots, and an unbalanced canopy to the east and west.	2a	High	Outside of scope
195	Quadrangle.	<u>Triadica sebifera</u> Chinese Tallow	10	18	34 45	4.1 2.4	Mature, good condition but poor development. This is a toxic plant species.	5e Z10	Low	Outside of scope (Toxic species).
196	Quadrangle.	<u>Triadica sebifera</u> Chinese Tallow	NS 15 EW 17	15	43 52	5.2 2.5	Mature, moderate condition, previously pruned, with decay at 3m height. This is a toxic plant species.	5e Z10	Low	Outside of scope (Toxic species).
197	Quadrangle.	<u>Corymbia ficifolia</u> Red Flowering Gum	3	5	5 10	2.0 1.5	Juvenile, good condition.	1a	Low	Outside of scope (Toxic species).
198	Quadrangle.	<u>Triadica sebifera</u> Chinese Tallow	10	12	33 35	4.0 2.1	Semi-mature, good condition but poor development, with 50% pre-existing hard-surface impacts. This is a toxic plant species.	5e Z10	Low	Outside of scope (Toxic species).
199	Quadrangle.	<u>Archontophoenix alexandrae</u> Alexander Palm	6	6	18 20	4.0# 1.7	Immature, good condition but poor development.	2a	Low	Outside of scope

3.5 Photographic Observations

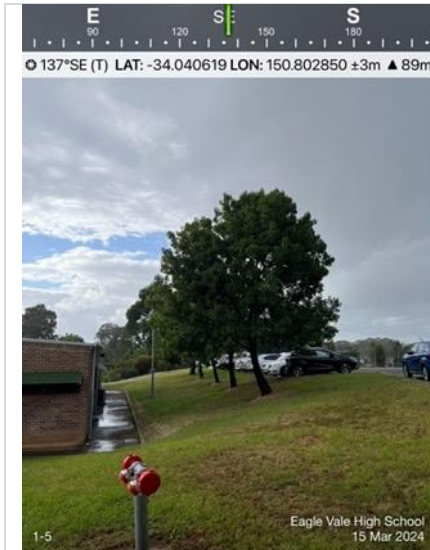


Plate 1: Trees 1 to 5
(from left to right).

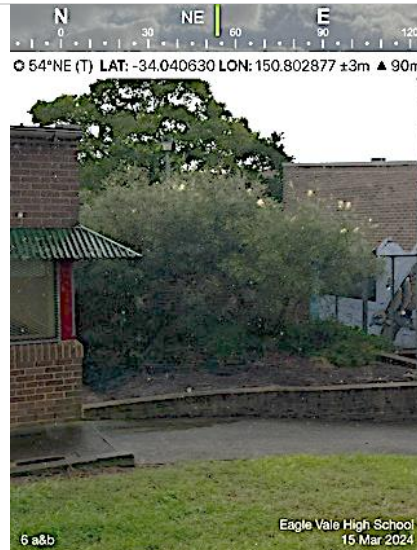


Plate 2: Trees 6a and 6b
(from right to left).



Plate 3: Trees 7 and 8
(from right to left).

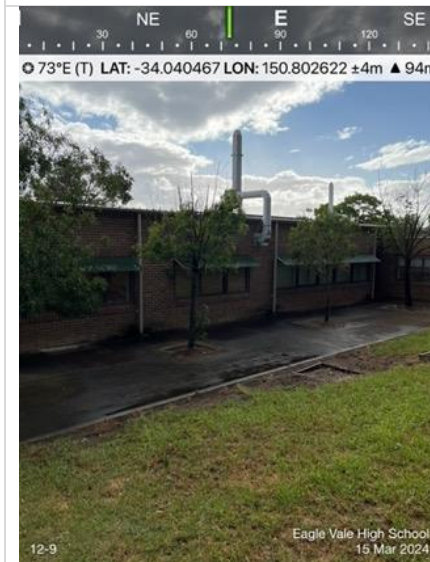


Plate 4: Trees 9 to 12
(from right to left).



Plate 5: Trees 13, 14 and 15.

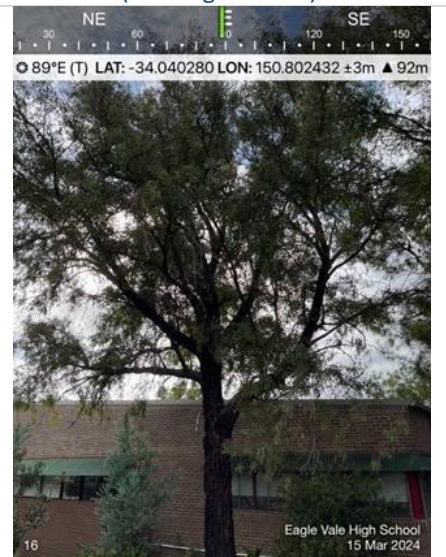


Plate 6: Tree 16.



Plate 7: Trees 17, 18 and 19.



Plate 8: Trees 20 and 21
(from left to right).



Plate 9: Trees 23 to 26.



Plate 10: Tree 25.



**Plate 11: Trees 29 to 34
(from right to left).**



Plate 12: Tree 35.



Plate 13: Trees 35 to 39.



**Plate 14: Trees 40 to 44
(from left to right).**



Plate 15: Tree 44 has a split inclusion



**Plate 16: Tree 46 and Tree Group 47
(behind).**



Plate 17: Tree 59.



Plate 18: Trees 60 to 68.



Plate 19: Trees 70 to 78.

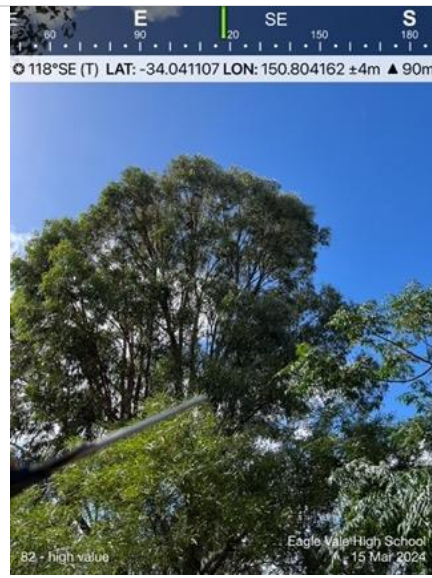


Plate 20: Tree 82.



Plate 21: Tree 87.



**Plate 22: Trees 92 to 95
(from right to left).**



Plate 23: Tree 102.



Plate 24: Tree 103.



Plate 25: Tree 104.



**Plate 26: Trees 116 and 117
(from left to right).**



**Plate 27: Trees 118 to 119
(from left to right).**



Plate 28: Tree 124.

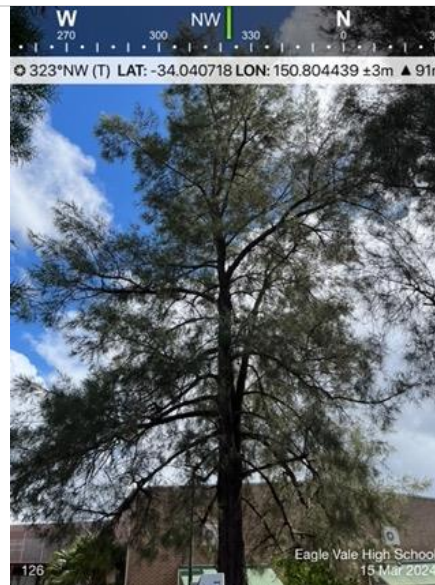


Plate 29: Tree 126.



Plate 30: Tree 134.



Plate 31: Tree 139.



Plate 32: Tree 140.



Plate 33: Tree 146.



Plate 34: Tree 148.



Plate 35: Tree 157 has a cavity at the base of the tree.



Plate 36: Trees 165 to 169 (from right to left).



Plate 37: Tree 175.



Plate 38: Tree 177.



Plate 39: Tree 178.



Plate 40: Trees 189, 190, 192, 193 and 194 (from left to right).

4. DISCUSSION

4.0.1 One hundred and ninety-nine (199) trees and tree groups, consisting of two hundred and four (204) trees, were assessed on site, including neighbouring properties and public domain and summarised as follows.

- c) One-hundred and sixty-five (165) trees and groups consisting of one hundred and seventy (170) trees, are **outside the building scope** are numbered trees 1-106 and 141-199.
- d) Thirty-four (34) trees are **within the building scope**; these are numbered 107- 140.

4.0.2 This assessment is based on the thirty-four (34) trees **within the building scope**, numbered 107- 140.

4.1 Tree Useful Life Expectancy (TULE) and Landscape Significance

4.1.1 Twenty-five (25) trees are rated as having a **medium TULE (2A 2B 2C 2D)** rating indicating a useful life expectancy of 15 to 40 more years with adequate intervention works. These trees are numbered 107, 108, 109, 110, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 125, 126, 130, 132, 133, 137, 138, 139, 140.

4.1.2 Six (6) trees are rated as **short TULE (3A 3B 3C 3D)** rating indicating a useful life expectancy of 5 to 15 more years with substantial intervention works. These trees are numbered 111, 124, 127, 128, 129, 131.

4.1.3 Three (3) trees are rated as **remove TULE (4A 4B 4C)** rating due to instability or dead, these trees are numbered 134, 135, 136.

4.2 Retention Values

4.2.1 Retention values are established by evaluating both the factors of TULE and Landscape Significance. (Appendix C, D & E). Retention values are classified as follows.

Table 5: Retention Values for trees within Building envelope.

