Martin Peacock Tree Care
Arboricultural & Horticultural Consultancy

Arboricultural Impact Assessment Report

4 Inman Road
Cromer
NSW

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Contents

1.0 Summary

1.1 This report provides an assessment of thirteen (13) tree growing at 4 Inman Road, Cromer, NSW (the site). An additional two (2) trees growing adjacent to the site are also included in this report; however, being located outside of the boundary these trees are to be retained and protected and therefore have not been fully assessed.

1.2 The development proposal for the site includes construction of a new playground and associated landscaping works.

1.3 The development proposal includes the removal of five (5) low value trees and one (1) tree which is listed as an exempt species under Councils Tree Management Controls.

1.4 The development proposal includes the retention of seven (7) trees. The establishment of Tree Protection Zone areas and the use of tree sensitive construction methods will be required when undertaking development works.

1.5 To maintain/enhance the canopy cover at the site, the proposed landscaping treatment includes the planting of eleven (11) advanced size trees.

1.6 The recommendations of this report are subject to approval by Northern Beaches Council.

2.0 Introduction

2.1 This Arboricultural Impact Assessment Report has been prepared on behalf of Learn and Play Child Care Services in relation to the proposed child care centre development at 4 Inman Road, Cromer, NSW (the site).

2.2 This report provides an assessment of thirteen (13) tree growing at the site. An additional two (2) trees growing adjacent to the site are also included in this report; however, being located outside of the boundary, these trees are to be retained and protected and therefore have not been fully assessed.

2.3 The development proposal for the site includes construction of a new playground and associated landscaping works.

2.4 Martin Peacock (Martin Peacock Tree Care) visited the site on the 13th of March 2024 and assessed the trees and their growing environment. It should be noted that the majority of tree identification numbers used in this report have been taken from a previous plans/documentation that are unrelated to the current development application documentation.

3.0 Scope of The Report

3.1 This report has been prepared to meet the following objectives:

- Conduct at ground level, a visual inspection of the subject tree(s) and their growing environment.
- Assess the physiological and structural condition of the subject tree(s).
- Determine the useful life expectancy, quality and value(s) of the subject tree(s).
- Award a retention category for the subject tree(s).
- Assess relevant plans and documentation to determine the potential impacts of the proposed development upon the subject tree(s).
- Make recommendations for retention, removal or remedial works to the subject tree(s), and/or implementation of tree protection measures as appropriate.

3.2 The following plans/documentation were referenced in the preparation of this report:

- Landscape Plan (Rev C), dated 09.03.24 – prepared by Roderick Ward

4.0 Caveats & Limitations

4.1 The subject trees were inspected from the ground only, using the methodology detailed in this report. The findings of this report are based on the observations made at the time of inspection (13/03/24), and from the information contained within the supplied plans/documentation.

4.2 This report reflects the subject trees as found on the day of inspection. There is no warranty or guarantee, expressed or implied, that problems or deficiencies with the site or the subject trees may not arise in the future. Any changes to development proposals or tree management works beyond those recommended in this report may alter the findings of the report.

5.0 Methodology

5.1 Data Collection:

The methodology used in this report follows the procedures detailed in *Australian Standard: AS 4970—2009. Protection of Trees on Development Sites*. This report also references the *British Standard BS: 5837 (2005) Trees in Relation to Construction – Recommendations.*

The methodology used in this report provides the following information:

1. Tree species - botanical and common name.
2. Age class - Juvenile, semi-mature, mature, senescent.
3. DBH – Diameter at breast height (mm)*
4. Height – estimated total height (m)
5. Crown spread – estimated, average radial crown spread in meters (m)
6. Physiological condition - good, fair, poor
7. Structural condition - good, fair, poor
8. Useful Life Expectancy - <5, 5–15, 15–40, >40 (years)**
9. Quality & Value – A, B, C, D ***
10. Retention Category - Priority for Retention, Consider for Retention, Consider for Removal, Priority for Removal****
11. SRZ – Structural Root Zone radius (m)
12. TPZ – Tree protection Zone radius (m)
13. Comments / Preliminary Management Recommendations

5.2 *DBH (Diameter at Breast Height) - Stem /trunk diameter measured at 1.4m above ground level. On sloping ground, measurements will be taken at the mid slope point at the base of the tree. Where a tree stem / trunk begins to branch at a point that is less than 1.4m above ground, a combined stem diameter is calculated using the formula:
Total DBH = $\sqrt{\ DBH^2 + DBH^2 + DBH^2}$

5.3 **Useful Life Expectancy – The estimated lifespan of the tree over which it will positively contribute to the amenity of the area and to the local environment, in a safe, healthy condition.

