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# **rain Tree consulting**

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12 July 2024

**1 – 5 RICKARD ROAD**

**NORTH NARRABEEN, NSW**

**DEVELOPMENT PROPOSAL**

**ARBORICULTURAL IMPACT  
ASSESSMENT (AIA) REPORT**

*Ref No- 5324*

Prepared for  
ALDA Properties  
101, 20 Clarke Street  
CROWS NEST, NSW

Prepared by  
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## INTRODUCTION

This report has been commissioned by ALDA Properties. The purpose & scope of work is to assess the remaining Useful Life Expectancy (ULE) and potential impacts that may occur to significant trees in relation to a new development proposal. The proposed development consists of constructing a new Shop Top Housing facility within Lots 7, 8 & 9 of DP 16212, being known as 1 – 5 Rickard Road NORTH NARRABEEN NSW.

Recommendations for retention or removal of trees is based on the tree's protection status, being prescribed or non-prescribed trees, tree structural condition, estimated remaining Useful Life Expectancy (U.L.E.) and potential impacts to trees by the design proposal.

Development incursions within tree protection zones (TPZ) are based on percentages of incursion noted within Note 2 of Appendix- A and are described as Negligible (0%), Minor (<10%) & Major (>10%) TPZ occupancy having *Low*, *Moderate* to *High* level impacts within the Tree Protection Zone (TPZ).

Where site restrictions within notional root zone radiuses exist development impacts or encroachment disturbances are based on author's experience, observations of site conditions, soil type and topography.

Each assessed within this report tree has been accorded a temporary identification number and is referred to by number throughout this report. For additional trees not plotted in provided documentation their location has been estimated by taking offsets from existing trees and structures.

The trees assessed, their location, development impact and design requirements have been detailed within the Tree Assessment Schedule and Tree Location Plan of Appendices D & E.

Care has been taken to obtain information from reliable sources. All data has been verified as far as possible, however, I can neither guarantee nor be responsible for the accuracy of information provided by others.

### DISCLAIMER & LIMITATION ON THE USE OF THIS REPORT

This report is to be utilized in its entirety only. Any written or verbal submission, report or presentation that includes statements taken from the findings, discussions, conclusions or recommendations made in this report, may only be used where the whole of the original report (or copy) is referenced in, and directly to that submission, report or presentation. Unless stated otherwise: Information contained in this report covers only the tree/s that were examined and reflects the condition of the trees at the time of inspection: and the inspection was limited to visual examination of the subject tree without dissection, excavation, probing or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the subject tree/s may not arise in the future. Arborist cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specific period of time. Trees are a living entity and change continuously, they can be managed but not controlled and to be associated near one involves some degree of risk.

## METHODOLOGY

1. In preparation for this report a site and ground level visual tree inspection was conducted on Thursday 13 June 2024 by the author of this report. The principles of visual tree inspection were primarily adopted from components of Mattheck & Breloer 1994 'The Body Language of Trees' with basic risk values determined by criteria explained within the ISA TRAQ (tree risk) manual 2017. The inspection included observing the overall health and vigour of trees, tree form, structure and structural condition as best as site conditions would allow. On completion of the inspection the retention value of the tree was summarised utilizing the tree inspection Checklist provided within Appendix- C.
2. The inspection was limited to visual observations where no aerial (climbing) inspections, woody tissue testing, or tree root investigation was undertaken. Tree height and canopy spread was estimated and expressed in metres with trunk diameters measured at approximately 1.4 metres above ground level, rounded off to the nearest 50mm and expressed as DBH (Diameter at Breast Height). Where multi stems at or near the base exist the stem group diameter was estimated as a tight clump. The height of palms was taken from ground level to the top of the crown shaft only and excludes the central apical spear projection with palm Tree Protection Zones (TPZ) determined as 1m outside the canopy projection area.
3. This report acknowledges and utilizes the current Australian Standards 'Protection of Trees on Development Sites' AS4970 – 2009 as explained within Notes of Appendix- A.
4. Unless specified otherwise all distances and development offsets within this report are taken from the centre of the tree as indicated within provided survey and/or design documentation.
5. Plans and/or documentation reviewed to assist in preparation of this assessment include:
  - Gartner Trovato Architects project No: 2315 *specific to*:
    - Demolition Plan Dwg No: DA 02 rev A dated July 2024
    - Site Plan: Dwg No: DA 03 rev A dated July 2024
    - Sub Floor Flood Zone Dwg No: DA 04 rev A dated July 2024
    - Ground Parking Level Dwg No: DA 05 rev A dated July 2024
    - Commercial Retail Level Dwg No: DA 06 rev A dated July 2024
    - Elevations NTH & EST Dwg No: DA 10 rev A dated July 2024
    - Elevations STH & WST Dwg No: DA 11 rev A dated July 2024
    - Sections Dwg No: DA 12 rev A dated July 2024
  - Stutchbury Jaques Pty Ltd
    - Survey Dwg ref No: 11883/23 dated 10.8.2023.