High (5)	Moderate (18)	Low-Moderate Thirty-four (3)	Low (7)	Very Low 1
117, 119, 126, 139, 140.	107, 108, 109, 111, 112, 114, 115, 116, 118, 120, 121, 122, 124, 130, 132, 136, 137, 138.	113, 123, 125.	110, 127, 128, 129, 131, 133, 135.	134.

4.3 Impact Assessment

4.3.1 The assessment evaluates the impacts of the proposed development on the TPZ, categorising the impacts based on the extent of TPZ encroachments. Encroachments under 10% are minor, while those exceeding 10% are considered major.

4.3.2 Nine (9) trees have **major encroachments**; these are numbered 116- 124.

Table 6: Summary of TPZ Encroachment

Tree	Scientific Name	TPZ (m) r	TPZ % E	Retention Value
116	<u>Casuarina glauca</u>	3.0	25.38%	Low
117	<u>Casuarina glauca</u>	6.0	54.23%	High
118	<u>Casuarina glauca</u>	4.6	100%	Moderate
119	<u>Casuarina glauca</u>	6.6	95.07%	High
120	<u>Casuarina glauca</u>	3.0	100%	Moderate
121	<u>Casuarina glauca</u>	4.3	100%	Moderate
122	<u>Casuarina glauca</u>	4.2	100%	Moderate
123	<u>Fraxinus angustifolia</u>	4.3	100%	Low-Moderate
124	<u>Casuarina glauca</u>	8.4	93.28%	Moderate

4.4 Trees Proposed For Removal

4.4.1 Thirty-four (34) trees **within the building scope** are numbered 107- 140.

4.4.2 Eleven (11) trees are proposed for removal, these are numbered 110, 116- 124 and 134. Of these trees.

- One (1) tree numbered 110 is an **exempt species**.
- One (1) tree numbered 134 is **structurally hazardous**.
- Nine (9) trees have **major impacts** from the proposed development, these trees are numbered 116, 117, 118, 119, 120, 121, 122, 123, 124.

4.4.3 A summary of all trees within scope proposed for removal, these are numbered 10

Table 7: Tree removal by retention values.

Tree removal by Retention value				
High	Moderate	Low-Moderate	Low	Very Low
117, 119.	116, 118, 120, 121, 122, 124.	123.	Exempt species 110	Hazardous 134.

4.4.4 **Tree Removals and Pruning:** Development without consent are subject to Review of Environmental Factors (REF) and endorsed under the requirements of the State Environmental Planning Policy (SEPP) (Transport and Infrastructure) 2021, as the mitigation measures will act as 'conditions of consent' that ensure that any impacts are not deemed to be 'significant' therefore requiring preparation of an EIS.

4.5 Canopy Cover Loss

4.5.1 **Canopy Cover Loss** calculation ($r^2 \times \pi$), excludes trees with an exempt species status.

Table 8: Canopy cover loss for trees proposed for removal.

Canopy Diameter (m)	Canopy area per tree (m²)	Trees removed	Count	Total Loss (m²)
6	28.274	120, 134	2	56.548
8	50.265	116, 118	2	100.53
9	63.617	117, 123.	2	127.234
10	78.539	121, 122.	2	157.078
14	153.938	119, 124.	2	307.876
		Total	10	746m2

4.6 Replenishment Planting

4.6.1 **State Environmental Planning Policy (Transport and Infrastructure) 2021**, Schools Part 3.4 clause 3.39 (b) states that each removed tree is replaced with a tree capable of reaching a mature height of at least 3 metres and planted within the school grounds.

4.6.6.2 Ten (10) new tree planting of 45L volume pots are required to compensate for the proposed removal of trees.

4.6.3 Consideration must be given trees endemic to the local area or native trees already part of the vegetation community on site. New plantings are to be completed in accordance with NATSPEC (Clark 2003) guidelines and Australian Standard ® AS 2303-2018 Tree Stock for Landscape Use (Appendix F) and where possible at least 3-5 metres away from buildings, away from power lines, hard-surfaces, infrastructure and underground services.

4.7 Trees Proposed For Retention

4.7.1 Thirty-four (34) trees **within the building scope**, these are numbered 107- 140.

4.7.2 Twenty-three (23) trees are proposed for retention, these are numbered 107, 108, 109, 111, 112, 113, 114, 115, 125, 126, 127, 128, 129, 130, 131, 132, 133, 135, 136, 137, 138, 139, 140.

4.7.3 All retained trees will require **mitigation measure** (tree protection measures and sensitive construction measures).

5. RECOMMENDATION

5.0.1 One hundred and ninety-nine (199) trees and tree groups, consisting of two hundred and four (204) trees, were assessed on site, including neighbouring properties and public domain and summarised as follows.

- a) One-hundred and sixty-five (165) trees and groups consisting of one hundred and seventy (170) trees, are **outside the building scope** are numbered trees 1-106 and 141-199.
- b) Thirty-four (34) trees are **within the building scope**; these are numbered 107- 140.

5.0.2 This assessment is based on the thirty-four (34) trees **within the building scope**, numbered 107- 140.

Table 9: Summary of proposed tree retention and removal plan

Tree Management Plan	
Remove 11 trees	Retain 23 trees
Exempt species 110	107, 108, 109, 111, 112, 113, 114, 115, 125, 126, 127, 128, 129, 130, 131, 132, 133, 135, 136, 137, 138, 139, 140.
Structurally hazardous 134	
Major impacts 116, 117, 118, 119, 120, 121, 122, 123, 124.	

5.0.3 Ten (10) new tree planting are required new tree planting of 45L volume pots after construction, to compensate for the tree removals.

5.1 Mitigation Measures- Tree protection Plan

5.1.1 For all retained trees withing building envelope.

Tree Protection Fencing: A 1.8-meter-high chain wire mesh fence secured with concrete blocks, must be installed around the designated TPZ. All fencing must comply with AS4687- Temporary Fencing and Hoardings. Existing boundary fences or walls may be used as part of the tree protection fence where appropriate and effective. In situations where the TPZ extends beyond the fenced area, ground protection must be provided in accordance with AS4970 – 2009, Protection of Trees on Development Sites, covering the area between the fence and the building line.

5.1.2 **Mulch ground protection.** Apply 75mm-100mm deep of certified eucalyptus material, in accordance with AS 4454- 2003 Compost, Soil Conditioners and Mulches. Mulch must have at least 70% of particles, (no greater than 16 mm) keep mulch 200mm way from trunk.

5.2 Sensitive Construction Methods

5.2.1 Sensitive construction methods to protect trees during development and must be supervised by an AQF Level 5 Arborist, these include,

5.2.3 **Demolition within TPZ:** Prior to relocating any tree protection fencing, temporary ground protection must be installed to safeguard the TPZ. A 150mm deep gravel layer composed of 20–40mm aggregate must be placed over a layer of geofabric. On top of this, plywood sheets, timber sleepers, or steel plates must be installed to allow safe access during excavation or demolition activities. Gravel must be carefully distributed around the tree root zones to ensure no root damage occurs during the relocation of fencing or site activity. Only hand demolition methods are permitted within the TPZ to minimise disturbance to roots and surrounding soil. A qualified arborist or site supervisor must be present on-site during fence relocation to ensure that TPZ boundaries are respected and that no damage occurs to trees or their root systems.

5.2.4 **Temporary driveway:** Keep construction access away from the TPZ. Lay a 100mm mulch layer over TPZ's and use a grated steel pathway for vehicular access to shield roots. Alternatively, apply topsoil or loamy sand over roots to maintain stability, or construct a bridge with gap-graded fill.

5.2.5 **Relocating fences during works within TPZ zones:** Protect TPZs with temporary ground protection prior to relocating fences. Clearly mark the TPZs using hi-visibility flags, tape or signage before moving fences. The fence panels should be lifted, not dragged and avoid heavy machinery should be avoided.

5.3 Project Arborist Hold Points

5.3.1 **Hoarding Waste and Amenities (HWA)** must be stored outside the TPZ's of trees.

5.3.2 **Signage**, with the project arborist's contact details reading 'Tree Protection Zone: Do Not Enter' in accordance with AS 1319-1994 – Safety Signage.

5.3.3 Appointment of an **AQF 5 Project Arborist** to implement and adhered to the Tree Protection Plan during works in accordance with Australian Standards AS 4970-2009 Protection of Trees on Development Sites.

5.3.4 **Supervise** all activities within the TPZ that may impact the tree roots, such as excavation and trenching, must be supervised by AQF 5 project arborist. The use of machinery within the TPZ is prohibited without appropriate ground protection, excavators must be on rolled tracks and not exceed 5 tonnes

5.3.5 **Root pruning** can be performed by an AQF 3 Arborist or higher under the direction of the Project Arborist. No root in the Structural Root Zone (SRZ) shall be pruned. No more than 20% of the total root system must be pruned at a time. Root must be pruned with sharp clean tools. Any roots in the TPZ over 40 mm in diameter must be pruned by the Project Arborist.

5.3.6 **Remediation plan** by project arborist is required if trees decline or are damaged.

