
rain Tree consulting

Arboricultural Management

PO Box 326 AVALON NSW 2107

Mobile 0419 250 248

4 June 2025

5 TOR ROAD

DEE WHY, NSW

DEVELOPMENT PROPOSAL

ARBORICULTURAL ASSESSMENT & TREE PROTECTION PLAN

Ref No- 4525

Prepared for
Styleness Properties Pty Limited
25/9 Powells Road BROOKVALE, NSW
T: 0437 275 275

Prepared by
Mark A. Kokot
AQF Level 5 Consulting arborist



CONTENTS	page
INTRODUCTION	3
METHODOLOGY	3
SUMMARY OF ASSESSMENT	
1. General tree assessment	4
Figure 1: Showing proposed design footprint	4
2. Assessment or root mapping investigation	5
Figure 2: Showing encountered tree root(s)	5
3. Determining residual effect of root loss	5
TREE MANAGEMENT RECOMMENDATIONS	
4. Prior to works – <i>tree protection & certification points</i>	6
Figure 3: Tree protection detail	6
5. Excavations, root pruning & management	7
6. General tree protection requirements	7
APPENDICES	9
Appendix- A: THS tree root investigation report	10
Appendix- B: Terminology, notes & references	12
Appendix- C: Tree Retention Values <i>Checklist</i>	13
Appendix- D: Tree Assessment Schedule	14
Appendix- E: Tree Location Plan	14
Appendix- F: Tree Protection Area Plan	15

INTRODUCTION

This report has been commissioned by Styleness Properties Pty Limited. The purpose & scope of works is to provide an arboricultural assessment and Tree Protection Plan (TPP) to assist in managing a Council verger Street tree due to a new development proposal within 5 Tor Road DEE WHY, NSW.

The primary scope of works is to undertake tree root investigations and provide management advice due to the location of a new driveway crossover and driveway footprint occupancy within a Notional Root Zone (NRZ) radius.

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.

METHODOLOGY

1. In preparation for this report the author attended site to visually inspect the tree and site conditions on Monday 12 May 2025. Tree height and canopy spread was estimated and expressed in metres with trunk diameter measured or estimated at approximately 1.4 metres above ground level. At completion of the inspection the retention value of trees was summarised utilizing the compressed tree inspection Checklist provided within Appendix- C. Additional works conducted to assist with the discussions presented included:
 - Assessing driveway access impacts and marking out locations for tree root investigations due to works within the front Council verge.
 - On Monday 26 May 2025 tree root investigations were conducted by Tree Health Solutions Mr. Brad Davies AQF Level 5 arborist.
 - The root investigation consisted of excavating a narrow trench 400mm deep at near 5m in length following the line of the proposed driveway crossover as detailed within this report and Appendix- A.
2. This report acknowledges and utilizes the current Australian Standards 'Protection of Trees on Development Sites' AS4970 – 2025 as explained within Notes of Appendix- B.
3. 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.
4. Plans and/or documentation received to assist in preparation of this assessment include:
 - Styleness project No. 003
 - Landscape Plan Dwg No: DA-03-03-Rev5 dated 13.5.2025
 - Meridian Homes
 - Demolition Plan, Sheet 3 Rev B dated 24.4.2025
 - Ground Floor Plan, Sheet 4 Rev B dated 24.4.2025
 - Boxall
 - Survey Plan Dwg No. 11901-001-B, Rev B dated 19.3.2025

