
rainTree consulting

Arboricultural Management

PO Box 326 AVALON NSW 2107

Mobile 0419 250 248

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60 FEDERAL PARADE

BROOKVALE, NSW

VEHICLE PARKING DEVELOPMENT PROPOSAL

PRELIMINARY ARBORICULTURAL IMPACT ASSESSMENT REPORT

Report Ref No- 11121

Prepared for
ST Augustine's College
C/- APG Mr. Carter Gaze
70 Essex St, SYDNEY NSW
T: 8035 5450

Prepared by
Mark A. Kokot
AQF Level 5 Consulting arborist



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INTRODUCTION

This report has been commissioned by ST Augustine's College C/- APG Mr. Carter Gaze 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 new development proposal consists of constructing a new car park facility and associated infrastructure within Lot 13 of DP 568333 known as 60 Federal Parade, BROOKVALE NSW.

Recommendations for retention or removal of trees is based on the trees condition, accorded ULE category, current design and potential impacts to trees under this development application.

Development incursions within tree protection zones (TPZ) and impacts to trees have been outlined within Note 2 of Appendix- A where incursions are described as Minor (<10%) & Major (>10%) TPZ occupancy having low, moderate to high level impacts within the TPZ. Where site restrictions within notional root zone radiuses exists development impacts or encroachment disturbances are based on author's experience, observations of site conditions, soil type and topography.

Each tree assessed has been accorded a temporary identification number and is referred to by number throughout this report. For additional trees not plotted on provided documentation their location has been estimated by taking offsets from existing trees and structures. The trees, their location, development impact and design requirements may be referenced within the Tree Assessment Schedule and Tree Location Plan of Appendices C & D.

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 ground level Visual Tree Assessment (VTA) was conducted on Friday 25th June 2021 by the author of this report. The principles of VTA 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 manual 2017. The inspection included assessment of the overall health and vigour of trees, tree form, structure and structural condition commencing from near the lower trunk to the upper first order branch division as best as site conditions would allow. On completion of the VTA the retention value of the tree was summarised utilizing the tree assessment Checklist provided within Appendix- B.
2. The inspection was limited to visual assessment from within the subject site where the retention value, condition and diameters of neighbouring trees was estimated. No aerial (climbing) inspections, woody tissue testing or tree root investigation was undertaken as part of this tree assessment. 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). The height of palms was taken from ground level to the top of the crown shaft only, and excludes the central apical spear projection.
3. This report acknowledges and utilizes the current Australian Standards 'Protection of Trees on Development Sites' AS 4970 – 2009 as explained within Notes of Appendix- A.
Unless specified otherwise all distances and development offsets within this report are taken from the centre of the tree.
4. Plans and/or documentation received to assist in preparation of this assessment include:
GTA Consultants *Concept Plans*
 - Parking Yield – Option 1, 2 & 3 Design Dwg No's. N190000-04-01 to 03, Sheets 1 to 3, issue P5 date issued 18.6.2021LTS Lockley
 - Survey Plan ref No. 35381DT 003, Sheet 3 rev J dated 26.5.202

1. SUMMARY OF ASSESSMENT

1.1 General tree assessment

- 1.1.1 Nine (9) trees have been assessed under this development proposal. Of the nine trees one (1) tree is located within a neighbouring property, two (2) trees contain low retention values and five (5) trees or palms are non-prescribed (exempt) species noted within Northern Beaches Council DCP tree management & protection orders.

Neighbouring tree: T1 (Mediterranean Cypress). The tree requires to be retained and protected with tree sensitive car park design should a Major (>10%) TPZ occupancy by design be proposed.

Low retention value trees: are identified as T5 & 6 (Sydney Blue Gum trees). The trees have been subject to an advanced risk assessment where the assessment found the trees to be structurally defective and not viable to be retained for safety reasons. The trees are known as trees 35 & 36 within Raintree consulting's advanced risk assessment report ref No. 3221 dated 18.2.2021.

Exempt non-prescribed species: are identified as T2, 4, 7, 8 & 9.