5.4 ***Quality & Value – The quality of the tree when compared to an idealised example of the species and the values which the tree provides to the site and local area (see Appendix D – Cascade Chart for Assessment of Tree Quality & Value).

5.5 ****Retention Category – The subject tree is allocated one of four categories based on a combination of its Quality and Value and Useful Life Expectancy. A certain amount of flexibility may be allowed when allocating a Retention Category, to take into account tree species, significance and site/environmental conditions.

5.6 An assessment of the trees condition is made using the Visual Tree Assessment (VTA) method (Mattheck & Breoler, 1994).

5.7 Tree assessment results are recorded in the Tree Assessment Schedule (see section 6.0 Results). Note: for trees outside of the site only the species and DBH is recorded for the purposes of calculating the SRZ/TPZ.

6.0 Results

6.1 Tree Assessment Schedule Site: 4 Inman Road, Cromer, NSW Date of survey: 13.03.24

Tree ref. no.	Species	Age Class	DBH (mm)	Height (m)	Crown Spread (m)	Physiological Condition	Structural Condition	Useful Life Expectancy (years)	Quality & Value	Retention Category	TPZ (m)	SRZ (m)
T1	*Melaleuca bracteata* (Black Tea Tree)	Mature	200 x2 100 x2 50	9	4	Fair	Good	5-15	C	Consider for Removal	3.9	2.1
T2	*Eucalyptus botryoides* (Bangalay)	-	650	-	-	-	-	-	-	Retain – outside of site	7.8	2.8
T3	*Eucalyptus sieberi* (Silvertop Ash)	-	800	-	-	-	-	-	-	Retain – outside of site	9.6	3.0
T63	*Lagunaria patersonii* (Norfolk Island Hibiscus)	Mature	400	10	5	Good	Good	15-40	B	Consider for Retention	4.8	2.3
T65	*Eucalyptus botryoides* (Bangalay)	Mature	775	24	9	Good	Good	15-40	A	Priority for Retention	9.3	3.0

	Comments / Preliminary Management Recommendations
T1	Heavily supressed. Crown density 50-75%. **Proposed for removal.**
T2	Located outside of site, therefore not fully assessed. **To be retained.** No works in TPZ area.
T3	Located outside of site, therefore not fully assessed. **To be retained.** No works in TPZ area.
T63	Minor wounds in various stages of decay. Low volumes of small (<25mm) diameter deadwood throughout crown. **Proposed for removal** (exempt species under Council Tree Management Controls).
T65	Hung up branch in crown. Minor storm damage. Low volumes of small (<25mm) and medium (25-75mm) diameter epicormic growth throughout crown. **Proposed for retention –** Major Encroachment from crushed sandstone paving.

Tree ref. no.	Species	Age Class	DBH (mm)	Height (m)	Crown Spread (m)	Physiological Condition	Structural Condition	Useful Life Expectancy (years)	Quality & Value	Retention Category	TPZ (m)	SRZ (m)
T66	*Eucalyptus sieberi* (Silvertop Ash)	Mature	500	12	6	Poor	Poor	<5	D	Priority for Removal	6.0	2.5
T67	*Eucalyptus botryoides* (Bangalay)	Mature	650	18	8	Good	Good	15-40	B	Consider for Retention	7.8	2.8
T69	*Eucalyptus saligna* (Sydney Blue Gum)	Mature	850	20	9	Good	Good	15-40	A	Priority for Retention	10.2	3.1
T70	*Leptospermum petersonii* (Lemon Scented Tea Tree)	Late Mature	300	6	4	Fair	Fair	5-15	C	Consider for Removal	3.6	2.0
T71	*Eucalyptus botryoides* (Bangalay)	Mature	450 450 600	14	9	Good	Good	15-40	A	Priority for Retention	10.5	3.2
	Comments / Preliminary Management Recommendations											
T66	Crown density 0-25%. Extensive crown dieback. **Proposed for removal.**											
T67	Partially supressed. Low volumes of small (<25mm) and medium (25-75mm) diameter epicormic growth throughout crown. Branch contact with roof of building. Storm damage. Pruning required for building clearance. **Proposed for retention.** Major Encroachment from crushed sandstone paving, sandpit and play equipment.											
T69	Moderate volumes of small (<25mm) and medium (25-75mm) diameter epicormic growth throughout crown. Low volumes of medium (25-75mm) diameter deadwood throughout crown. **Proposed for retention.** Major Encroachment from crushed sandstone paving, decking and play equipment.											
T70	Partially supressed. Minor co-dominant inclusion. Crown density 25-50%. Moderate volumes of small (<25mm) and medium (25-75mm) diameter deadwood throughout crown. **Proposed for removal.**											
T71	Moderate volumes of small (<25mm), medium (25-75mm) and large (>75mm) diameter epicormic growth throughout crown. Storm damage. **Proposed for retention.** Major Encroachment from decking and play equipment.											