Table 10: Project Arborist Mitigation Measures & Monitoring Schedule

Project Arborist Hold Points & Monitoring Schedule	Timing
Obtain DA approval for Tree Protection Plan (TPP).	Pre-construction & pre-demolition
Appoint an AQF 5 Project Arborist to implement the TPP during works in accordance with Australian Standards AS 4970-2009 <i>Protection of Trees on Development Sites</i> .	
Certify tree protection installation measures for all retained trees.	
Inspect and monitor retained trees regularly and record with photographs.	
Supervise approved works within the TPZ including installation of underground services, driveway, piers or anything that may adversely affect the tree.	During Construction
Undertake any remedial works if necessary for declining tree health.	
Final certificate.	Post construction

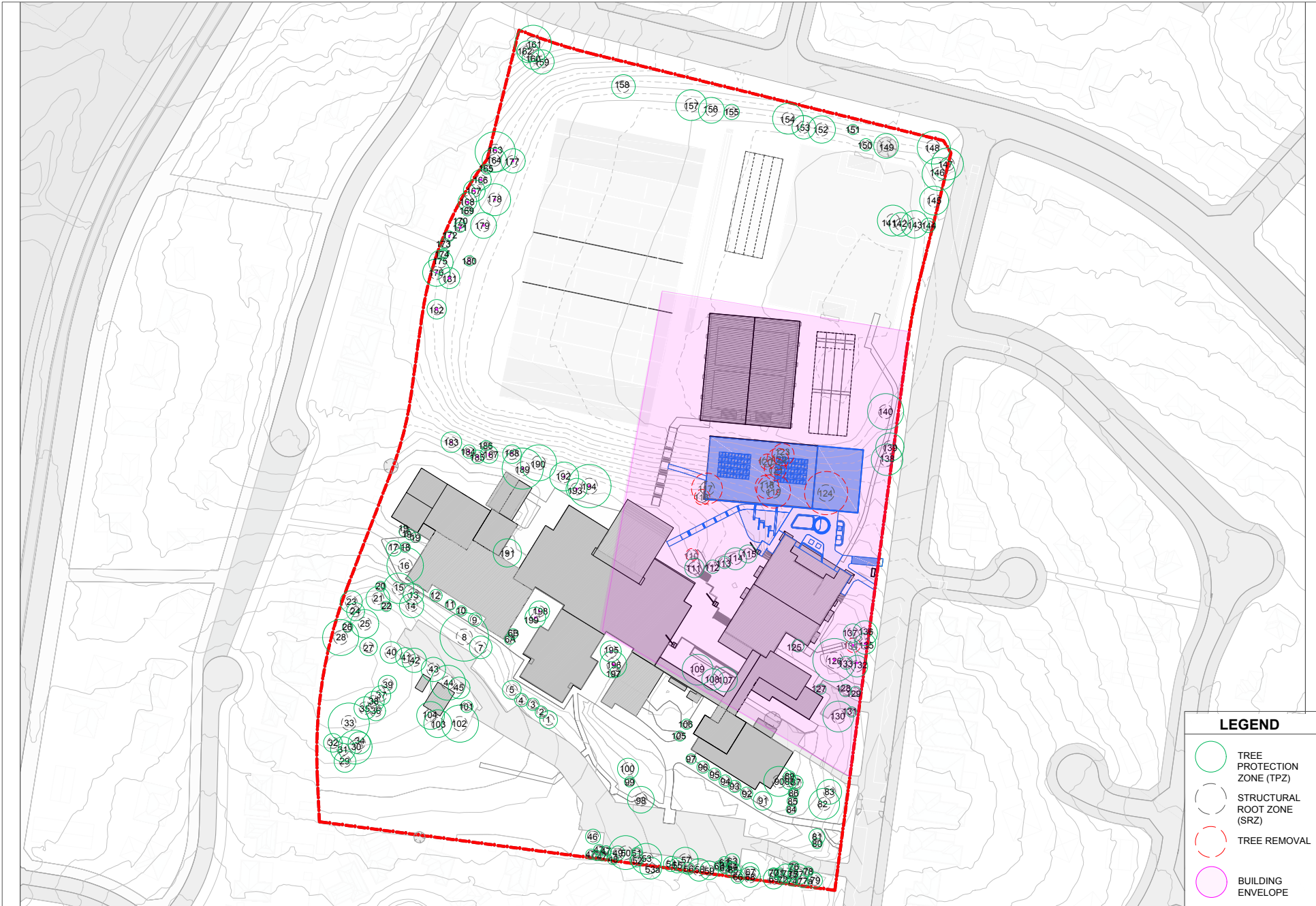
6. TREE MANAGEMENT PLANS

The following pages include.

6.1 [Tree Location Plan](#)

6.2 [TPZ Encroachment Plan](#)

6.3 [Tree Protection Plan](#)



GENERAL NOTES

1. Tree measurements, TPZ and SRZ are in metres.
2. Tree locations are indicative and based on supplied survey/base plans. Minor discrepancies may exist.
3. Additional site survey may be required where precise tree positioning is critical to design or construction.
4. Tree IDs and species correspond with the accompanying Arborist Report.
5. Refer to legend for arborist symbols and code keys.
6. This is a digital drawing. Do not scale from this plan—use figured dimensions only.
7. This drawing must be read in conjunction with all relevant architectural, engineering and consultant drawings.
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REV	DESCRIPTION	DATE
A3	Edits	14/07/2025
A2	TREE LOCATIONS	10/06/2025
A1	TREE LOCATIONS	23/05/2025

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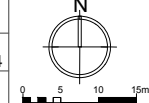
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**EAGLE VALE HIGH SCHOOL
NSW 2558**

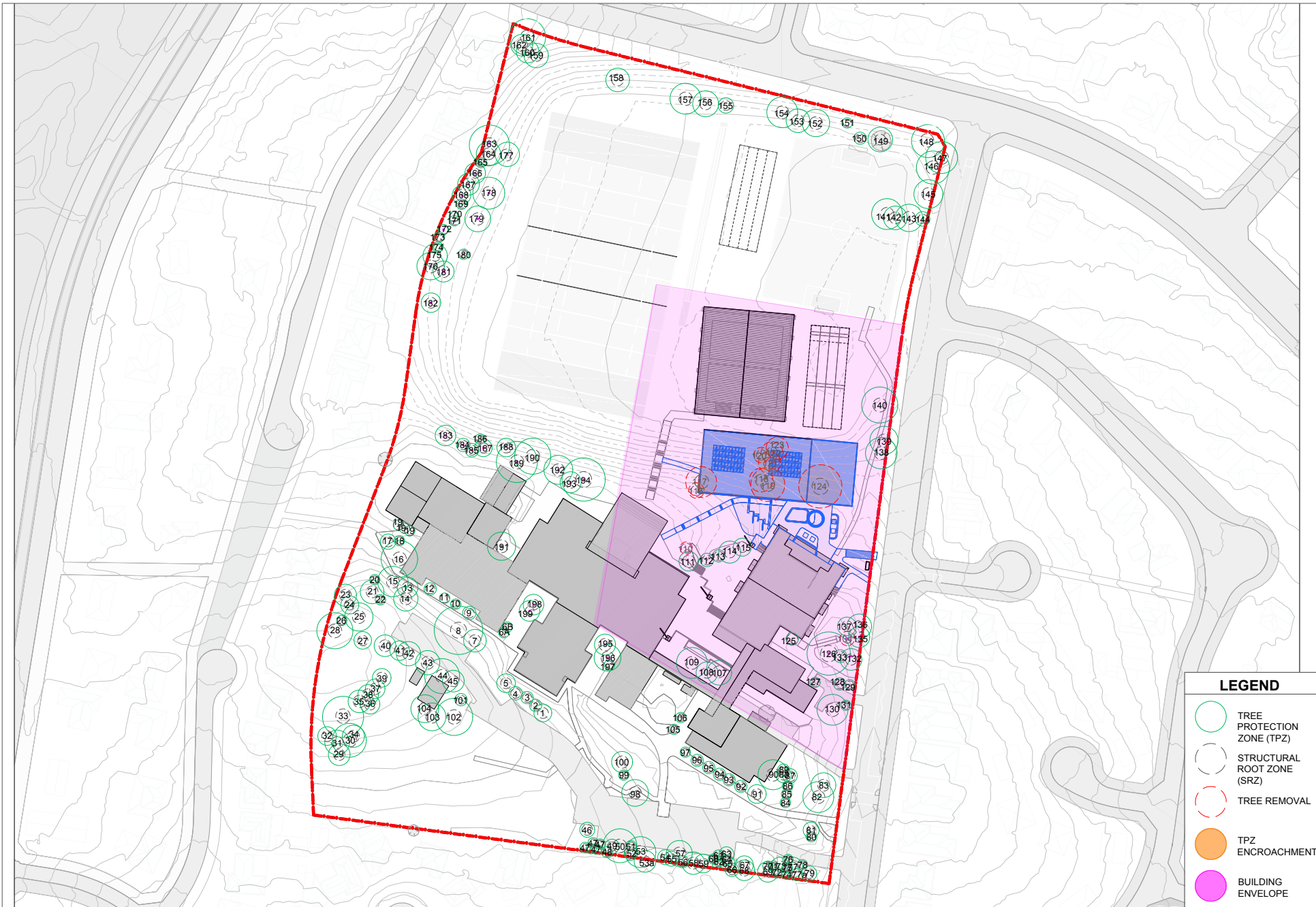
PREPARED FOR:
NSW DEPARTMENT OF EDUCATION

DRAWING TITLE:
TREE LOCATION PLAN

REFERENCE | BASE PLAN:
BENNENT & TRIMBLE | SCOPE OF WORKS: 0101: 10/4/25

DATE:
14/07/2025
REVISION:
A3
SCALE:
1:2000 A4
OUR PROJECT NO:
24056





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3. Additional site survey may be required where precise tree positioning is critical to design or construction.
4. Tree IDs and species correspond with the accompanying Arborist Report.
5. Refer to legend for arborist symbols and code keys.
6. This is a digital drawing. Do not scale from this plan—use figured dimensions only.
7. This drawing must be read in conjunction with all relevant architectural, engineering and consultant drawings.
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A3	Edits	14/07/2025
A2	TREE LOCATIONS	10/06/2025
A1	TREE LOCATIONS	23/05/2025
REV	DESCRIPTION	DATE