Being exempt non-prescribed species the trees or palms are permitted to be managed (pruned, removed or relocated) without Council consent. Should an exempt species require retention further advice and protection methodology is required prior to works occurring within Tree Protection Zone (TPZ) setbacks.

- 1.1.2 Remaining tree 3 is 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 of Appendix- C.

1.2 The development proposal

- 1.2.1 The development proposal consist of demolition of existing site features to make way for a new car park facility. Three options in design have been proposed where finished levels (RL's) or over excavation areas have not been clearly plotted within the limited design documentation provided for assessment.

1.3 Discussion of development impacts – prescribed trees

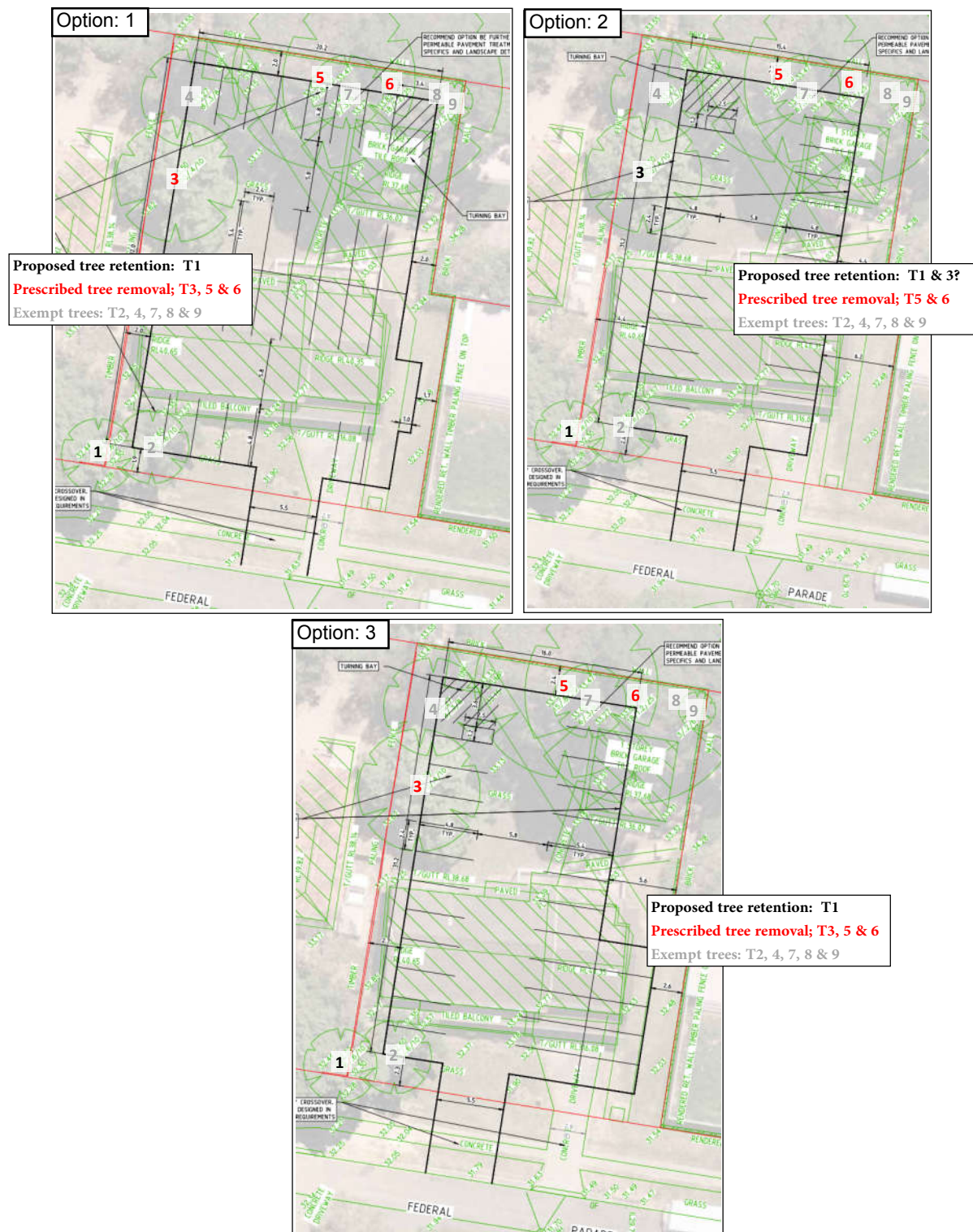
- 1.3.1 Option 1: requires the removal of all prescribed trees within the site being T3, 5 & 6 as the protected trees fall within the footprint of design. Neighbouring tree T1, the design footprint is located within the Structural Root Zone (SRZ) being *the area required for tree stability* (AS4970) where occupancy occurs at or near 11.4% within the SRZ & TPZ.
- 1.3.2 Option 2: requires the removal of prescribed trees T5 & 6 where the design footprint is located within the trees SRZ. The design footprint is located just within the SRZ of T3 having a Major (>10%) at or near 17.8% TPZ encroachment. The footprint is located outside of the SRZ of neighbouring tree T1 where design has a Minor (<10%) TPZ encroachment.