Tree ref. no.	Species	Age Class	DBH (mm)	Height (m)	Crown Spread (m)	Physiological Condition	Structural Condition	Useful Life Expectancy (years)	Quality & Value	Retention Category	TPZ (m)	SRZ (m)
T72	*Callistemon viminalis* (Weeping Bottlebrush)	Mature	100 150 75	6	3	Poor	Fair	<5	D	Priority for Removal	2.4	1.7
T73	*Melaleuca bracteata* (Black Tea Tree)	Mature	200 x2 175 150	8	4	Good	Good	15-40	C	Consider for Removal	4.5	2.2
T74	*Dracaena marginata* (Dragon Tree)	Mature	600 @ grade	4	3	Good	Good	15-40	C	Consider for Removal	7.2	2.7
T75	*Hibiscus tiliaceus* (Sea Hibiscus)	Mature	100 x2 500 200	9	9	Good	Fair	5-15	C	Consider for Removal	6.6	2.6
T76	*Eucalyptus botryoides* (Bangalay)	Mature	850	24	10	Good	Good	15-40	A	Priority for Retention	10.2	3.1
	Comments / Preliminary Management Recommendations											
T72	Heavily supressed with poor form. Crown density 0-25%. **Proposed for removal.**											
T73	Minor co-dominant inclusions. Crown density 75-95%. Partially supressed. **Proposed for retention.** Major Encroachment from play equipment.											
T74	n/a. **Proposed for retention** (exempt species – under 5m in height). Major Encroachment from decking.											
T75	High volumes of small (<25mm) and medium (25-75mm) diameter epicormic growth throughout crown. Poor form. Partially supressed. **Proposed for removal.**											
T76	Moderate volumes of medium (25-75mm) and large (>75mm) diameter epicormic growth throughout crown. Moderate volumes of medium (25-75mm) and large (>75mm) diameter dead wood throughout crown. Storm damage with partially failed branch over roof of building. Pruning required for building clearance. **Proposed for retention.** Major Encroachment from decking, fence and access gate.											

7.0 Observations

7.1 The trees within the site have been assessed in accordance with *Australian Standard AS4970 (2009) Protection of trees on development sites* (AS4970) to determine their; condition, quality and value(s), Useful Life Expectancy and to allocate a Retention Category. Full details of the assessment are listed in 6.1 Tree Assessment Schedule.

7.2 **The allocation of a Retention Category is a requirement of AS4970** and provides and overview of the quality and value of trees on site. Retention Categories are a guide only and do not take into account design considerations/constraints relating to the development proposal. **It should be noted that Retention Categories are not a schedule for tree removal or retention.**

7.3 Trees Proposed for Retention:

The table below provides a summary of the quality and value and Retention Category of those trees proposed for retention:

Quality & Value	Retention Category	Tree no.
A - High	Priority for Retention	T65, T69, T71, T76
B - Moderate	Consider for Retention	T67
C - Low	Consider for Removal	T73, T74
D – Not suitable for Retention	Priority for Removal	-

The supplied plans show all of these trees will be subject to a Major Encroachment (as defined by AS4970) within their Tree Protection Zone (TPZ) areas from the development proposal. However, the proposal has been designed to minimise the impact of encroachment upon the trees.

7.4 Trees Proposed for Removal:

The table below provides a summary of the quality and value and Retention Category of those trees proposed for removal:

Quality & Value	Retention Category	Tree no.
A - High	Priority for Retention	-
B - Moderate	Consider for Retention	T63
C - Low	Consider for Removal	T1, T70, T75
D – Not suitable for Retention	Priority for Removal	T66, T72

With the exception of Tree T63, the trees proposed for removal are all low value specimens that provide only limited amenity and canopy cover to the site.

Tree T63 is listed as an exempt species under Councils Tree Management Controls and is considered unsuitable for retention within a playground area due to the irritant hairs contained within the seed pods.

Trees allocated Retention Category D have a very short Useful Life Expectancy and would be recommended for removal regardless of the development proposal.

7.5 Trees Outside of the Site:

Trees T2 and T3 are large, mature specimens growing adjacent to the northern boundary of the site. The TPZ areas of these trees extend into the site; however, the supplied plans show no development works (other than mulch installation) are proposed within their TPZ areas.