SUMMARY OF ASSESSMENT

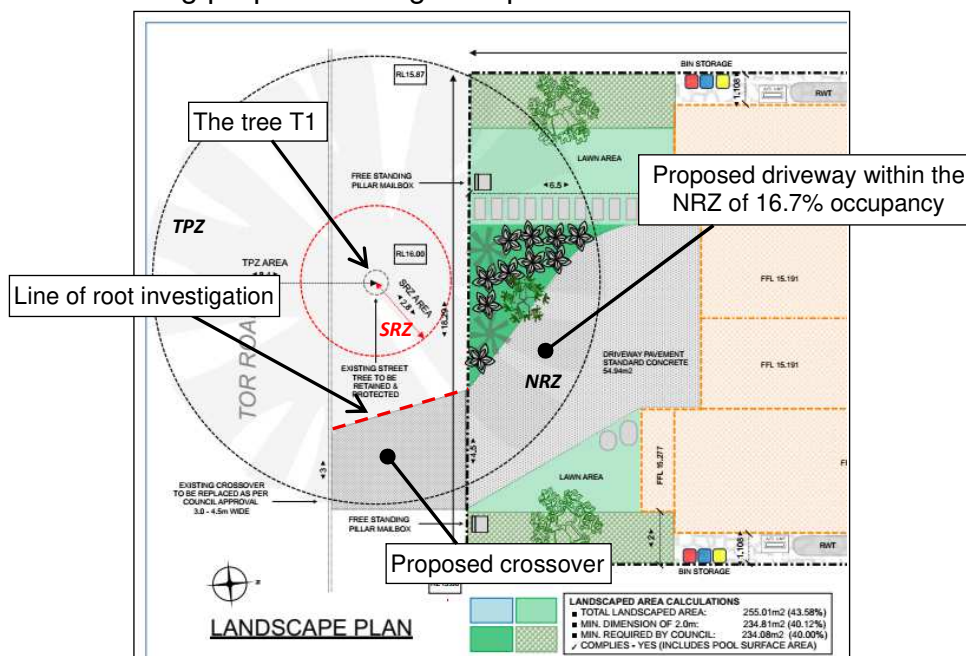
1. General tree assessment

- 1.1 The subject tree is identified as a mature Brush Box tree (*Lophostemon confertus*). The tree displays good vitality (health & vigour) showing no signs of environmental stress or significant decline indicating the tree is capable of enduring minor or manageable (<20%) TPZ encroachment impacts.

The trees' structural condition is considered fair due to long past pruning for utility power line clearances which has modified natural tree form. Visually the tree displays no significant visual faults and is considered of high environmental and landscape significance.

- 1.2 The trees Structural Root Zone (SRZ) being *the area required for tree stability* (AS4970), or critical root zone radius is estimated at 2.8m from the centre of the tree trunk. The Notional Root Zone (NRZ) or specified Tree Protection Zone (TPZ) radius is estimated at 8.4m, where both the SRZ & NRZ have likely been restricted in development by adjacent roadside kerb & guttering.
- 1.3 The percentage of TPZ coverage by the driveway crossover is of a manageable *Moderate* (at or <20%) NRZ occupancy at or near 16.7% encroachment, without SRZ occupancy. Based on Australian Standard AS4970 'Protection of Trees on Development Sites'- 2025, the *Moderate* level of encroachment impact can be managed by the protection advice as detailed within this report.

Figure 1: showing proposed design footprint



2. Assessment of root mapping investigation

- 2.1 The root investigation identified one (1) tree root R1 at 25mm(Ø) at or near a 5m setback from the tree.

Trench Length	Trench Depth	Root Diameter	Depth to top of root from ground level
5000 mm	400 mm	25 mm	130 mm

- 2.2 Given the depth of the root from the surface to accommodate the design proposal the root R1 is recommended for removal to accommodate the proposed driveway crossover.

Figure 2: showing R1 root location, refer Appendix- A for more detail



3. Determining residual effect of root loss

- 3.1 Having excavation well outside the SRZ the extent of root loss will very unlikely affect tree anchorage.
- 3.2 Given the species type (*Brush Box*) indicates the tree species type is more tolerable to *Minor* or *Manageable* disturbance within the trees specified Notional Root Zone (NRZ), or Tree Protection Zone (TPZ) radius.
- 3.3 As one (1) tree root at or near 25mmØ requires removal the residual affect of root removal is likely to be negligible, with the overall design encroachment noted as an acceptable encroachment within AS4970 '*Protection of Trees on Development Sites*'- 2025 encroachment diagrams shown within AS4970 Figure 1 – *Sample minor and moderate encroachments*.
- 3.4 To mitigate the impact of root loss tree protection and root pruning methodology has been detailed within the following sections and is primarily based on Australian Standards AS4373 *Pruning of Amenity Trees* 2007 Section 9 *Root pruning*.