1.3.3 Option 3: requires the removal of prescribed trees T3, 5 & 6 where the design footprint is located within the trees SRZ.

The footprint is located outside of the SRZ of neighbouring tree T1 where design has a Minor (<10%) TPZ encroachment of low level impact.

The identified development impacts and design requirements have been detailed within Appendix- C and shown within the lower diagrams.

Figure 1, showing Options 1 to 3 design footprints



2. CONCLUSIONS & RECOMMENDATIONS

2.1 Tree Removal

- 2.1.1 Trees T5 & 6 are structurally defective trees and have been identified for removal with an advanced risk assessment report conducted by Raintree Consulting dated 18 February 2021.

Of the options provided Option 2 proposes the least amount of impact to neighbouring tree T1. Retention of tree T3 may be possible pending tree root investigations and/or ensuring no disruption occurs within the SRZ that would compromise the vitality of the tree.

- 2.1.2 Exempt non-prescribed species permitted to be removed without the consent of Council are identified as: T2, 4, 7, 8 & 9.

2.2 Recommended tree management & protection principles

- 2.2.1 In addition to the recommendations provided within this report and Australian Standard AS4970 – 2009 Protection of Trees on Development Sites the following summary and/or additional recommendations are provided as a guide for tree protection during works:

Specific recommendations

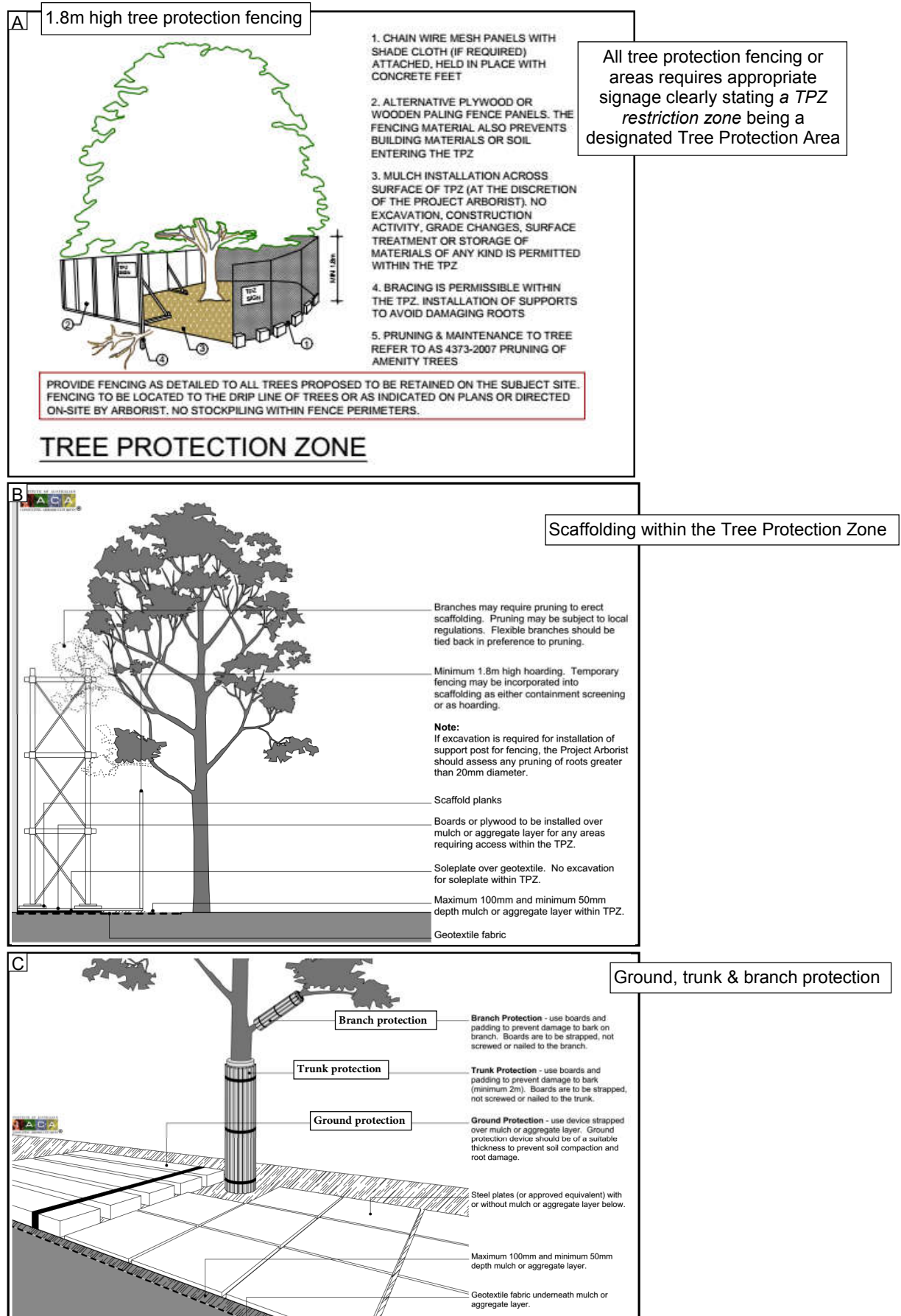
- a) Prior to obtaining a Construction Certificate (CC) the option of the design footprint is to be made clear to an appointed project arborist. The project arborist is to be provided with clear and detailed construction drawings showing existing & proposed RL's within tree protection zone setbacks. Design plans should also provide a cut & fill plan, which is to include, in detail, any over excavation that may be required to accommodate design.
- b) For those trees specified for retention the appointed project arborist shall then provide a detailed Arboricultural Impact Assessment (AIA) report to accompany the final design layout.