8.0 Discussion

8.1 The removal of Trees T1, T63, T66, T70, T72, T75 will have minimal impact on the amenity and canopy cover at the site as the trees are all relatively small specimens. To maintain/enhance the amenity and canopy cover at the site, the Landscape Plan includes the installation of eleven (11) advanced size trees.

8.2 The majority of the site comprises of overlapping TPZ areas, and the proposed development works represent a Major Encroachment (as defined by AS4970) with the TPZ areas of the trees proposed for retention. To minimise the impact of the encroachments the proposed crushed sandstone paving, decking and play equipment should be installed above existing grade. Footing for the play equipment, fence and gate should be installed on isolated piers, located to avoid significant roots (as determined by the Project Arborist). Mechanical removal of existing turf must be avoided, due to the potential for damage to surface tree roots.

8.3 At the time of the tree assessment (13.03.24) it was noted that there was limited clearance between the crowns of Trees T67 and T76 and the roof of the adjacent building. Pruning is recommended to provide additional building clearance and remove significant dead wood and storm damaged branches. A Pruning Specification is contained within Appendix B – Photographs. The recommended pruning works will be minor in nature and should remove less than 5% of each trees total crown volume.

8.4 To protect the trees from accidental damage and soil compaction within the trees' root zones, the installation of trunk and ground protection within TPZ areas will be required during the construction stage of the project.

9.0 Recommendations

9.1 Trees T1, T63, T66, T70, T72, T75 are proposed for removal, and Trees T67 and T76 are proposed for pruning.

Approved tree removals/pruning shall be undertaken by a qualified Arborist (minimum AQF level 3) covered by adequate third party, public liability insurance. Arborists and ground staff shall comply with the *Work Cover Code of Practice for the Amenity Tree Industry*.

Trees T67 and T76 shall be pruned in accordance with the Pruning Specification contained within Appendix B – Photographs. All pruning works shall comply with *Australian Standard AS4373 (2007) Pruning of amenity trees.* **Refer: Appendix B - Photographs**

9.2 As part of the site establishment works, install trunk protection for Trees T65, T67, T69, T71, T73, T74, T76. For the purposes of tree protection, the entire site shall be designated as a single TPZ area. Construction machinery and vehicle movements within the site shall be restricted to areas of ground protection (HDPE ground mats or plywood sheeting) at all times. **Refer: Appendix C - Establishment of TPZ Areas**

9.3 Existing ground levels within the site shall be maintained and all new surfaces, structures and features shall be installed above existing grade.

9.4 Prior to installation of the crushed sandstone paving, sand pit and mulch, the existing turf within these areas shall be sprayed off with a Glyphosate based herbicide. Turf shall be left to die and desiccate before being raked off using hand tools only. **Mechanical removal of turf is not permissible**.

9.5 The proposed decking shall be installed over the existing concrete slab.

9.6 Play equipment and the fence and access gate shall be installed on piered footings. Pier locations shall be excavated by hand and where roots >25mm diameter are encountered the pier hole shall be relocated (unless root pruning is approved by the Project Arborist). Where required, pier holes shall be sleeved to protect roots form damage through contact with highly alkaline, fresh concrete.

9.7 New trees shall be grown and supplied in accordance with *AS:2303 2018 Tree stock for landscape use.* The planting and aftercare of the trees shall be undertaken by a qualified horticulturalist (minimum AQF level 3).

9.8 The recommendations of this report are subject to approval by Northern Beaches Council.

Martin Peacock

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Higher National Diploma Arboriculture (UK)
National Diploma Horticulture (Arb.) (UK)
Diploma Horticulture (Landscape Design) (AUS)