## 1. SUMMARY OF ASSESSMENT

### 1.1 General tree assessment

1.1.1 Eight (8) trees have been assessed for the purpose of this development proposal. Of the eight trees six (6) trees within the site are exempt non-prescribed trees.

1.1.2 Exempt non-prescribed trees within the site are identified as trees:

- T1, 2, 3, 4, 7 & 8.

Of the above trees T1, 2, 3 & 8 are exempt by tree species type, T4 is exempt being under 5m in height and T7 (Sydney Blue Gum) is currently exempt being located within 2m of a dwelling foundation.

Being exempt non-prescribed specimens, the above trees are permitted to be managed (pruned, removed or relocated) without Council consent.

1.1.3 Based on the inspection conducted, apart from low retention value trees identified with Appendix- D, remaining trees T5 & 6 (*Melaleuca trees*) are considered viable for retention without change in existing site conditions or modification within Tree Protection Zone (TPZ) radiuses as indicated within the SRZ & TPZ distance column Appendix- D.

### 1.2 The development proposal

1.2.1 The development proposal of both residential & commercial apartments occupies the majority of the site while allowing for deep soil frontage that supports the retention of prescribed trees T5 & 6.

Land modification to accommodate the Sub Floor Flood Zone is proposed at or near existing ground level where the floor plan design is located within Tree Protection Zone (TPZ) radiuses of prescribed (protected) and non-prescribed trees.

### 1.3 Tree removal to accommodate design

*Exempt tree removal.*

1.3.1 Based on the design footprint the removal of the six (6) exempt non-prescribed trees is required to accommodate the design proposal. The six trees are identified as trees:

- T1, 2, 3, 4, 7 & 8.

1.3.2 The identified impacts by the development proposal and design requirements have been detailed within Appendix- D and are summarized within the following sections.

### 1.4 Discussion of development impacts – *prescribed trees*

1.4.1 Remaining trees T5 & 6 receive overall manageable *Moderate* (15-20%) TPZ encroachments by the design footprint with potential very slight SRZ incursion occurring for pathway access adjacent T5.

- 1.4.2 Given moderate levels of TPZ interference the trees are capable of being managed in accordance with Section 2.3 *General tree protection requirements*, with the following guidelines provided to mitigate impacts by the design proposal.
- The SRZ radius is to remain an excavation exclusion zone.
  - The SRZ area within the site is to be covered with ground protection mats or similar to prevent soil disturbance or work site ground interference & compaction during construction activities.
  - A designated Tree Protection Area (TPA) is to be installed forming a Tree Protection Zone (TPZ) where no additional excavation is to occur without project arborist advice & certification.
  - Within the TPA the initial line of the design footprint required for excavation or grading cut within the TPZ is recommended to be conducted manually, by hand, under the supervision of an appointed site arborist, see Figure 2.
  - Encountered tree roots along the line of cut are to be managed, clean cut & protected as directed or conducted by the arborist in accordance with AS4970 – 2009 Section 4.5.4 *Root protection during works within the TPZ*. All cuts shall be clean cuts made with sharp tools such as secateurs, pruners, handsaws, chainsaws or specialized pruning equipment to prevent site machinery ripping roots beyond the proposed line of excavation.
  - Construction of pathways within the TPZ specifically adjacent T5 is recommended to be of tree sensitive design, being placed on top of ground level without excavation cut or compaction.

Figure 1: showing design footprint & tree removal plan.