McArdle Arboricultural
Consultancy Pty. Ltd.
ABN 87 145 760 461

Dural NSW 2158, Tuggerah
NSW 2259, Gosford NSW 2250

www.mcardlearborist.com.au
T 0420 745 658

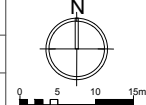
PROJECT ADDRESS:
**EAGLE VALE HIGH SCHOOL
NSW 2558**

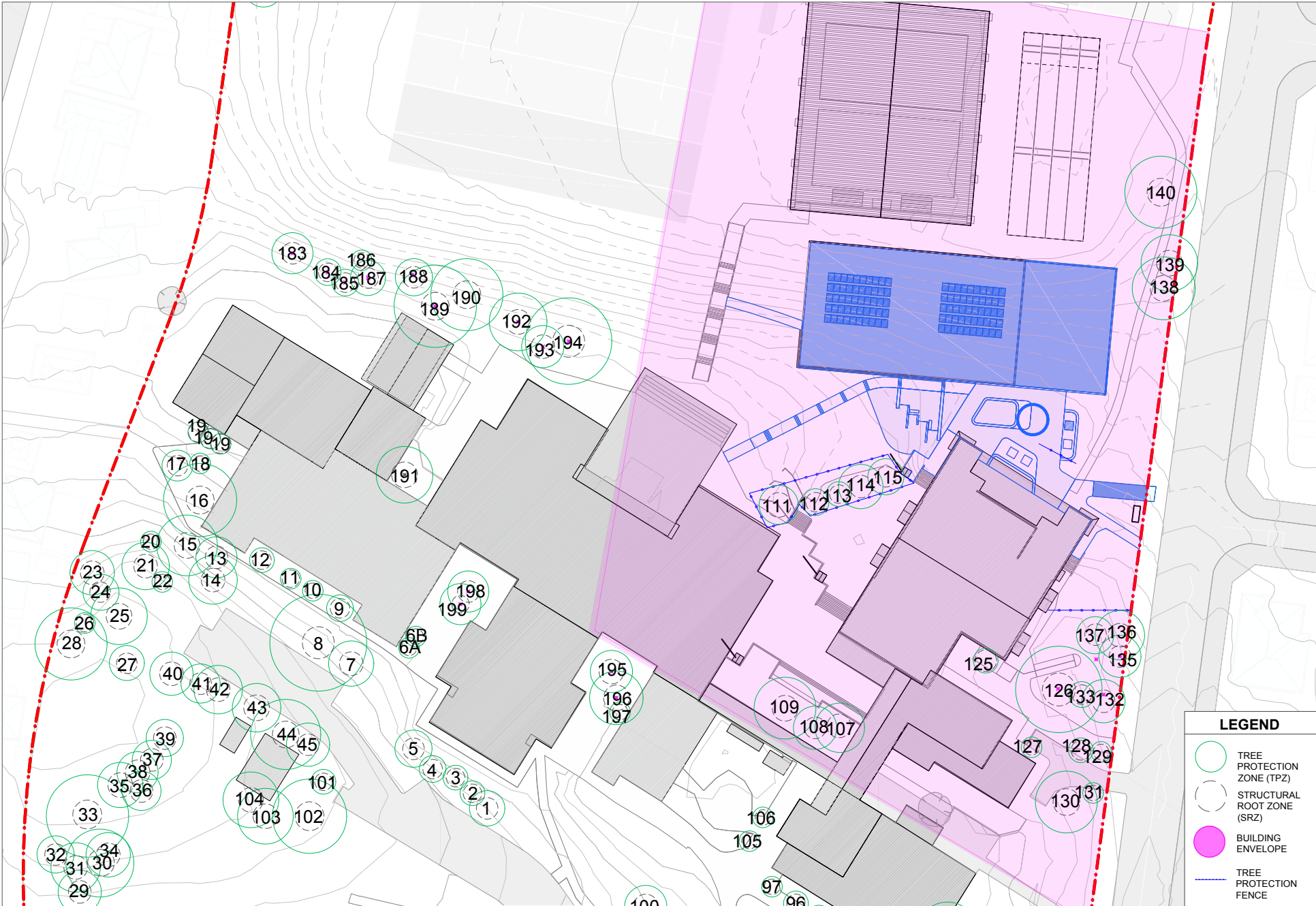
PREPARED FOR:
NSW DEPARTMENT OF EDUCATION

DRAWING TITLE:
TPZ ENCROACHMENT PLAN

REFERENCE | BASE PLAN:
BENNENT & TRIMBLE | SCOPE OF WORKS: 0101: 10/4/25

DATE:
14/07/2025
REVISION:
A3
SCALE:
1:2000 A4
OUR PROJECT NO:
24056





LEGEND

TREE PROTECTION ZONE (TPZ)

STRUCTURAL ROOT ZONE (SRZ)

BUILDING ENVELOPE

TREE PROTECTION FENCE

GENERAL NOTES

1. Tree measurements, TPZ and SRZ are in metres.

2. Tree locations are indicative and based on supplied survey base plans. Minor discrepancies may exist.

3. Additional site survey may be required where precise tree positioning is critical to design or construction.

4. Tree IDs and species correspond with the accompanying Arborist Report.

5. Refer to legend for arborist symbols and code keys.

6. This is a digital drawing. Do not scale from this plan—use figured dimensions only.

7. This drawing must be read in conjunction with all relevant architectural, engineering and consultant drawings.

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A2	Edits	14/07/2025
A1	TREE LOCATIONS	23/05/2025
REV	DESCRIPTION	DATE

McArdle Arboricultural Consultancy Pty. Ltd.
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PROJECT ADDRESS:
**EAGLE VALE HIGH SCHOOL
NSW 2558**

PREPARED FOR:
NSW DEPARTMENT OF EDUCATION

DRAWING TITLE:
TPZ PROTECTION PLAN

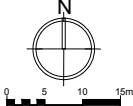
REFERENCE | BASE PLAN:
BENNENT & TRIMBLE | SCOPE OF WORKS: 0101: 10/4/25

DATE:
14/07/2025

REVISION:
A2

SCALE:
1:1000 A4

OUR PROJECT NO:
24056



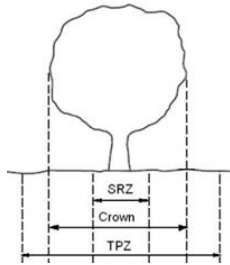
6.4 General Tree Management Specifications

Based on *Australian Standard® 4970-2009 Protection of Trees on Development Sites*.

Tree Protection Zones

Tree Protection Zone (TPZ) distances are measured as a radius from the center of the trunk at ground level and must be protected during construction. Structural Root Zone (SRZ) is a critical area for a tree's stability.

AS 4970-2009 *Protection of Trees on Development Sites* permits a 10% incursion into the TPZ (with Conditions) and incursions greater than 10% will require additional TPM.



Prohibitions for TPZ's

Prohibited activities within the TPZ of protected trees during demolition, excavation and construction, include entry onto or across protected surfaces, disposal of chemicals and liquids (including concrete and mortar slurry, solvents, paint, fuel or oil), stockpiling, storage or mixing of materials, refueling, parking, storing, washing and repairing tools, equipment, machinery and vehicles and disposal of building materials and waste.

Demolition

Tree Protection is to be installed around the retained trees and certified by the project arborist prior to any demolition, development or soil stripping.

Post Construction

Tree Protection must be removed after the final certification is determined to be compliant.

Hoarding Waste & Amenities (HWA)

HWA's must be stored outside the TPZs of the retained trees.

Installing Underground Services Within TPZ

All services must be routed outside the TPZ. If underground services must be routed within the TPZ, they must be installed by directional drilling or in manually excavated trenches. The directional drilling boring methods, such as horizontal directional drilling (HDD) must be at least 600 mm deep. The project arborist must assess the likely impacts of bore and bore pits on retained trees.

Excavations for entry/exit pits must be located outside the TPZ.

Excavation Within TPZ's

Excavations shall be undertaken under supervision of the project arborist, using sensitive, non-destructive methods (e.g., Manual excavation (hand tools), Air-spade or Hydro-vacuum excavations (sucker-truck).

Excavation is to be carried out in a manner that prevents tearing, splitting and displacement of the remaining roots; no roots greater than 40mm in diameter are damaged, pruned or removed. All care shall be taken to preserve and avoid damaging roots; excavation must not occur within the SRZ. Exposed roots shall be protected from direct sunlight by covering them with hessian or similar fabric and always kept moist.

Hand excavation and root mapping shall be undertaken along excavation lines within the TPZ. Any conflicting roots (>40mm in diameter) shall be pruned using clean, sharp secateurs or a pruning saw to ensure a clean cut, free from tears.

Backfilling is to be carried out as soon as possible.

Mulch Within TPZ

Maintain aged eucalyptus mulch to retained trees for the duration of the development in accordance with Australian Standards® AS 4454-2003 Compost, Soil Conditioners and Mulches.

Mulch must have at least 70% by mass of its particles, with a maximum size of greater than 16 mm and spread 50-75mm deep to the extent of the dripline, (never exceed 100mm depth). Mulch must not have contact with the tree trunk, apply 200mm from trunk and shaping a soil berm dish close to the root ball to facilitate establishment of watering.

Mulch across the surface of the TPZ is at the discretion of the arborist.



Protective Fencing Specification

Tree Protection Fencing must be installed to fully enclose the TPZ prior to demolition.