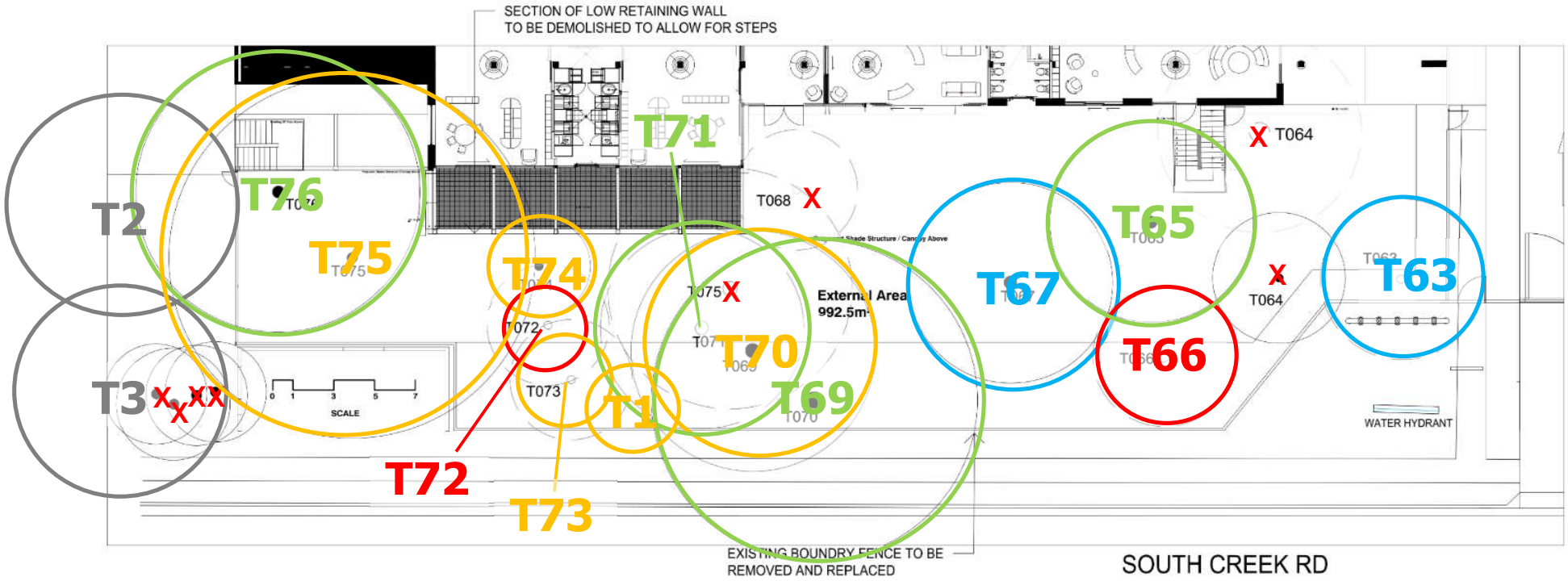
References

Australian Standard: *AS 4970 - 2009 Protection of trees on development sites*. Standards Australia GPO Box 476, Sydney, NSW, 2001.

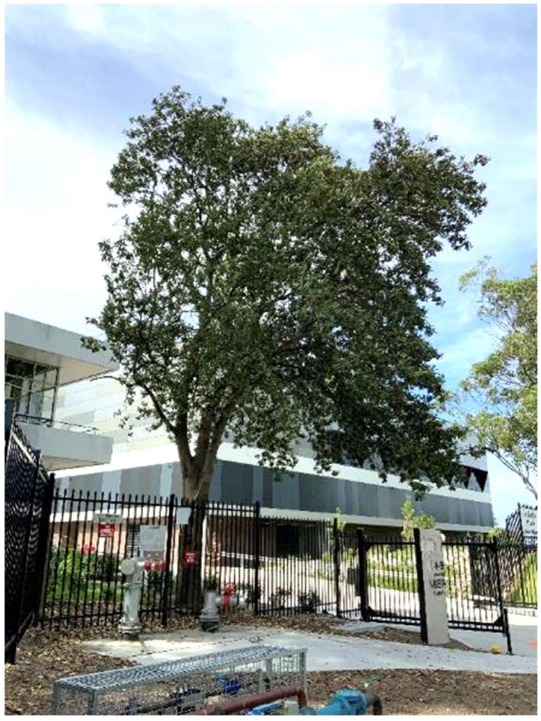
British Standard Institution (2005). *Guide for Trees in relation to construction*. BSI, 2 Park Street, London W1A 2BS.

Draper B.D. and Richards P.A. (2009), *Dictionary for Managing Trees in Urban Environments*, Institute of Australian Consulting Arboriculturists (IACA), CSIRO Publishing, Collingwood, Victoria, Australia.