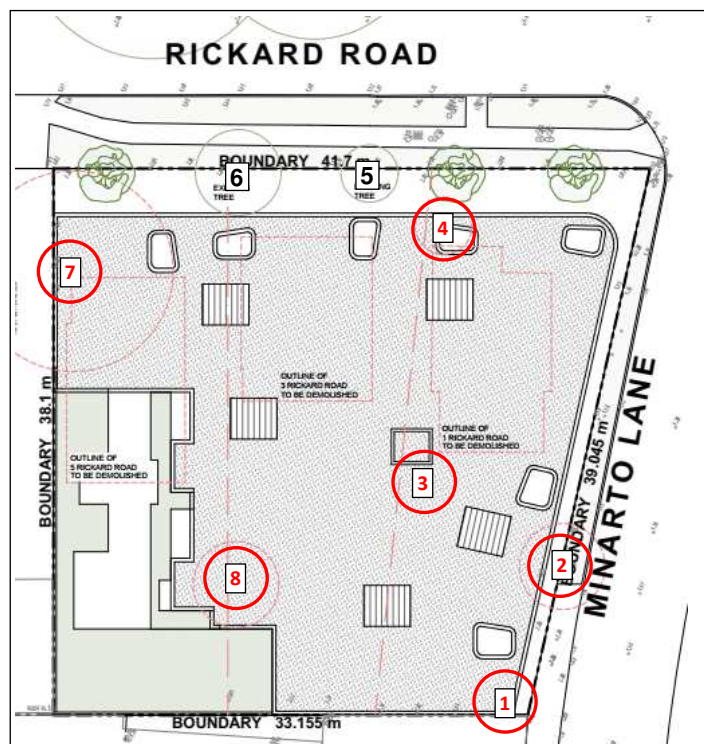
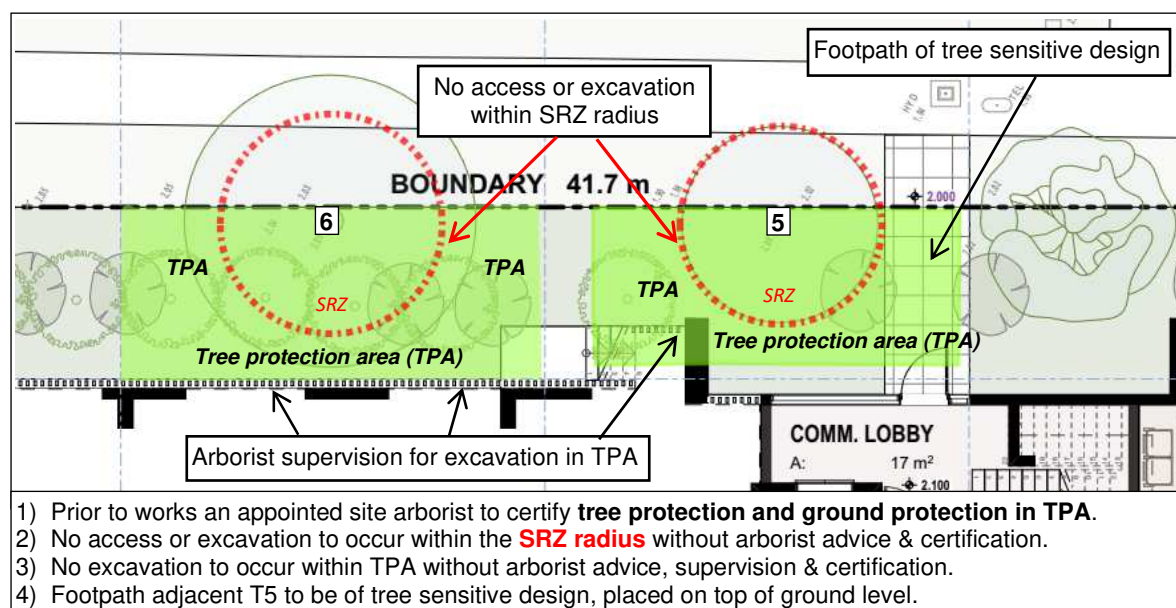


Figure 2: showing Tree Protection Area (TPA).



## 2. CONCLUSIONS & RECOMMENDATIONS

### 2.1 Tree Removal

- 2.1.1 No prescribed (protected) trees require removal to accommodate this development application.
- 2.1.2 Exempt non-prescribed trees requiring and/or recommended for removal to accommodate design are identified as trees: **T1, 2, 3, 4, 7 & 8**.

### 2.2 Specific tree management recommendations

- 2.2.1 In addition to the recommendations provided within this report the following summary or additional recommendations are provided as a guide for tree T5 & 6 management due to the design proposal:
  - a) Prior to works including demolition all trees are to be protected with tree protection fencing and/or similar (timber beam trunk & ground) protection being certified by an appointed site arborist.
  - b) At no stage are works or excavations to occur within Structural Root Zone (SRZ) radiuses, being *the area required for tree stability* (AS4970). Should excavation be required within the SRZ prior project arborist advice & certification is required.
  - c) Given construction site access will likely be required within the TPA the SRZ and designated Tree Protection Area (TPA) is recommended to be protected with ground / root protection mats as indicated within Appendix- B Item [C].
  - d) In addition to the above all standard requirements as indicated within Section 2.3 *General tree protection requirements* apply to the protection of trees T5 & 6.

## 2.3 General tree protection requirements

- a) Prior to site works, including demolition, Tree Protection Fencing (TPF) and/or zones as identified within this report or Appendix- B are recommended to be located under the guidance of an appointed site arborist. Unless specified otherwise the location of tree protection fencing is to be positioned to allow for adequate work access and/or be located at the extremity of the TPZ radius as indicated within the SRZ & TPZ distance column Appendix- D. Where design & construction access may be restrictive by tree protection fencing timber beam trunk protection is recommended to be installed with ground protection mats provided to protect underlying tree roots within tree protection zones or designated tree protection areas (TPA).
- b) Unless approved otherwise activities to be excluded within TPZ radius or specified tree protection areas (TPA's) include:
  - Machine access & excavation.
  - Minor works including trenching & installation of utility services.
  - Storage & work preparation including wash down areas.
  - Soil level change and physical damage to trees.