Fencing in accordance with AS4687 Temporary fencing. Existing boundary fences or walls shall constitute part of the TPZ where appropriate.

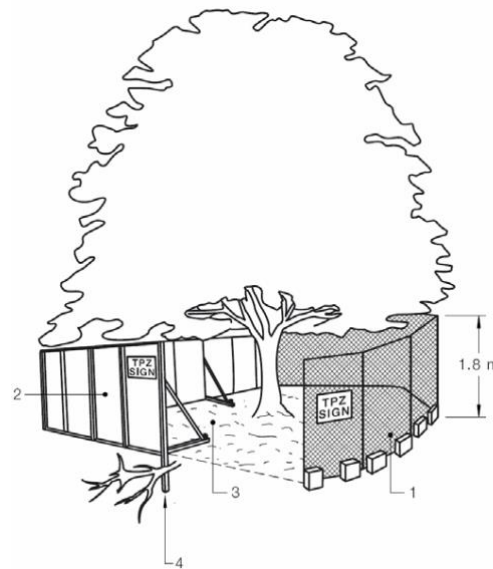
Fencing entails a 1.8-meter-high wire mesh fence, anchored with concrete.

Fencing on sloping or uneven ground will entail a 1-meter-high wire mesh fence anchored with star pickets, spaced at 2m intervals and connected by a continuous high-visibility plastic mesh fence.

Shade cloth must be affixed to the fencing.

Tree protection fencing must not be removed or altered but must be relocated with permission from the Project Arborists to access the work site.

Signage attached to the fencing and reads 'Tree Protection Zone: No Access' in accordance with AS 1319-1994 – Safety Signage.



Tree Trunk and Branch Specification

Tree Trunk Protection is required if tree protection fencing would be impractical and block access to the work site.

The method requires a layer of padding, geotextile or similar fabric wrapped around the trees' trunk.

Followed by a layer of 1.8-metre-long timber planks measuring 50mm x 100mm aligned vertically and spaced with small gaps (100mm) evenly around the trunk. The timber planks are securely fastened against the trunk using suitable strapping, must not be nailed or screwed into the trees.

Branch Protection requires adequate clearance of 250mm provided between the structure (hoarding/scaffolding), tree branches, limbs and trunk.

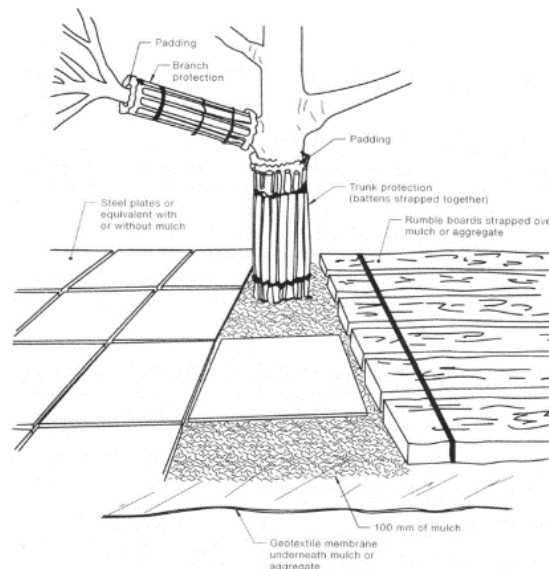
Tree trunks and or major branches located within 500mm of any hoarding or scaffolding must be protected by wrapped hessian or similar material to limit damage.

Ground / Root Protection Specification

Anticipate loads in the TPZ, to prevent root damage and soil compaction.

For foot traffic use a permeable membrane such as geotextile fabric beneath a layer of protective aggregate such as mulch or crushed rock (minimum depth of 75-100mm).

For loads over 3 tonnes use a permeable membrane such as geotextile fabric beneath a layer of mulch or crushed rocks (75-100mm) and a third layer of track mats (25mm thickness), steel plates or strapped rumble boards (120 x 65mm hardwood).



Scaffolding Specification / Canopy Protection

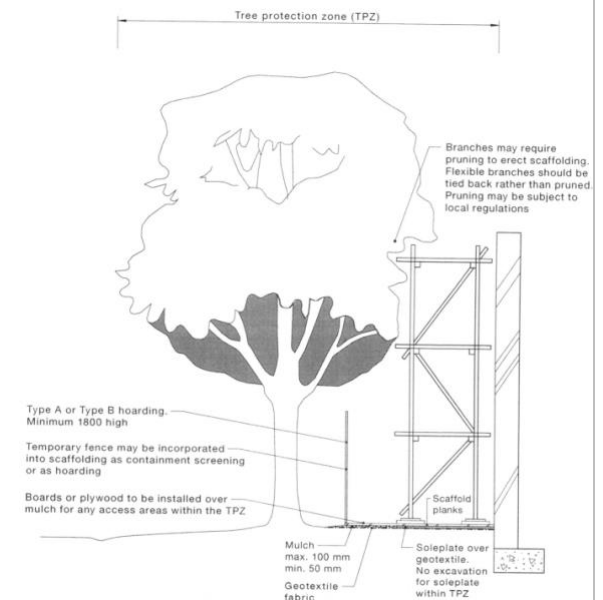
Type A hoarding must be installed directly adjacent to the tree trunk to a minimum height of 1.8m.

No branch is to be cut, broken or removed without permission from AQF5.

Branches may require pruning to erect scaffolding.

Flexible branches may be gently pushed back and tied back rather than pruned.

Support post entering the TPZ must not cut roots greater than 20mm.



7. GLOSSARY

Aerial Inspection: Where a tree is climbed by an arborist to inspect upper stem and crown for signs or symptoms of defects and disease.

Branch collar: The ring of wood tissue which forms around the base of a branch (near the branch attachment).

Cavity: A void, initiated by a wound within the trunk, branches or roots. These voids are referred to as hollows.

Co-dominant: Stems or branches equal in size and relative importance.

Crown: All the parts of a tree arising above the trunk where it terminates by its division forming branches, e.g. the branches, leaves, flowers and fruit: or the total amount of foliage supported by branches.

Crown Lifting: The removal of the lower branches of the tree.

Dead wood: Refers to any whole limb that no longer contains living tissues

Decay: Process of degradation of woody tissues by fungi or bacteria through decomposition of cellulose and lignin.

Dieback: Tree deterioration where the branches and leaves die.

Drip line: Where the canopy releases water shed from the foliage during precipitation.

Epicormic Shoots: These shoots often have a weak point of attachment. Epicormic growth/shoots are generally a survival mechanism.

Inclusion: The pattern of development at branch or stem junctions where bark is turned inward rather than pushed out. This fault is located at the point where the stems/branches meet.

Maturity: Tree age, assessed as over-mature (last 1/3 of life expectancy), mature (1/3 to 2/3 life expectancy) and semi mature (less than 1/3 life expectancy).

Resistograph® testing: A Resistograph® is a specialised machine that measures timber density by drilling a 3mm diameter probe through the wood, simultaneously plotting the results on a graph at full scale.

Structural Integrity: Describes the internal supporting timber. (Substantial to frail)

Structural root zone (SRZ): Refers to the radial distance in metres, measured from the centre of the tree stem, which defines the critical area required to maintain stability of the tree.

Target: Are people, property or activities that could be injured, damaged or disrupted by a tree.

Tree Protection Zone (TPZ): Refers to the radius distance in metres, measured from the centre of the tree stem which defines the *tree protection zone* for a tree to be retained. This is generally the minimum distance from the centre of the tree trunk where protective fencing is to be installed to create an exclusion zone associated with construction works.

Vigour: Refers to the tree's health as exhibited by the crown density, leaf colour, presence of epicormic shoots, ability to withstand disease invasion and the degree of dieback.

8. BIBLIOGRAPHY

AS 2009, AS 4970 – Protection of trees on development sites, Standards Australia, Sydney.

AS 2007, AS 4373 - Pruning of Amenity Trees, Standards Australia, Sydney.

Barrell, J, 2012, Balancing Tree Benefits Against Tree Security: The duty holder's dilemma, Arboricultural journal. The International Journal of Urban Forestry, 34:1,29-44.

Barrell, J. 1993-95, 'Pre-planning Tree Surveys: Safe Useful Life Expectancy (SULE) is the Natural Progression' Arboricultural Journal V.

CSIRO Boland et al Forest Trees of Australia; Nelson University Press. Australia: 1984

Hadlington PW. and Johnston IA. 1983. Australian Trees. Australia: NSW University press.

Harris, R, Clark, J, & Matheny, N 2004, Arboriculture - Integrated Management of Landscape Trees, Shrubs, and Vines, 4th Edition, Prentice Hall, New Jersey.

Hayes, E (2001) Evaluating Tree Defects, 2nd edition, safe trees, Rochester, MN.

Leake S Elke H (2014) Soil for Landscape Development; Selection, Specification and Validation. CSIRO Victoria.

Lonsdale, D, 1999, Principles of Tree Hazard Assessment and Management, Forestry Commission, London.

Matheny, N.P and Clark, J.R, 1998, Trees and Development: A Technical Guide to Preservation of Trees during Land Development', International Society of Arboriculture, Savoy, Illinois.

Mattheck, C, 2007, Updated Field Guide for Visual Tree Assessment, Karlsruhe Research Centre:

Mattheck, C & Breloer, H 1994, The Body Language of Trees – a handbook for failure analysis.

Research for Amenity Trees No 4 Sixth impression – 2008, TSO (The Stationary Office), Norwich, UK.

Morton, A, 2011, Determining the retention value of trees on development site, Illinois, USA E. Thomas Smiley, Nelda Matheny, and Sharon Lilly (2011) Tree Risk Assessment & Principles. ISA Printed USA.