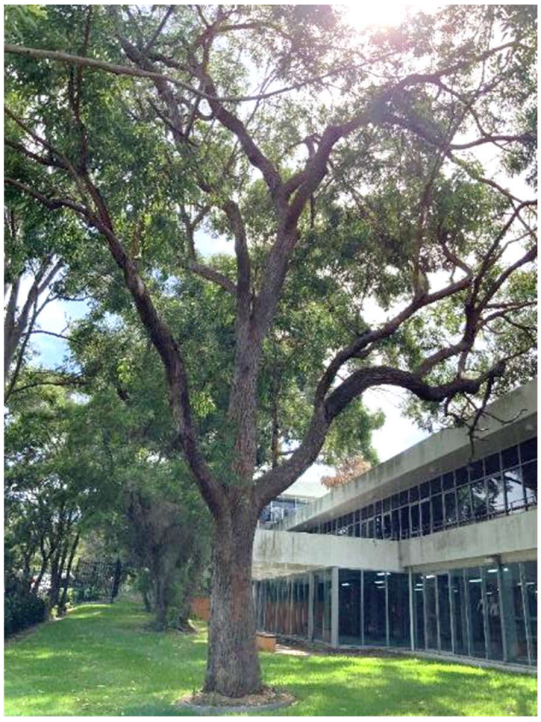
Appendix A - Tree Location Plan



Appendix B – Photographs



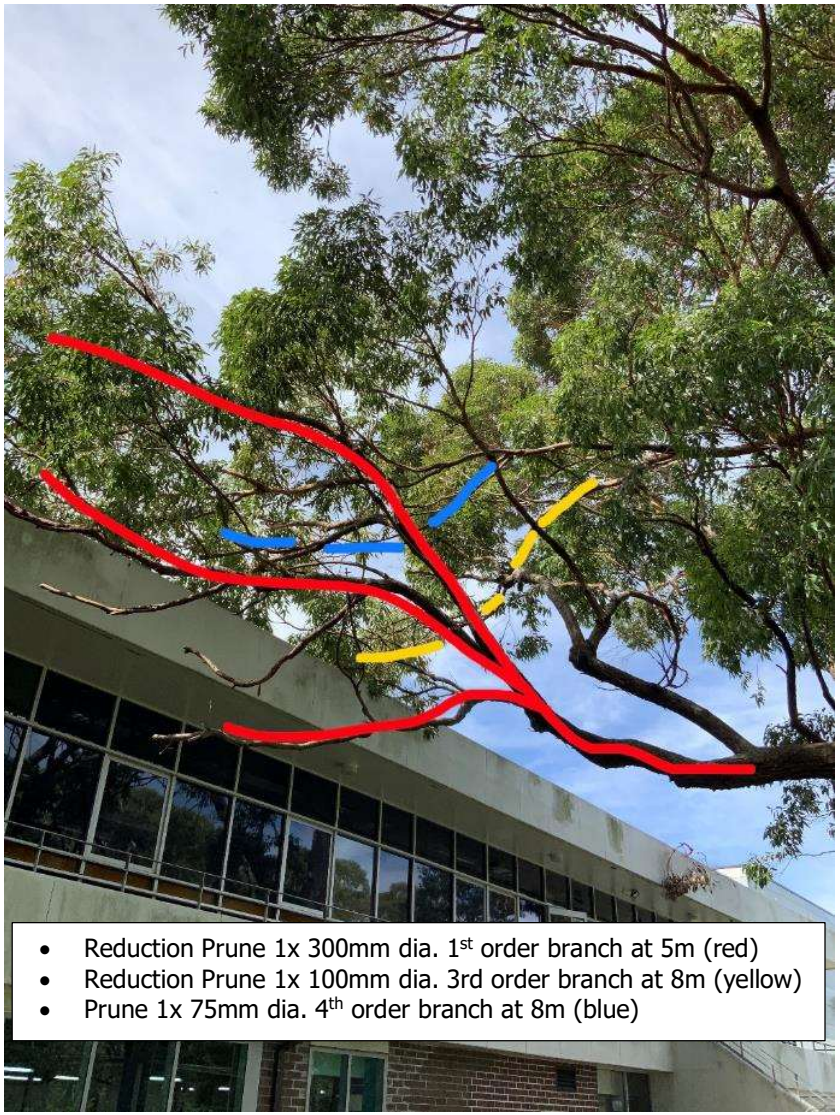
1: Tree T1



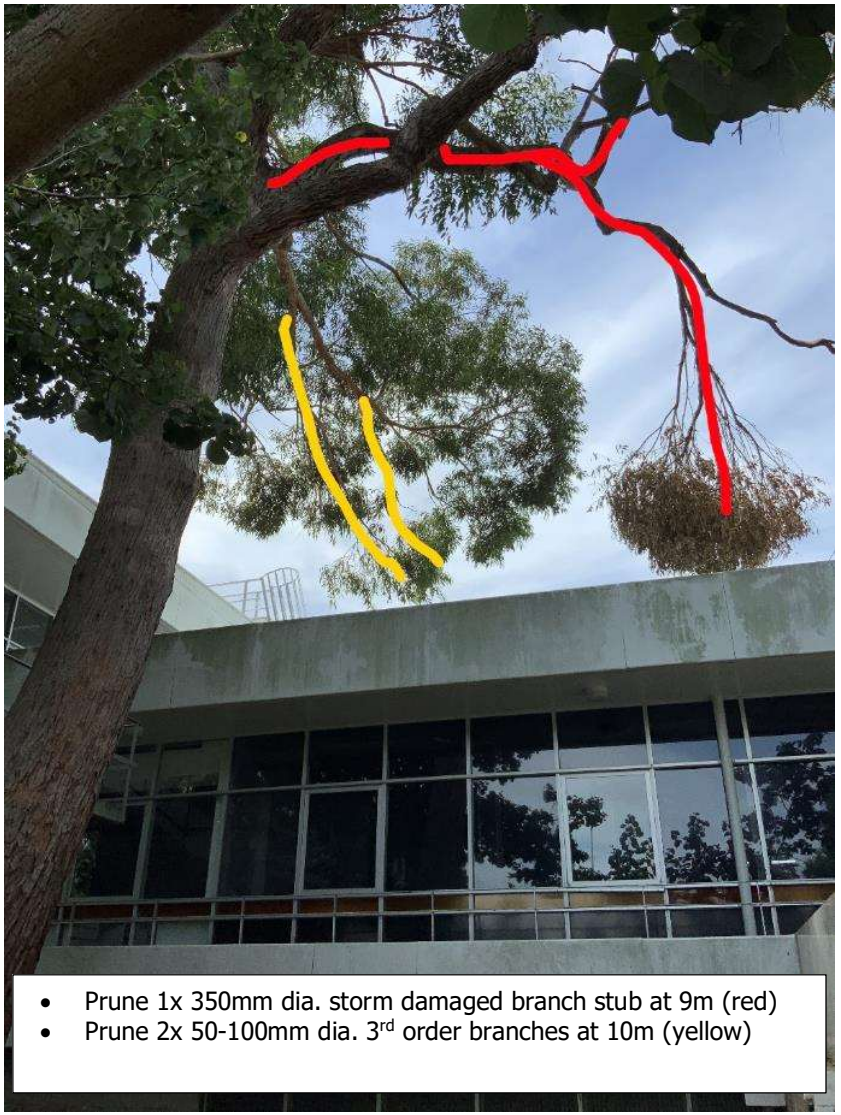
Tree T67

3: Tree T69

4: Tree T75

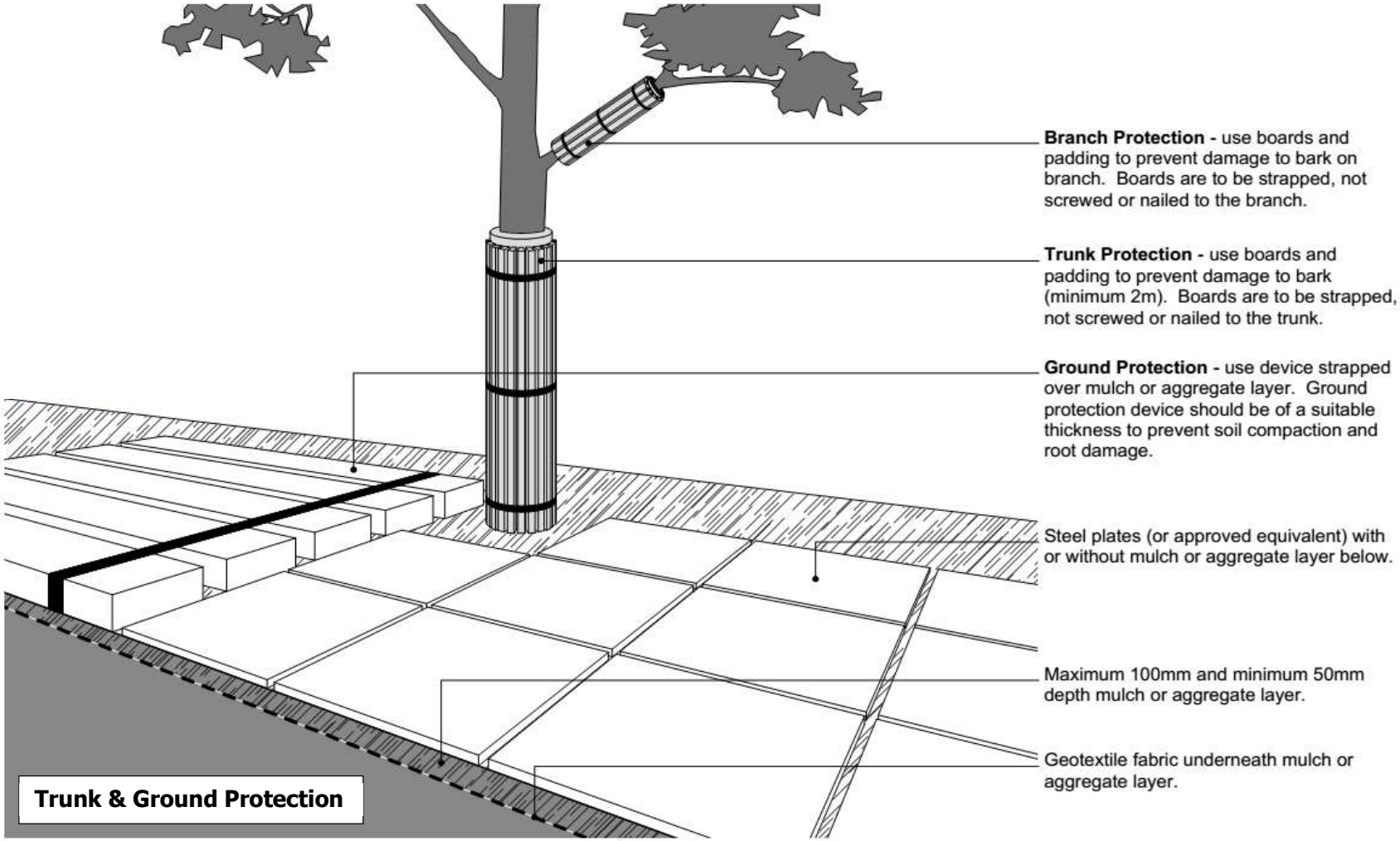


5: Pruning Specification Tree T67



6: Pruning Specification Tree T76

Appendix C – Establishment of TPZ Areas



Appendix D - Cascade Chart for Assessment of Tree Quality & Value

(Adapted from British Standard Institution (2005). Guide for Trees in Relation to Construction)

RETENTION CATEGORY & DEFINITION	CRITERIA - SUBCATEGORIES			IDENTIFICATION IF SHOWN ON A PLAN
	1. Mainly Arboricultural values	2. Mainly landscape values	3. Mainly cultural values, including conservation	
Category A **High Quality & Value:** Those in such a condition as to be able to make a substantial contribution for a minimum of 40 years. Highly significant trees or trees listed on a significant tree register regardless of life expectancy (excluding hazardous trees). **Priority for retention.**	Trees that are particularly good examples of their species, especially if rare or unusual or essential components of groups or of formal or semi-formal Arboricultural features (e.g. The dominant and / or principal trees within an avenue). Trees that provide a definite contribution to the amenity of the locality.	Trees, groups or woodlands which provide a definite screening or softening effect to the locality in relation to views into or out of the site, or those of particular visual importance (e.g. Avenues or other Arboricultural features assessed as groups).	