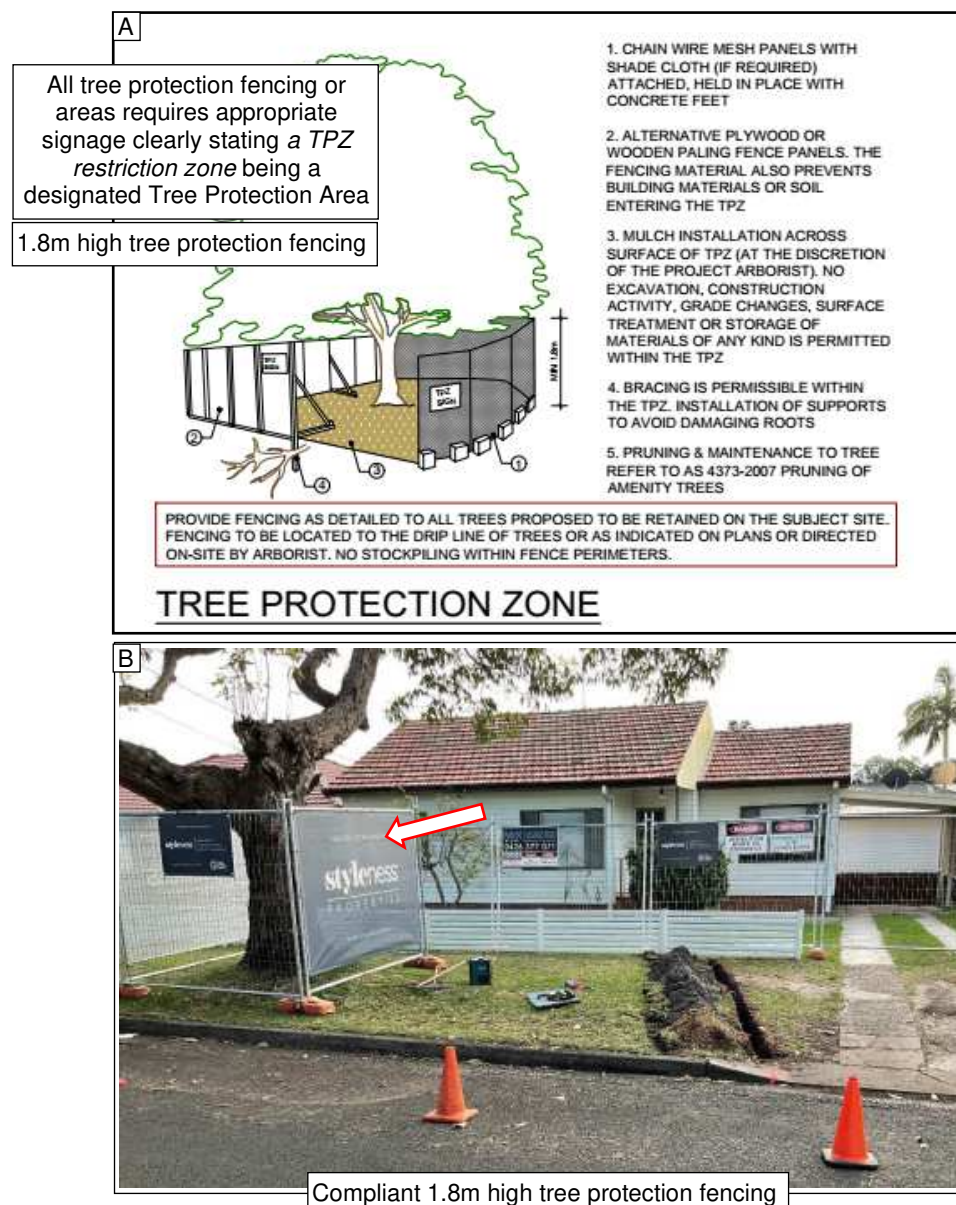
TREE MANAGEMENT RECOMMENDATIONS

4. Prior to works – tree protection & certification points

4.1 Prior to works a minimum Australian Qualification Framework (AQF) Level 5 arborist is recommended to be engaged to oversee and certify tree protection and management activities. Certifications are recommended to include:

- a) *Certifying the installation of tree protection.* Timber beam trunk protection or tree protection fencing as indicated within Figure 3 below is recommended.
- b) The installed and inspected tree protection fencing as shown within Figure 3 [B] is considered suitable and compliant, with tree protection zone signage recommended prior to major work activities commencing.

Figure 3: Tree protection detail



5. Excavations, root pruning & management

- 5.1 Under the supervision of an AQF Level 5 supervising arborist or where works are conducted by a minimum AQF Level 3 certified arborist; excavations along the line of cut are to be conducted manually, by hand to clearly expose the identified root(s).
- 5.2 Root pruning is to be conducted by the appointed arborist in accordance with AS4970 – 2025 Section 4.5.4 *Root protection during works within the TPZ* and as specified with Section 9 *Root pruning* of Australian Standards AS4373 Pruning of Amenity Trees 2007. Root pruning is to be conducted and certified specific to: *all cuts shall be clean cuts made with sharp disinfected tools such as secateurs, pruners, handsaws, chainsaws or specialized root pruning equipment* (AS4373).
- 5.3 At completion of root pruning, exposed root cut ends are recommended to be protected with geotextile fabric or similar. The fabric protection cover is to act as a protection barrier between the driveway footing formwork and assist in mitigating contaminant (concrete) contact to the root zone.
- 5.4 The appointed site arborist is recommended to provide compliance certification at completion of installed soil and root protection fabric barriers prior to footing formwork being installed.