Activities that minimize the impact of TPZ disturbances include:

- Within the TPZ radius, TPA or extending 2m outside the canopy dripline installation of native leaf mulch not greater than 80mm in depth with routine irrigation based on arborist advice is recommended.
- c) In accordance with AS4970 - 2009 (1.4.4) during works a Project or Site Arborist is to be engaged to monitor, supervise excavation within TPZ setbacks, advise and provide certification of protection works conducted. The project arborist is recommended to hold a minimum Australian Qualification Framework (AQF) Level 5 certification and be competent in methodology of protecting trees on development sites.
  - d) The project arborist is to provide final certification outlining tree protection measures with photographic evidence of ongoing works retained for certification purposes (AS4970 S/5.5.2 *Final certification*).
  - e) The project arborist is to be familiar with protection measures specific to Australian Standard AS4970 'Protection of Trees on Development Sites' – 2009 requirements with any modification in Tree Protection Fencing (TPF) or Zones (Z) to be compliant with AS4970 Section 4.5 *Other Tree Protection Measures*.
  - f) Approved excavation within TPZ setbacks; there shall be no over excavation beyond the line of cut as shown within construction drawings without arborist advice. Should over excavation be required the extent of excavation should be detailed within approved drawings or a construction management plan for arborist review and endorsement.



- g) Unless specified otherwise during approved excavation within TPZ setbacks excavation is to be conducted manually (by hand) under the supervision of an appointed site arborist. Where approved by the arborist the pruning of roots at or <30mm(Ø) is to be conducted in accordance with AS4970 – 2009 Section 4.5.4 *Root protection during works within the TPZ*, such that tree roots are not damaged or ripped beyond the point of excavation by site machinery.

Where larger roots have been encountered, they are to be referred to an independent Level 5 arborist for further advice. For deep excavations exposed roots at the excavated cut face are to be protected with jute mesh, geotextile fabric or similar being secured in place to avoid drying of roots and the exposed soil profile.

- h) *Additional inground services* which may include landscape works, fencing, sewer, stormwater, water and electrical services, final design and impact to trees shall be reviewed and endorsed by the project arborist prior to their instalment. Where landscaping (excavation) is required within the SRZ further advice from an appointed project arborist is recommended.

- i) *Tree sensitive construction measures* such as pier and beam bridging over critical roots, suspended slabs, cantilevered building sections, screw piles and contiguous piling can minimise the impact of encroachment (AS4970).

Where Bushfire BAL conflicts exist with tree management advice the appointed project arborist shall be consulted to advise on an appropriate design outcome.

- j) *Canopy pruning / tree removal*: where required tree removal and canopy reductions are to be approved by the Local Government Authority. Works are to be conducted by a suitably qualified AQF Level 3 certified arborist in accordance with AS4373 Pruning Standards, and specifically be conducted in accordance with Safe Work Australia – Guide to managing risks of tree trimming and removal works 2016 ([www.swa.gov.au](http://www.swa.gov.au)).

- k) *Hold points*: specific to no works are to commence without arborist advice, inspections & certifications:

- 1) Prior to works arboricultural certification is to be provided ensuring that all trees have been adequately protected in accordance with this report, or as indicated within Australian Standard AS 4970 Protection of Trees on Development Sites– 2009.
- 2) No works (including landscaping) shall occur within the SRZ of any tree without prior arborist advice and certification. Where excavation may be required prior exploratory tree root investigation are to identify the location, distribution and impact to underlying tree roots.

- 3) No excavation shall occur within tree protection zones without prior project arborist notification and/or site supervision.
  - 4) No access, work activity or storage is permitted within fenced or designated tree protection areas (TPA's) or Tree Protection Zone (TPZ) radiuses without arborist advice and certification.
- l) To ensure tree(s) are appropriately protected the development site superintendent is recommended to be familiar with all tree protection and ongoing certification requirements.
- The superintendent is responsible for informing all subcontractors of the responsibilities and requirements of tree protection prior to their engagement.
- m) Should there be any uncertainty with tree protection requirements the site superintendent shall contact the appointed project arborist for advice prior to works occurring within tree protection zones (TPZ) or specified tree protection areas (TPA).
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Should you require further liaisons in this matter please contact me direct on 0419 250 248

Yours sincerely



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Member: ISA, Arboriculture Australia & IACA, Working With Children No: WWC0144637E