Trees, groups, remnant bushland or forest of significant conservation, historical, Aboriginal, commemorative or other value. Note: independent ecological/aboriginal/heritage assessment may be required.	GREEN
Category B **Moderate Quality & Value:** Those in such a condition as to make a significant contribution for a minimum of 15 years. **Consider for retention.**	Trees that might be included in the high category, but are downgraded because of impaired condition (e.g. presence of remediable defects including unsympathetic past management and minor storm damage).	Trees situated mainly internally to the site, therefore individually having little visual impact on the wider locality or, trees present in numbers, usually as groups or woodlands, such that they from distinct landscape features, thereby attracting higher collective rating than they might as individuals but which are not, individually essential components of formal or semi formal Arboricultural features (e.g. trees or moderate quality within an avenue that includes better A category specimens).	Trees with clearly identifiable conservation or other cultural benefits.	BLUE
Category C **Low Quality & Value:** Those in such a condition as to make a contribution for a minimum of 5 years. **Consider for removal.**	Trees not qualifying in higher categories. Juvenile, semi mature or small tree species which are considered easily replaceable.	Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value, and / or trees offering low or only temporary screening benefit.	Trees with very limited conservation or other cultural benefits.	ORANGE
Category D **Not worthy of retention:** Those in such a condition that any existing value would be lost within 5 years and which should in current context, be removed for reasons of sound Arboricultural management. **Priority for removal**.	Trees that have a serious, irremediable structural defect, such that their early loss is expected due to failure, including those that will become unviable after removal of other trees (i.e. where, for whatever reason the loss of companion shelter cannot be mitigated by pruning). Trees that are dead or are showing signs of significant, immediate and irreversible overall decline Trees infected with a pathogen of significance to the health and/or safety of other trees nearby, or very low-quality trees suppressing adjacent trees of better quality. Trees causing significant damage to structures, where no viable alternatives exist for remedial tree management / modification of structures to enable tree retention. Trees considered a weed species or those listed as noxious weeds. **NOTE:** Dead or dying trees with hollows or cavities may be of ecological importance. These trees are to be identified and assessed independently of the criteria in this cascade chart. Where category D trees are removed habitat reinstatement may be appropriate.			RED