- 5.5 At completion of works the appointed arborist is to conduct a final tree inspection assessing tree health, vitality and structural condition in accordance with AS4970 Section 5.5.2 *Final certification*.

6. General tree protection requirements

- 6.1 Unless specified otherwise within this report there shall be no additional excavation or storage of materials within the 2.8m Structural Root Zone (SRZ) being *the area required for tree stability* unless approved and certified by site supervision of the appointed arborist.
- 6.2 Where additional inground services are required, which may include landscape works, fencing, sewer, stormwater, water & electrical services are required within Tree Protection Zone (TPZ) setbacks or specified Tree Protection Area (TPA) further advice from an appointed arborist is required.
- 6.3 Unless approved otherwise activities to be excluded from within the front Council verge, designated Tree Management(M) or Protection(P) Area's (TMA's / TPA's) including Tree Protection Zone (TPZ) radius includes:
 - 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.

- 6.4 To ensure the 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.
- 6.5 Should there be any uncertainty with tree protection requirements the site superintendent is recommended to contact the appointed project arborist for advice prior to works occurring within tree protection zones (TPZ) or specified tree protection areas (TPA).
-

Should you require further liaisons in this matter please contact me direct on
0419 250 248

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 exp-2029
Member: ISA, Arboriculture Australia & IACA, Working With Children No: WWC0144637E



APPENDICES

Appendix- A: THS tree root investigations	10
Appendix- B: Terminology, notes & references	12
Appendix- C: Tree Retention Values <i>Checklist</i>	13
Appendix- D: Tree Assessment Schedule	14
Appendix- E: Tree Location Plan	14
Appendix- F: Tree Protection Area Plan	15

APPENDIX- A: THS Tree Root Investigation

Email tree root investigation results dated 26.5.2025

Hi Mark

One root found – 1000mm from rear of kerb
Two pipes found 150mm below ground level.