## APPENDICES

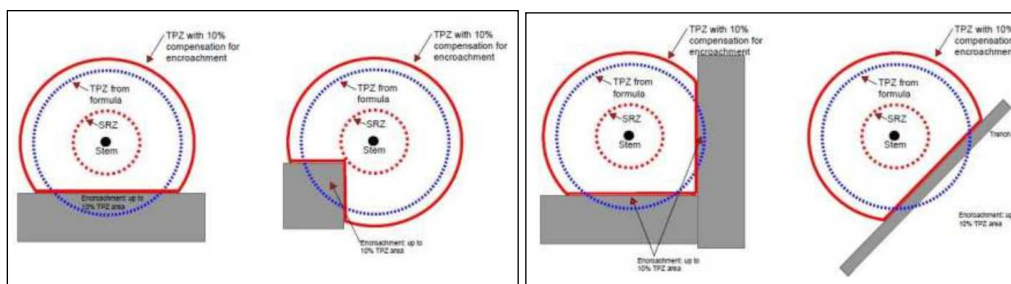
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## APPENDIX- A: Terminology, notes & references

**Acceptable Risk:** Exposure to or reject risk of varying degrees. The acceptable risk is defined as 'The person who accepts some degree of risk in return for a benefit being exposed to some risk of varying degree. **Age classes:** (I) Immature refers to a well established but juvenile tree. (ESM) refers to an early semi mature tree not of juvenile appearance. (SM) Semi-mature refers to a tree at growth stages advancing into maturity and full size. (LSM) Late Semi- Mature, refers to a tree between semi-mature and close to mature. (EM) refers to a tree at the first stages of maturity. (M) Mature refers to a full size tree with some capacity for future growth. **Health:** Refers to a trees vigor exhibited by the crown density, leaf colour, presence of epicormic shoots, ability to withstand disease invasion and the degree of dieback. **Condition:** Refers to the tree's form and growth habit, as modified by its environment (aspect, suppression by other trees, soils) and the state of the scaffold (i.e. Trunk and major branches), including structural defects such as cavities, crooked trunks or weak trunk / branch junctions. These are not directly connected with health and it is possible for a tree to be healthy but in poor condition. **Decay:** (N) – an area of wood that is undergoing decomposition. (V) – decomposition of an area of wood by fungi or bacteria. **Decline:** Is the response of a tree to a reduction of energy levels resulting from stress. Recovery from decline is difficult and slow; is usually irreversible. **Defect:** A identifiable fault in a tree. **Epicormic Shoots:** Shoots that arise from latent or adventitious buds that occur on stems and branches and on suckers produced from the base of the tree. A symptom / result of stress related factors. **Footprint:** The area occupied by site structures, including the dwelling driveways and hard surfaces. **Included Bark:** (Inclusion) a genetic weak fault, pattern of development at branch junctions where the bark is turned inwards rather than pushed out, can pose a potential hazard. **Order of branches:** First order being those that are the first to extend from the main trunk or codominant limbs, second order branches extend from the first order and third order branches extend from the second order. **Probability:** The likelihood of some event happening. **Risk:** Is the probability of something adverse happening. **Suppression:** Restrained growth pattern from competition of other trees or structures. **Wound:** Damage inflicted upon a tree through injury to its living cells, may continue to develop further weakening of the structure compromising structural integrity. **NOTE 1:** This report acknowledges the current **Australian Standards 'Protection of Trees on Development Sites'** AS 4970 – 2009 with reference to the Tree Protection Zone (TPZ): being a combination of the root and crown area requiring protection. The TPZ takes into consideration the Structural Root Zone (SRZ): The area required for tree stability. Determined by AS4970 - 2009 Figure 1, Table of determining the SRZ, section 3.3.5 of the standards. The standard states where a greater than 10% encroachment occurs the arborist is to take into consideration the schedule of determining impacts as set within AS4970 s. 3.3.4. Encroachments are referred to within this report as major or minor encroachments (AS4970 s. 3.3.2 & 3.3.3). Below is the terminology used for estimated percentage of development incursion used within this report. To retain specific trees and ensure their viability development must take into consideration protection of the TPZ radius. **NOTE 2: The extent of inclusion within the TPZ radius has been categorised as follows:** **Low impact** 0 - 10% of minor consequence. **Low to Moderate** 10 – 15% incursion where the project arborist is to demonstrate the tree(s) remain viable. **Moderate** 15 – 20% incursion where the project arborist is to demonstrate the tree(s) remain viable by tree sensitive construction techniques. **Moderate to high** 20 – 25% incursion requiring specific protection methodology to retain. **High impact** 25 – 35% incursion where design changes or further information is required to manage tree vitality which includes **Significant** >35% incursion. **WBF** = located within design or building footprint where design necessitates tree removal.