- c) Tree management is likely to require, but not be limited to the following tree protection requirements.

2.3 General tree protection requirements

- a) Prior to demolition works Tree Protection Fencing (TPF) and/or zones as identified within Figure 2 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, see SRZ & TPZ distance column Appendix- C. Where design & construction access may be restrictive timber beam trunk protection is recommended to be installed, with ground protection mats provided to protect underlying tree roots within tree protection zones or areas.

- b) In accordance with AS4970 - 2009 (1.4.4) 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 4 certification and be competent in methodology of protecting trees on development sites.
- c) 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*).
- d) 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*.
- e) Unless specified otherwise during approved excavation within TPZ setbacks excavation is to be conducted manually (by hand) under the supervision of an appointed project 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.
- f) During approved excavation within TPZ setbacks there shall be no over excavation beyond the line of cut as shown within construction drawings. Should over excavation be required the extent of excavation should be detailed within approved drawings or a construction management plan for arborist review and certification.
- g) *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).
- h) *Additional inground services* which may include landscape works, sewer, stormwater, water and electrical services, final design and impact to trees shall be reviewed and endorsed by the project arborist prior to their installment. Where landscaping (excavation) is required within the SRZ further advice from an appointed project arborist is recommended.

Figure 2: Tree protection fencing, ground and trunk protection detail



- 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 construction conflicts exist with tree management advice the appointed project arborist shall be consulted to advise on appropriate design outcomes.