Watson et al, (1996) Replacing Soil in The Root Zone of Mature Trees for Better Health, Journal Arboriculture.

WEBSITES

Bureau of Meteorology, <http://www.bom.gov.au/climate/change>

E-Spade, <https://www.environment.nsw.gov.au/eSpade2WebApp>

Near Maps, <http://maps.au.nearmap.com>

NSW legislation, <https://www.legislation.nsw.gov.au/>

Planning Portal, <https://www.planningportal.nsw.gov.au>

Urban J (2014) Tree Planting Specification. <https://www.jamesurban.net>

Watering Newly-planted Trees, viewed 2021. <https://www.treesimpact.com.au/>

APPENDIXES

Appendix A Visual Tree Assessment (VTA)

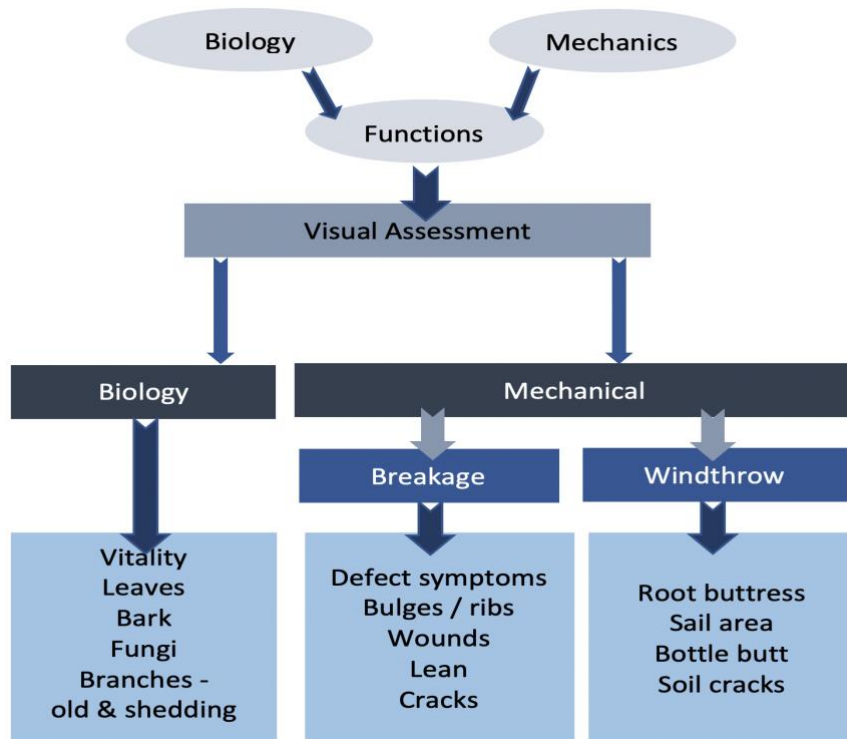


Diagram 1: VTA Chart by Claus Mattheck (1994) *The Body Language of Trees*, adapted.

Schedule 1: Categories for VTA

VISUAL TREE DIAGNOSTICS	
M-Maturity; J-Juvenile; IM-Immature; SM-Semi-Mature; M-Mature	
Health & Vigour	Condition of Tree
	3a Good Condition
	3b Good Condition but poor development
	3c Moderate.
4 Dieback is more than 20%.	
4b Epicormics	
5 Sparse Foliage Crown	5b Unbalanced Canopy
	6 Physical Damage
7 Insect damage-foilage	
7b Borers	
8 Fungal Attack -pathogen	
	9 Cavity
10 Termite activity	
	11 Lean
12b Dying	12 Heavily pruned
	13 Damage to roots
	13b Encroachment
14 Parasitic Vine Present	
15 Damage by Climbing Plant	
	16 Inclusions
17 Habitat Tree	
18 Endangered Species	

Appendix B Tree Useful Life Expectancy (TULE)

Schedule 2: SULE (2001) adapted with permission from author J. Barrell (2014) for TCAA members.

	1 LONG TULE	2 MEDIUM TULE	3 SHORT TULE	4 REMOVE	5 MOVE OR REPLACE	6 SMALL, YOUNG OR REGULARLY CLIPPED
	Trees that appeared to be retainable for more than 40 years with an acceptable degree of risk, assuming reasonable maintenance. Or with low level of risk.	Trees that appeared to be retainable for 15 to 40 years with an acceptable degree of risk, assuming reasonable maintenance. Or with low to medium level of risk.	Trees that appear to be retainable at the time of assessment for 5 to 15 years with an acceptable degree of risk, assuming reasonable maintenance. Or with medium to high level of risk.	Trees which should be removed within the next 5 years. Or with high to very high level of risk.	No potential for retention. Trees which can be readily moved or replaced. Or with very high to extreme level of risk.	Trees that can be easily transplanted or replaced.
A	Structurally sound trees located in positions that can accommodate future growth.	Trees that may only live for between 15 and 40 more years.	Trees that may only live for between 5 and 15 more years.	Dead, dying, suppressed or declining trees through disease or inhospitable conditions.	Small trees less than 5 meters (m) in height.	Small trees less than 5 meters in height.
B	Trees that could be made suitable for retention in the long term by remedial tree care.	Trees that may live for more than 40 years, but would need to be removed for safety or nuisance reasons	Trees that may live for more than 15 years, but would need to be removed for safety or nuisance reasons	Dangerous trees through instability or recent loss of adjacent trees.	Young trees less than 15 years old but over 5m in height.	Young trees less than 15 years old but over 5 meters in height.
C	Trees of special significance for historical, commemorative or rarity reasons that would warrant extraordinary efforts to secure their long-term retention.	Trees that may live for more than 40 years but should be removed to prevent interference with more suitable individuals or to provide space for new planting.	Trees that may live for more than 15 years but should be removed to prevent interference with more suitable individuals or to provide space for new planting.	Dangerous trees through structural defects including cavities, decay, bark, wounds or poor form.	Dangerous trees through structural defects including cavities, decay, included bark, wounds or poor form.	Trees that have been regularly pruned to artificially control growth.
D		Trees that could be made suitable for retention in the medium term by remedial tree care.	Trees that require substantial remedial tree care and are only suitable for retention in the short term	Damaged trees that are clearly not safe to retain.	Dangerous trees through instability or recent loss of adjacent trees.	
E				Trees that may live for more than 5 years but should be removed to prevent interference with more suitable individuals or to provide space for new planting.	High Toxicity Allegan trees, asthmatic and poisonous trees and must be removed immediately.	
F				Trees that may cause damage to existing structures within 5 years.	Dead, dying or declining trees diseased or inhospitable conditions.	
G				Trees that will become dangerous after removal of other trees for reasons given in A to F.	OTHER, with legitimate explanation	
INSPECTION FREQUENCY						
	Every 1-5 years by a competent inspector, or event monitored.	Every 1-5 years by a competent inspector, or event monitored.	Every 1-3 years by a competent inspector, or event monitored.	Ascertain timeframe up to 1 year. By a competent inspection, or event monitored.	Ascertain timeframe up to 7-12 days. By a competent inspection, or event monitored.	Bi-annually by a competent inspector.

Appendix C Tree A-Z Categories and Retention Value Rating

Schedule 3: Tree A-Z Categories Field Sheet (version 10.10-ANZ) Barrell (2019)

Criteria for Assessing the importance of Trees on Development Sites.

Figure 1: TreeAZ Categories (Version 10.10-ANZ)

CAUTION: TreeAZ assessments must be carried out by a competent person qualified and experienced in arboriculture. The following category descriptions are designed to be a brief field reference and are not intended to be self-explanatory. They must be read in conjunction with the most current explanations published at www.TreeAZ.com.

Category Z: Unimportant trees not worthy of being a material constraint

Local policy exemptions: Trees that are unsuitable for legal protection for local policy reasons including size, proximity and species

- Z1** Young or insignificant small trees, i.e. below the local size threshold for legal protection, etc
- Z2** Too close to a building, i.e. exempt from legal protection because of proximity, etc
- Z3** Species that cannot be protected for other reasons, i.e. scheduled noxious weeds, out of character in a setting of acknowledged importance, etc
- High risk of death or failure:** Trees that are likely to be removed within 10 years because of acute health issues or severe structural failure
- Z4** Dead, dying, diseased or declining
- Z5** Severe damage and/or structural defects where a high risk of failure cannot be satisfactorily reduced by reasonable remedial care, i.e. cavities, decay, included bark, wounds, excessive imbalance, overgrown and vulnerable to adverse weather conditions, etc
- Z6** Instability, i.e. poor anchorage, increased exposure, etc
- Excessive nuisance:** Trees that are likely to be removed within 10 years because of unacceptable impact on people
- Z7** Excessive, severe and intolerable inconvenience to the extent that a locally recognized court or tribunal would be likely to authorize removal, i.e. dominance, debris, interference, etc
- Z8** Excessive, severe and intolerable damage to property to the extent that a locally recognized court or tribunal would be likely to authorize removal, i.e. severe structural damage to surfacing and buildings, etc
- Good management:** Trees that are likely to be removed within 10 years through responsible management of the tree population
- Z9** Severe damage and/or structural defects where a high risk of failure can be temporarily reduced by reasonable remedial care, i.e. cavities, decay, included bark, wounds, excessive imbalance, vulnerable to adverse weather conditions, etc
- Z10** Poor condition or location with a low potential for recovery or improvement, i.e. dominated by adjacent trees or buildings, poor architectural framework, etc
- Z11** Removal would benefit better adjacent trees, i.e. relieve physical interference, suppression, etc
- Z12** Unacceptably expensive to retain, i.e. severe defects requiring excessive levels of maintenance, etc

NOTE: Z trees with a high risk of death/failure (Z4, Z5 & Z6) or causing severe inconvenience (Z7 & Z8) at the time of assessment and need an urgent risk assessment can be designated as ZZ. ZZ trees are likely to be unsuitable for retention and at the bottom of the categorization hierarchy. In contrast, although Z trees are not worthy of influencing new designs, urgent removal is not essential and they could be retained in the short term, if appropriate.