**NOTE-3:** Showing acceptable 10% incursion within TPZ radiuses (AS4970)



### SELECTED REFERENCES:

Barrell J. 1993, 'Preplanning Tree Surveys: Safe useful Life expectancy (SULE) is the Natural Progression', *Arbicultural Journal* 17: 1, February 1993, pp. 33-46.

International Society of Arboriculture (ISA) 2013, Tree Risk Assessment Manual, Martin Graphics, Champaign Illinois U.S.

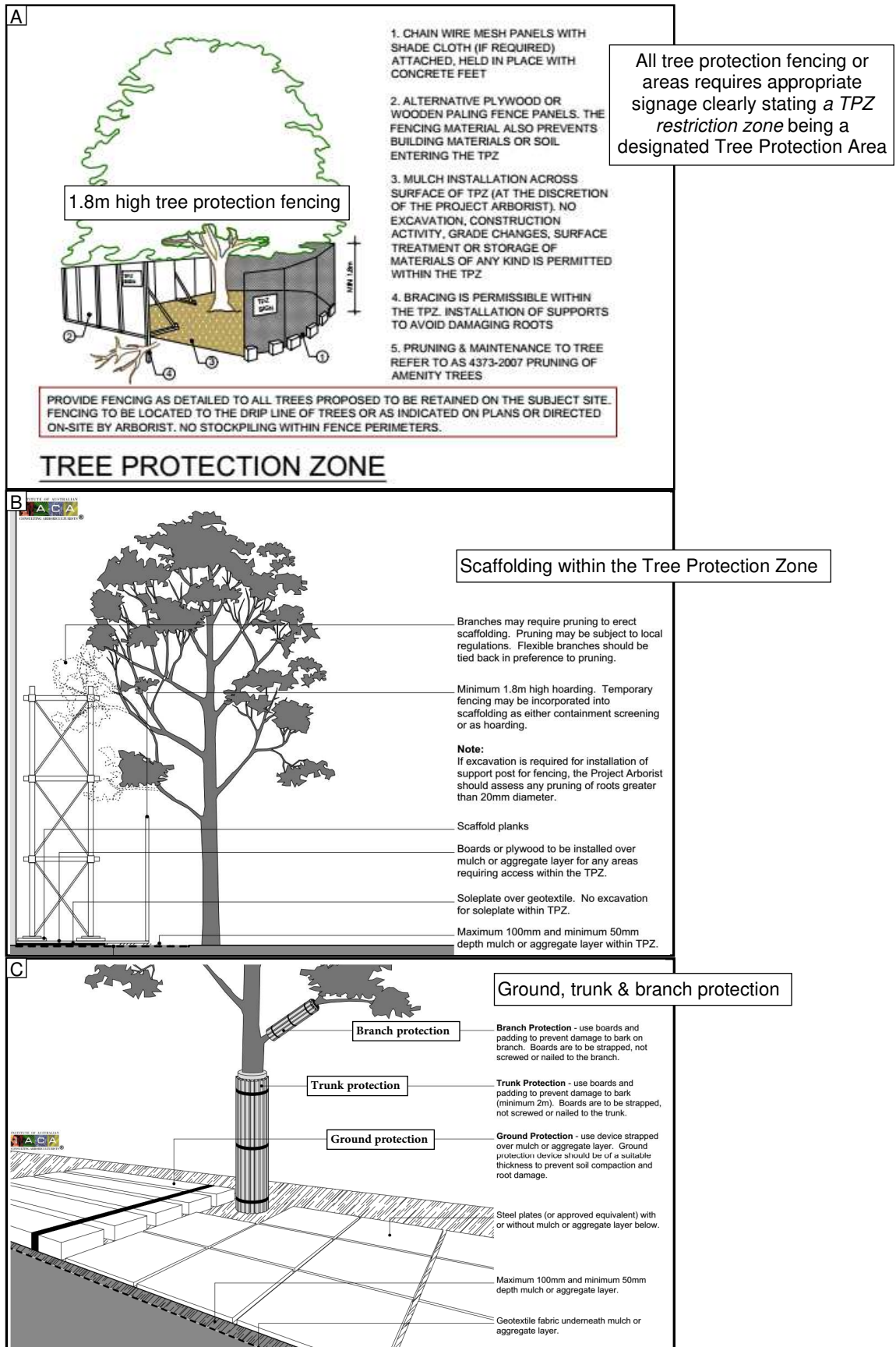
Mattheck, C. & Breloer, H.(1994) *The Body Language of Trees*. Research for Amenity Trees No.4 the Stationary Office, London.

Matheny N. & Clark J. 1998, *Trees & Development 'A Technical Guide to Preservation of Trees During Land Development'* International Society of Arboriculture, Champaign USA.

ProSafe: TPZ encroachment calculator [https://proofsafe.com.au/tpz\\_incursion\\_calculator.html](https://proofsafe.com.au/tpz_incursion_calculator.html) Standards Australia 2009, *Australian Standards 4970 Protection of Trees on Development Sites* - Standards Australia, Sydney, Australia.