- j) *Hold points*: specific to no works are to commence without arborist advice, inspections & certifications:
- 1) Prior to construction arboricultural certification is required ensuring that all trees have been adequately protected in accordance with this report.
 - 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 the TPZ without prior project arborist notification and/or site supervision.
 - 4) No access or work activity is permitted within fenced or designated tree protection areas (TPA's) without arborist advice.

Table 1, certification requirements & hold points

1	Pre-construction	Prior to works install tree protection fencing & zones as specified within this report or as directed by the site arborist.
2	During construction	Project arborist to supervise & certify approved works within tree protection areas.
3	Post construction	Prior to handover project arborist to provide final inspection & certification of tree health & vitality

- k) 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.

Yours sincerely



Mark A Kokot

AQF Level 5 consulting arborist

Diploma of Hort/Arboriculture (AQF5), Associate Diploma Parks Management (AQF4)
Certified Arborist / Tree Surgeon (AQF3), ISA Tree Risk Assessment Qualified 6/2024
Member: ISA, Arboriculture Australia & IACA, Working With Children No: WWC0144637E



APPENDICES

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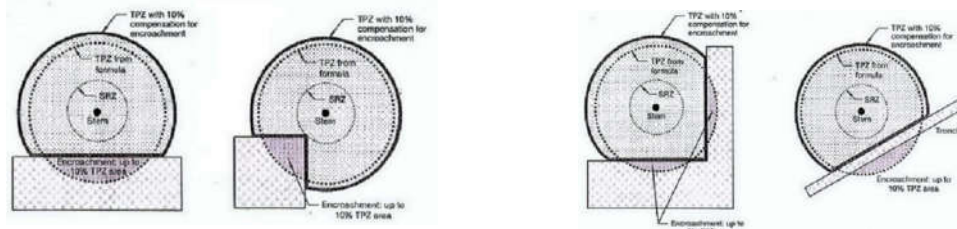
APPENDIX- A: Terminology & references

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:

No impact (0%) incursion, Low to negligible impact (<10%) of minor consequence, 10 - <15% incursion of moderate to low impact, 15 - <20% Medium to moderate level of impact and incursion where the project arborist is to demonstrate the tree/s remain viable by tree sensitive construction techniques, 20 - <25% incursion of Medium to high level of impact, 25 – <35% of High level impact to significant >35% incursion where moderate to high level impacts may require design changes or further information to manage tree vitality. **WBF** = located within the building footprint where design necessitates tree removal. Showing acceptable incursion within the TPZ (AS4970)



SELECTED REFERENCES:

- Barrell J. 1993, 'Preplanning Tree Surveys: Safe useful Life expectancy (SULE) is the Natural Progression', *Arboricultural 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
- Australia 2009, *Australian Standards 4970 Protection of Trees on Development Sites* - Standards Australia, Sydney, Australia.
- Standards Australia 2007, *Australian Standards 4373 Pruning of Amenity Trees* - 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 Retention Value Check list ©rainTree consulting

VTA 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	Trees location likely to be affected by infrastructure restricting root growth potential, or tree has potential to cause infrastructure damage &/or risk mitigation or rectification works may compromise tree anchorage. Tree(s) may be contained within a vault have restricted anchoring root potential
0A	Noxious or invasive species located within heritage conservation area		
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 of 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, 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 would benefit from crown maintenance pruning as identified within the Australian Standards AS 4373 – 2007 Pruning of Amenity Trees
		5A	Trees that require little or no maintenance at time of inspection other than close monitoring
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 canopies 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 which should not restrict development applications containing faults that are likely to become problematic in the short term, [4] trees to be considered for removal due to 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- C: Tree Assessment Schedule