Trench Length	Trench Depth	Root Diameter	Depth to top of root from ground level
5000 mm	400 mm	25 mm	130 mm



Picture- 3



Picture- 4



END OF SCHEDULE

APPENDIX- B: Terminology, notes & references

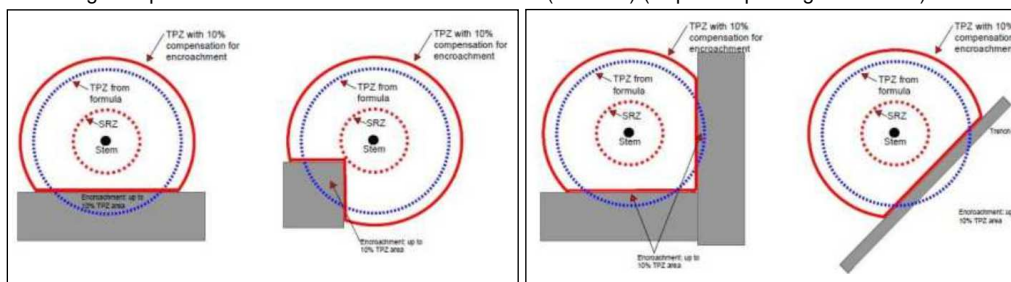
Acceptable Risk: Exposure to or reject risk of varying degrees. The acceptable risk is defined as 'The person who accepts some degree of risk in return for a benefit being exposed to some risk of varying degree. **Age classes:** (I) Immature refers to a well established but juvenile tree. (ESM) refers 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. **Works:** any activity that modifies above & below ground conditions within specified tree protection zone radiuses.

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 - 2025 Section 3.4 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/-3.3.6. Encroachments are referred to within this report as major, moderate or minor encroachments (AS4970. 3.3.3, 3.3.5 & 3.3.6). To retain specific trees and ensure their viability development must take into consideration protection of the Notional (NRZ) or TPZ radius with terminology used for estimated percentage of development incursion noted below.

NOTE 2: The extent of inclusion within the TPZ radius has been categorised as follows:

Negligible (0%) incursion of no to low-level impact, *Minor* (<10%) of minor consequence, *Moderate* 10 - <20% incursion of medium to moderate level of impact provided works are outside the SRZ, and where the project arborist is to demonstrate the tree/s remain viable by tree sensitive construction techniques, *Medium to high* 20 - <25% incursion impacts, *High level* 25 - <35% impact to *Significant* >35% incursion where *Major* (>10%) impacts may require design changes or further information to ensure a tree remains viable. **WBF** = located within the building footprint where design necessitates tree removal.

NOTE-3: Showing acceptable 10% incursion within TPZ radiuses (AS4970) (requires updating to AS2025)



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.

Standards Australia 2025, 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- 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. There are no industry standards for referencing tree retention value or significance. The values provided may be subjective, however, are based after IACA Sustainable Retention Index Value (SRIV) which offer a visual understanding of the relative importance of the tree to the environment. The LS 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
---	-------------	---	-----------	---	------	---	----------	---	-----	---	----------	---	---------------

ii) Visual Tree Assessment (VTA)

0	If appropriate to VTA - *exempt trees from Local Government Authority (LGA) Tree Management Orders or known NSW *Weedwise environmentally invasive species	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 solid structures with restricted radial root anchorage
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 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, 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 including pest or disease infestation(s). 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 that should be considered for removal due to poor or average condition.

1	High retention	2	Medium retention	3	Low retention	4	Consider removal
---	----------------	---	------------------	---	---------------	---	------------------

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.