Northern Beaches Council DCP <https://www.northernbeaches.nsw.gov.au/planning-and-development/building-and-renovations/planning-controls>

**APPENDIX- B: Tree protection fencing, ground and trunk protection detail**



**APPENDIX- C: Tree Retention Value Check list @rainTree consulting**

**i) Landscape Significance (LS):** The significance of a tree in the landscape is a combination of its amenity, environmental and heritage values. Values may be subjective however, offer a visual understanding of the relative importance of the tree to the environment. The Landscape Significance of a tree is described in seven categories to assist in determining the retention value of trees.

1	Significant	2	Very High	3	High	4	Moderate	5	Low	6	Very Low	7	Insignificant
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**ii) Visual Tree Assessment (VTA)**

0	If appropriate to VTA - *exempt trees from Local Government Authority (LGA) Tree Management or Preservation Orders (TPO)	2E	Tree location likely to be affected by infrastructure restricting root growth potential, or tree has potential to cause infrastructure damage where risk mitigation or rectification works may compromise tree anchorage. Tree(s) may be contained by sloid structures with restricted anchoring root(s)
0A	Noxious or invasive weed species located within heritage conservation areas		
1	Trees that are dead, significantly declining >75% volume or obviously hazardous	3	This rating incorporates trees that may require further investigation of defects such as cavities or symptoms indicating internal decay to an extent that cannot be quantified under visual examination. Further inspections may be in the way of arborist climbing inspection within the canopy, root crown investigation and/or drill penetrating or Picus Sonic Tomograph ultrasound testing procedures to determine percentage of internal decay.
2	Trees that are structurally damaged. Have poor structure or weak & detrimental large stem inclusions capable or failure opposed to 2B. Tree also may be affected by extensive borer damage, fungal pathogens (wood rot) or viruses. Some symptoms may be reversible, remediated or controlled give appropriate management.		
2A	Tree damage specific to basal and/or root plate damage, or very shallow soils, or steep topography resulting in poor anchorage where condition may become problematic in near future / may include trees with included bark splits to ground level	4	Trees which appear specifically environmentally stressed by drought, poor soil or site conditions. Symptoms may be reversible given appropriate management
2B	Defect specific to stem inclusions development (weak branch attachments) where the condition may not be immediately detrimental however, require annual to biannual monitoring with control to prevent stem failure by installing slings, cable or bracing. Tree may also contain multi stems or codominant twin stems	5	Trees that have become exposed or are subject to wind loading, or have tall forest form where exposure may result in windthrow or limb snap
		5A	Screen trees, trees or shrubs, that are routinely hedged, pruned or managed for height control
2C	Tree may contain minor wounds, pest or minor pathogen activity, altered from storm damaged to an extent that is not considered immediately detrimental - may also display average form. Likely to require close annual monitoring or minor corrective pruning	6	Trees may be typical for species type, of good form and visual condition for age class. May have suppressed one sided canopy, or are low risk trees
2D	Trees significantly altered by recent storm or over pruning events which may reduce retention values due to average form- or tree extensively pruned for power line clearance	7	VTA restricted by canopy or plant material vine or ivy covering tree parts, or site conditions which do not allow access- fences to neighbouring sites

**iii) Retention Value (RV):** Determined by [1] tree free of visual defects and viable for retention, [2] viable for retention with minor faults which may reduce ULE, [3] trees containing faults that are likely to become problematic in the future, [4] trees to be considered for removal due to poor or average condition.

1	High retention	2	Medium retention	3	Low retention	4	Consider removal
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**iv) U.L.E. categories** Useful Life Expectancy (after Barrell 1996, modified by the author). A trees U.L.E. category is the life expectancy of the tree modified first by its age, health, condition, safety and location. U.L.E. assessments are not static but may be modified as dictated by changes in trees health and environment.

1. Long U.L.E. - Appear retainable at the time of assessment for over 40 years with an acceptable degree of risk assuming reasonable maintenance.
2. Medium U.L.E. - Appear to be retainable at the time of assessment for 15 to 40 years with an acceptable degree of risk assuming reasonable maintenance.
3. Short U.L.E. - Trees appear to be retainable at the time of assessment for 5 to 15 years with an acceptable degree of risk assuming reasonable maintenance.
4. Very short - Removal- Trees which should be scheduled for removal within the very short term or as specified within this report.
5. Small, young or regularly pruned – Trees under 5m in height that can be easily moved or replaced, includes screen plantings or hedge lines.