Trees requiring removal due to hazardous or dead condition - subject to Local Government Authority notification							Trees with low retention values: senescence, developing defects or being *exempt trees from the LGA Tree Preservation Order (TPO)					
Tree No	Botanical Name COMMON NAME	Height x spread (m)	DBH (mm)	SRZ TPZ	Age	Vigour	Condition	Significance	VTA	RV	U. L.E.	Comments CV = Council verge tree NT= Neighbouring tree
1 NT	<i>Cupressus sempervirens</i> Mediterranean Cypress	18 x 12	650	2.8m 7.8	SM	Good	Good	4/3	2B	2	2	Tree with minor stem inclusion development at multi stem development 4m above ground level
Design & impact summary		Retain & protect; Option 3 has the least impact with Option 2 having a manageable TPZ occupancy, all of Minor (<10%) TPZ occupancy. Option 1 poses a Major (>10%) TPZ encroachment within the SRZ having low level occupancy at or near 11.4% pending on construction management plan details that require to show excavation requirements										
*2	<i>Citharexylum spinosum</i> Fiddlewood	9 x 6	350, 350, 400	3.5 13.2	M	Good	Fair	4	0/2D	3	<3	Exempt non-prescribed tree. Environmentally stressed, past storm damaged tree, remedial topped at 5m modifying form, resulting in all epicormic shoot development = low retention value
Design & impact summary		Remove; Exempt tree species benefit from removal to accommodate development proposal.										
3	<i>Lophostemon confertus</i> Brush Box	12 x 9	400	2.4 4.8	ESM	Good	Good	4/3	6	1	1	Tree with no significant visual faults
Design & impact summary		Design requirement; Options 1 & 3 require tree removal, Option 2 has a Major (>10%) TPZ occupancy with design footprint within the SRZ, having at or near 17.8% occupancy, pending on construction management plan details showing excavation requirements the design footprint may not be favorable to suitably retain the tree with tree root investigations recommended to provide more detail on the location of underlying tree roots.										
*4	<i>Ficus benjamina</i> Weeping Fig	7 x 8	250	2 3	ESM	Good	Fair	4	0/2A	2	2	Exempt non-prescribed tree, root girdled at base from confined potted plant condition where basal condition is likely to become problematic in the future
Design & impact summary		Remove; Exempt tree species benefit from removal to accommodate development proposal.										
5	<i>Eucalyptus saligna</i> Sydney Blue Gum	23 x 16	850	3.1 10.2	M	Good	Poor	2	2	4	4	Structurally defective tree, refer to advanced risk assessment report ref No. 3221 dated 18.2.21, upper branch scaffolds defects throughout = low retention value tree
Design & impact summary		Remove: trees have been identified as structurally defective and require removal before large part failure occurs										

Trees requiring removal due to hazardous or dead condition - subject to Local Government Authority notification							Trees with low retention values: senescence, developing defects or being *exempt trees from the LGA Tree Preservation Order (TPO)					
Tree No	Botanical Name COMMON NAME	Height x spread (m)	DBH (mm)	SRZ	Age	Vigour	Condition	Significance	VTA	RV	U. L.E.	Comments CV = Council verge tree NT= Neighbouring tree
				TPZ								
6	<i>Eucalyptus saligna</i> Sydney Blue Gum	25 x 18	1150	3.6m 13.8	M	Good	Poor	2	2	4	4	Structurally defective tree, refer to advanced risk assessment report ref No. 3221 dated 18.2.21, upper branch scaffolds defects throughout = low retention value tree
Design & impact summary		Remove: trees have been identified as structurally defective and require removal before large part failure occurs										
*7	<i>Archontophoenix cunninghamiana</i> Bangalow Palm	6 x 4	250	- 3	ESM	Good	Good	4	0/6	1	1	Exempt non-prescribed palm with no significant visual faults
Design & impact summary		Remove; Exempt tree species benefit from removal to accommodate development proposal.										
*8	<i>Archontophoenix cunninghamiana</i> Bangalow Palm	3 x 3	250	- 2.5	ESM	Good	Good	4	0/6	1	1	Exempt non-prescribed palm with no significant visual faults
Design & impact summary		Exempt tree species retain or remove pending final design & arborist advice										
*9	<i>Archontophoenix cunninghamiana</i> Bangalow Palm	5 x 4	300	- 3	ESM	Good	Good	4	0/6	1	1	Exempt non-prescribed palm with no significant visual faults
Design & impact summary		Exempt tree species retain or remove pending final design & arborist advice										