Category A: Important trees suitable for retention for more than 10 years and worthy of being a material constraint

- A1** No significant defects and could be retained with minimal remedial care
- A2** Minor defects that could be addressed by remedial care and/or work to adjacent trees
- A3** Special significance for historical, cultural, commemorative or rarity reasons that would warrant extraordinary efforts to retain for more than 10 years
- A4** Trees that may be worthy of legal protection for ecological reasons (Advisory requiring specialist assessment)

Schedule 4: Tree Retention Value. Morton, A (2011)

Evaluating Sustainability and Landscape Significance to Determine Retention Value.	
RETENTION VALUE	CRITERIA AND CATEGORIES
HIGH	Trees considered worthy of preservation. Consideration should be given to their retention as a priority. Proposed site design and placement of buildings and infrastructure should consider the TPZ's as discussed in the following section to minimise any adverse impact. In addition to TPZ's, the extent of the canopy should also be considered, particularly in relation to a high-rise development. Significant pruning of the trees to accommodate the building envelope or temporary scaffolding is generally not acceptable.
MODERATE	The retention of these trees is desirable. These trees should be retained as part of any proposed development if possible, however these trees are considered less critical for retention. If these trees must be removed, replacement planting should be considered in accordance with Council's Tree Replacement Policy to compensate for loss of amenity.
LOW	Not considered worthy of special measures to ensure their preservation, due to current health, condition, or suitability. They do not have any special ecological, heritage or amenity value, or these values are substantially diminished due to their SULE. These trees should not be considered as a constraint to the future development of the site.
VERY LOW	Trees are considered potentially hazardous or very poor specimens or may be environmental or noxious weeds. The removal of these trees is therefore recommended regardless of the implications of any proposed development.

Appendix D

Landscape Significance Rating

Schedule 5: Criteria for Assessment of Landscape Significance. Morton, A (2006)

RATING	HERITAGE VALUE	ECOLOGICAL VALUE	AMENITY VALUE
SIGNIFICANT	The subject tree is listed as a Heritage Item under the Local Environment Plan (LEP) with a local, state, or national level of significance or is listed on Council's Significant Tree Register.	The subject tree is scheduled as a Threatened Species as defined under the Threatened Species Conservation Act 1995 (NSW) or the Environmental Protection and Biodiversity Conservation Act 1999.	The subject tree has a very large live crown size exceeding 300m ² with normal to dense foliage cover, is in a visually prominent position in the landscape, exhibits very good form and habit typical of the species.
	The subject tree forms part of the curtilage of a Heritage Item (building/structure/artefact as defined under the LEP) and has a known or documented association with that item.	The tree is a locally indigenous species, representative of the original vegetation of the area and is known as an important food, shelter, or nesting tree for endangered or threatened fauna species.	The subject tree makes a significant contribution to the amenity and visual character of the area by creating a sense of place or creating a sense of identity.
	The subject tree is a Commemorative Planting having been planted by an important historical person (s) or to commemorate an important historical event.	The subject tree is a remnant tree, being a tree in existence prior to development of the area.	The tree is visually prominent in view from surrounding areas, being a landmark or visible from a considerable distance.
VERY HIGH	The tree has a strong historical association with heritage items (building/structure/artefact/garden etc..) within or adjacent the property and/or exemplifies a particular era or style of landscape design associated with the original development of the site.	The tree is a locally indigenous species, representative of the original vegetation of the area and is a dominant or associated canopy species of an Endangered Ecological Community (EEC) formerly occurring in the area occupied by the site.	The subject tree has a very large live crown size exceeding 200m ² , a crown density exceeding 70% (normal-dense), is a very good representative of the species in terms of its form and branching habit or is aesthetically distinctive and makes a positive contribution to the visual character and the amenity of the area.
HIGH	The tree has a suspected historical association with a heritage item or landscape supported by anecdotal or visual evidence.	The tree is a locally indigenous species and representative of the original vegetation of the area and the tree is located within a defined Vegetation Link/Wildlife Corridor or has known wildlife habitat value.	The subject tree has a large live crown size exceeding 100m ² ; The tree is a good representative of the species in terms of its form and branching habit with minor deviations from normal (e.g., crown distortion/suppression) with a crown density of at least 70% (normal); The subject tree is visible from the street and surrounding properties and makes a positive contribution to the visual character and the amenity of the area.
MODERATE	The tree has no known or suspected historical association but does not detract or diminish the value of the item and is sympathetic to the original era of planting.	The subject tree is a non-local native or exotic species that is protected under the provisions of this DCP.	The subject tree has a medium live crown size exceeding 40m ² ; The tree is a fair representative of the species, exhibiting moderate deviations from typical form (distortion/suppression etc.) with a crown density of more than 50% (thinning to normal); and The tree is visible from surrounding properties but is not visually prominent – the view may be partially obscured by other vegetation or built forms. The tree makes a fair contribution to the visual character and amenity of the area.
LOW	The subject tree detracts from heritage values or diminishes the value of a heritage item.	The subject tree is scheduled as exempt (not protected) under the provisions of this DCP due to its species, nuisance, or position relative to building or other structures.	The subject tree has a small live crown size of less than 40m ² and can be replaced within the short term (5-10 years) with new tree planting.
VERY LOW	The subject tree is causing significant damage to a heritage item.	The subject tree is listed as an Environment Weed Species in the relevant Local Government Area, being invasive, or is a known nuisance species.	The subject tree is not visible from surrounding properties (visibility obscured) and makes a negligible contribution or has a negative impact on the amenity and visual character of the area. The tree is a poor representative of the species, showing significant deviations from the typical form and branching habit with a crown density of less than 50% (sparse).
INSIGNIFICANT	The tree is completely dead and has no visible habitat value.	The tree is a declared noxious weed under the Biosecurity Act 2015 (NSW) within the relevant Local Government Area.	The tree is completely dead and presents a potential hazard.

Appendix E Tree Planting Specifications

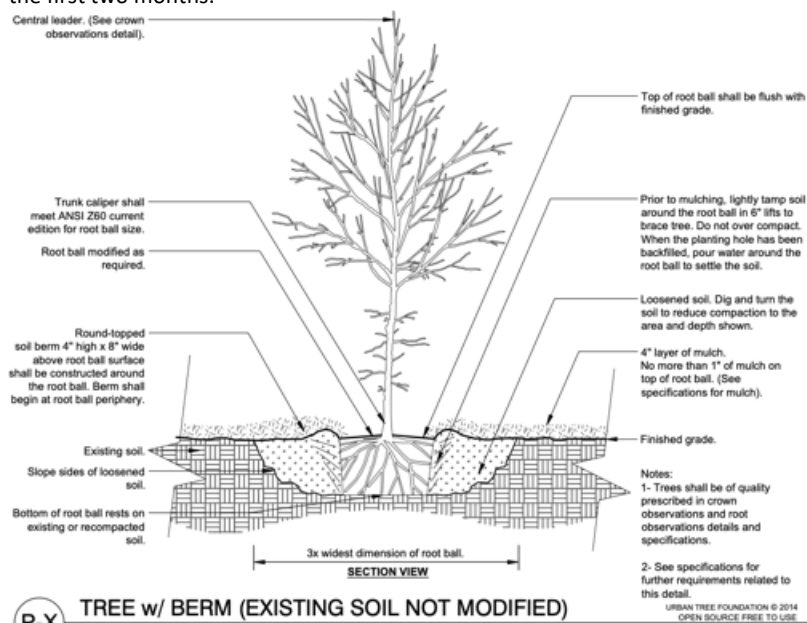
Tree planting specifications are in accordance with NATSPEC Specification for Trees, Ross Clark (2003) and Australian Standard® AS 2303-2018 – Tree Stock for Landscape Use.

Before Planting

Don't plant trees too close to buildings, in-ground pools, avoid planting under power lines and over drainage pipes or near other large trees. A consider the effect on neighbouring properties (i.e. shade, loss of views, impact on foundations, fences and services). Plant deciduous trees if you want in summer shade and winter sun. Consider shadows cast from evergreen trees. Use locally native to attract native fauna and to reduce watering required.

Basic Tree Planting

Dig the hole at least twice as wide as the pot size. Loosen the soil at the sides of the hole. Fill hole with water and allow to drain away. Place the loosened root ball in the hole. Fill back soil. The top of the root ball must be level with the surrounding soil. Water the plant deeply after planting, once a week for the first two months.