## APPENDIX- D: Tree Assessment Schedule

Refer Appendix- C Tree retention value Checklist

Consider tree removal due to dead or high-risk condition - subject to Local Government Authority notification				Trees with low retention values: senescence, are significantly environmentally stressed, have developing defects or being *exempt non-prescribed trees within the LGA								
Tree No	Botanical Name COMMON NAME	Height x spread (m)	DBH (mm)	SRZ TPZ (m)	Age	Vigour (health)	Condition (structure)	LS	VTA	RV	ULE	Comments
*1	<i>Cupaniopsis anacardioides</i> Tuckeroo	7 x 7	300	2.1 3.6	ESM	Good	Fair / Poor	4	0-2-2E	2	3	Exempt tree species, location to infrastructure likely to become problematic in the future, twin stems at 1.4m with defined stem inclusion development = low retention value tree
<i>Design impact summary: Proposed removal, exempt tree located within the building or excavation footprint requiring removal to accommodate design</i>												
*2	<i>Populus nigra 'Italica'</i> Lombardy Poplar	12 x 7	800	3 9.6	OM	Good*	Fair / Poor	4	0-2	3	<3	Exempt tree species, deciduous* at time of inspection, main stems & lower branch scaffolds with significant decay & decline= low retention value
<i>Design impact summary: Proposed removal, exempt tree located within the building or excavation footprint requiring removal to accommodate design</i>												
*3	<i>Dypsis Lutescens</i> Golden Cane Palm/s	4 x 4	100 each	- 3	ESM	Good	Good	4	0-6	1	1	Exempt clumping palm species, typical for species type with no significant visual faults
<i>Design impact summary: Proposed removal of exempt tree species to accommodate design</i>												
*4	<i>Callistemon viminalis</i> Bottle Brush	4 x 5	350at base	2.1 4.2	SM	Good	Fair / Good	4	0-5A	2	2	Exempt tree species height class <5m, regularly reduced for height control
<i>Design impact summary: Proposed removal, exempt tree located within the building or excavation footprint requiring removal to accommodate design</i>												
5	<i>Melaleuca quinquenervia</i> Paperbark	5.5 x 3.5	150, 200	2.1 4.2	ESM	Good	Good	4-3	4-2B	2	2	Canopy slightly environmentally stressed, minor fine tip decline with minor stem inclusion development
<i>Design impact summary: Proposed retention having Minor 3.3% TPZ occupancy by building footprint &amp; stair access with additional 14.2% TPZ encroachment by pathway E side. The combined encroachment is of Moderate (15-20%) TPZ incursion at or near 17.8% being a manageable occupancy. Having a likely moderate impact of &lt;20% TPZ occupancy tree capable of being managed in accordance with Section 2.3 General tree protection requirements, specific to: no works or access within the SRZ with SRZ to be protected with ground / root protection mats. Pathway tree sensitive design is required for pathway construction, with arborist supervision &amp; certification for any excavation within the TPZ.</i>												

Refer Appendix- C Tree retention value Checklist

		Consider tree removal due to dead or high-risk condition - subject to Local Government Authority notification				Trees with low retention values: senescence, are significantly environmentally stressed, have developing defects or being *exempt non-prescribed trees within the LGA						
Tree No	Botanical Name COMMON NAME	Height x spread (m)	DBH (mm)	SRZ	Age	Vigour (health)	Condition (structure)	LS	VTA	RV	ULE	Comments CV = Council verge tree NT = Neighbouring tree
				TPZ (m)								
6	<i>Melaleuca bracteata</i> Tea tree	7 x 4	350	2.3 4.2	SM	Good	Good	3	6	1	2	Slight lean NTH, no rear soil heave (lift) lower branch scaffolds with no significant visual faults
<p><i>Design impact summary: Proposed retention having a manageable Moderate (15-20%) TPZ incursion at or near 15.8% indicating tree capable of being managed in accordance with Section 2.3 General tree protection requirements specific to: no works or access within the SRZ without prior arborist advice &amp; certification. SRZ to be protected with ground / root protection mats, with arborist supervision for excavations within the TPZ.</i></p>												
*7	<i>Eucalyptus saligna</i> Sydney Blue Gum	13 x 16	550	2.7 6.6	ESM	Fair	Fair / Good	3	0-2C-2E	2	<3	Exempt tree – within 2m of dwelling foundation & against Gas main indicating location to infrastructure is very likely to become problematic in the future. Environmentally stressed with canopy & upper branch scaffold decline = low retention value
<p><i>Design impact summary: Proposed removal, exempt tree located within the building or excavation footprint requiring removal to accommodate design</i></p>												
*8	<i>Phoenix canariensis</i> Phoenix Palm	9 x 6	800	- 4	M	Good	Good	4-3	0-6	1	1	Exempt palm species with no significant visual faults
<p><i>Design impact summary: Proposed removal, exempt tree located within the building or excavation footprint requiring removal to accommodate design</i></p>												



**APPENDIX- E: Tree Location Plan**