Watering Schedule adapted from *Trees Impact: 2021*

Pot size	Watering Amounts	Watering Frequency		
		1-2 weeks	3-12 weeks	After 12 weeks
45L	3 to 6 Litres	Water daily	Water every 2-3 days	Weekly, until roots are established.
100L	5 to 8 Litres			

Water less in winter or after rain

Replenishment of Native Trees Species (guide only check LGA)

Botanical Name	Common Name	Height at maturity (m)	Crown Spread at maturity (m)
<i>Leptospermum petersonii</i>	Lemon Scented Tea Tree	5-8	6-10
<i>Tristaniopsis laurina</i>	Water Gum	7-10	6-10
<i>Corymbia ficifolia</i>	Red-flowing Gum	7-10	3-6
<i>Agonis flexuosa</i>	Willow Maple	7-10	6-8
<i>Melaleuca linariifolia</i>	Snow in summer	8-12	8-10
<i>Waterhousia floribunda</i>	Weeping Lilly Pilly	8-12	5-8
<i>Corymbia ficifolia</i>	Red Flowering Gum	8-12	5-8
<i>Syzygium leuhmannii</i>	Riberry	8-12	5-8
<i>Hymenosporum flavum</i>	Native Frangipani	8-12	6-8
<i>Acacia implexa</i>	Lightwood	8-12	6-8
<i>Elaeocarpus Eumundi</i>	Eumundi Quandong	8-12	4-8
<i>Tristaniopsis laurina</i>	Water gum	9-12	6-10
<i>Callistemon viminalis</i>	Weeping Bottlebrush	10-14	8-10
<i>Melaleuca linariifolia</i>	Flax-leaved Paperbark	10-14	8-10
<i>Corymbia eximia</i>	Yellow Bloodwood	10-14	7-10
<i>Cupaniopsis anacardioides</i>	Tuckeroo	10-14	10-14
<i>Eucalyptus cinerea</i>	Argyle Apple	12-14	7-9
<i>Callistemon salignus</i>	Willow Bottlebrush	12-14	6-8
<i>Eucalyptus cinerea</i>	Argyle Apple	12-14	7-10
<i>Elaeocarpus reticulatus</i>	Blueberry Ash	15-18	8-12
<i>Brachychiton populneus</i>	Kurrajong Tree	15-18	12-15
<i>Flindersia australis</i>	Australian Teak	15-18	10-12
<i>Backhousia citriodora</i>	Lemon Scented Myrtle	18-20	6-8
<i>Lophostemon confertus</i>	Brush Box	20-22	16-20
<i>Angophora costata</i>	Smooth Bark Apple	20-22	10-12

Appendix G tree location gps waypoints

Tree No.	Latitude	Longitude
1	-34.040827	150.803164
2	-34.040808	150.803113
3	-34.040784	150.80307
4	-34.040767	150.80304
5	-34.040741	150.803006
6	-34.040523	150.802991
7	-34.040572	150.802854
8	-34.040555	150.802792
9	-34.040474	150.802825
10	-34.040436	150.802789
11	-34.040423	150.802739
12	-34.040403	150.802681
13	-34.040413	150.802585
14	-34.040407	150.802579
15	-34.040367	150.802555
16	-34.040268	150.802539
17	-34.040191	150.802496
18	-34.040172	150.802533
19	-34.040138	150.802582
20	-34.040395	150.80244
21	-34.040393	150.802425
22	-34.040427	150.802451
23	-34.040404	150.802351
24	-34.040447	150.802355
25	-34.040472	150.802365
26	-34.040501	150.802326
27	-34.040541	150.802375
28	-34.040544	150.802286
29	-34.040917	150.802279
30	-34.040896	150.802267
31	-34.040871	150.802296
32	-34.040847	150.802309
33	-34.040862	150.802296
34	-34.04083	150.802325
35	-34.04076	150.802364
36	-34.040762	150.802401
37	-34.040741	150.802402
38	-34.040729	150.802417
39	-34.04071	150.802439
40	-34.040599	150.802462
41	-34.040611	150.802506
42	-34.040612	150.802522
43	-34.04066	150.802612
44	-34.040668	150.802658
45	-34.04134	150.803337
46	-34.041376	150.803379
47	-34.041391	150.803393
48	-34.041377	150.803413
49	-34.041326	150.803459
50	-34.041343	150.803474
51	-34.04134	150.803476
52	-34.041319	150.803486
53	-34.041329	150.803494
54	-34.041343	150.803521
55	-34.041372	150.803629
56	-34.041393	150.803645
57	-34.041389	150.803679
58	-34.041398	150.803706
59	-34.041402	150.803743
60	-34.041414	150.803851
61	-34.041426	150.803868
62	-34.041406	150.803891
63	-34.041405	150.803898
64	-34.0414	150.803917
65	-34.041396	150.803925
66	-34.041408	150.803924
67	-34.041399	150.803939

Tree No.	Latitude	Longitude
68	-34.041418	150.803955
69	-34.041425	150.804006
70	-34.041408	150.80399
71	-34.04148	150.804053
72	-34.041475	150.804043
73	-34.04148	150.804079
74	-34.041466	150.8041
75	-34.041463	150.804118
76	-34.041453	150.804157
77	-34.041427	150.804179
78	-34.041362	150.804123
79	-34.04142	150.804243
80	-34.041286	150.804261
81	-34.041165	150.80429
82	-34.041154	150.804283
83	-34.041158	150.804296
84	-34.041171	150.804258
85	-34.041152	150.804251
86	-34.041141	150.804255
87	-34.041175	150.804177
88	-34.041098	150.804203
89	-34.041087	150.804194
90	-34.041103	150.804136
91	-34.041134	150.804075
92	-34.041119	150.804016
93	-34.041102	150.803978
94	-34.0411	150.803928
95	-34.041088	150.803883
96	-34.041071	150.803842
97	-34.041064	150.803794
98	-34.04118	150.803571
99	-34.041117	150.803507
100	-34.04104	150.803495
101	-34.040803	150.802816
102	-34.040876	150.802758
103	-34.040847	150.802629
104	-34.04082	150.80259
105	-34.040907	150.803708
106	-34.040887	150.803725
107	-34.040737	150.803841
108	-34.040725	150.803844
109	-34.040675	150.803801
110	-34.040262	150.803753
111	-34.040271	150.803782
112	-34.040295	150.803858
113	-34.040292	150.803904
114	-34.04028	150.803942
115	-34.040258	150.803998
116	-34.040047	150.803837
117	-34.040048	150.803855
118	-34.040045	150.80403
119	-34.040045	150.804069
120	-34.039977	150.804134
121	-34.03995	150.804182
122	-34.039947	150.804178
123	-34.039874	150.804259
124	-34.040093	150.804328
125	-34.040633	150.804235
126	-34.040682	150.804373
127	-34.040748	150.804306
128	-34.040746	150.804404
129	-34.040752	150.804434
130	-34.040801	150.80439
131	-34.040849	150.804344
132	-34.040652	150.804466
133	-34.040664	150.804489
134	-34.040654	150.804501

Tree No.	Latitude	Longitude
135	-34.040639	150.80451
136	-34.040628	150.804505
137	-34.040611	150.804487
138	-34.039949	150.804652
139	-34.03991	150.804652
140	-34.039775	150.804627
141	-34.03902	150.804637
142	-34.039037	150.804659
143	-34.039058	150.804706
144	-34.039086	150.804813
145	-34.039023	150.804837
146	-34.038928	150.804877
147	-34.038902	150.80489
148	-34.038845	150.804863
149	-34.038838	150.804672
150	-34.038819	150.804576
151	-34.03873	150.804528
152	-34.038739	150.804362
153	-34.038732	150.804327
154	-34.03872	150.804254
155	-34.038671	150.804007
156	-34.038671	150.80393
157	-34.038659	150.803823
158	-34.038587	150.803522
159	-34.038485	150.803166
160	-34.038469	150.803142
161	-34.038455	150.803127
162	-34.038443	150.803123
163	-34.038771	150.802986
164	-34.038773	150.802982
165	-34.038789	150.802983
166	-34.038892	150.802956
167	-34.03894	150.802922
168	-34.038982	150.802888
169	-34.038975	150.802844
170	-34.039	150.802839
171	-34.039057	150.802807
172	-34.039115	150.802763
173	-34.039104	150.802756
174	-34.039108	150.802749
175	-34.039132	150.802739
176	-34.039222	150.80271
177	-34.038826	150.803012
178	-34.038964	150.802967
179	-34.039085	150.802893
180	-34.039195	150.802842
181	-34.039253	150.802774
182	-34.039329	150.802724
183	-34.039828	150.802765
184	-34.039848	150.802804
185	-34.039869	150.802826
186	-34.039866	150.802853
187	-34.03988	150.802869
188	-34.039877	150.802887
189	-34.039886	150.802983
190	-34.039924	150.803024
191	-34.040212	150.803037
192	-34.039987	150.803221
193	-34.040005	150.80328
194	-34.040016	150.803327
195	-34.040557	150.803475
196	-34.040605	150.803429
197	-34.040641	150.803357
198	-34.040472	150.803066
199	-34.040405	150.803107

DISCLAIMER

McArdle Arboricultural Consultancy Pty Ltd does not assume responsibility for liability associated with the tree on/or adjacent to this project site, the future demise and/or any damage which may result therefrom. They take care to obtain all information from reliable sources. All data has been verified insofar as possible; however, the consultant can neither guarantee nor be responsible for the accuracy of information provided by others.

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STATEMENT OF LIMITATIONS

McArdle Arboricultural Consultancy Pty Ltd makes every effort to accurately identify current tree health and hazards. Results may or may not correlate to actual tree structural integrity. There are many factors that may contribute to limb or total tree failure. Not all these symptoms are visible. There can be hidden defects that may result in a failure even though it would seem that other, more obvious defects would be the likely cause of failure. All standing trees have an element of unpredictable risk.

The inspection was limited to a visual ground examination of the tree, without aerial inspections and below ground excavations. The assessments are limited and do not include specialised analysis. No internal diagnostics, aerial inspection and pathology test were conducted. Sketches, diagrams, graphs and photographs in this report, being intended as visual aids, are not necessarily to scale.

Due to the variable nature of living organisms and the factors that can impact their health and wellbeing, the report will only be deemed valid for a period of five months from the date it was issued.

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