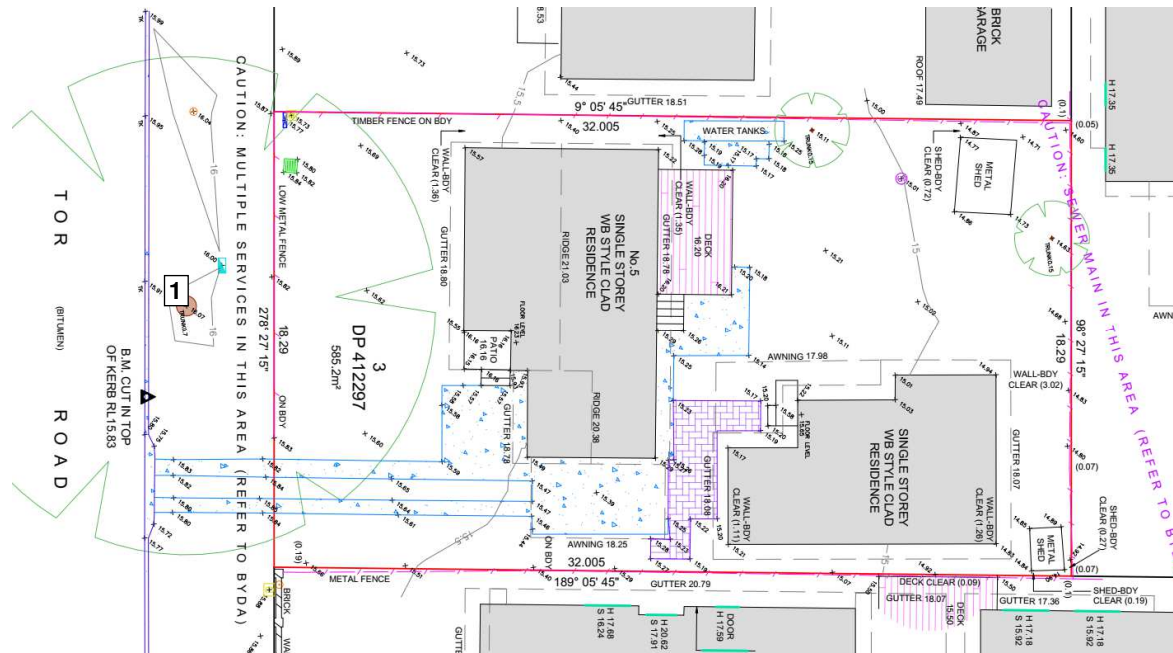
1. Long U.L.E. - Appear retainable at the time of assessment for over 40 years with an acceptable degree of risk assuming reasonable maintenance.
2. Medium U.L.E. - Appear to be retainable at the time of assessment for 15 to 40 years with an acceptable degree of risk assuming reasonable maintenance.
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

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 low significant or *exempt trees within the site from the LGA tree management orders					
Tree No	Botanical Name COMMON NAME	Height x spread (m)	DSH (mm)	SRZ NRZ (m)	Age	Vigour (health)	Condition (structure)	LS	VTA	RV	ULE	Comments
1 CV	<i>Lophostemon confertus</i> Brush Box	11 x 13	700	2.8 8.4	M	Good	Fair	3	2D	2	2	CV = Council verge tree NT= Neighbouring tree Tree pruned for power line clearance modifying form, minor lower trunk wounds E side, canopy 5m in site at 3.5m [^] / above ground level
Design & impact summary: Proposed driveway and driveway crossover proposes a manageable Moderate (15-20%) TPZ incursion at or near 16.7% occupancy within SRZ encroachment, indicating tree is capable of being managed in accordance with Section 6 General tree protection requirements, specific to: no excavation within the SRZ, excavations for driveway setout to be supervised & certified by an appointed site arborist.												

APPENDIX- E: Tree Location Plan



APPENDIX- F: Tree Protection Area Plan

Note 1: No excavation or soil disturbance is to occur within **YELLOW Tree Management Area (TMA)** without prior arborist advice & certification.

Note 2: No excavation to occur within SRZ radiuses without project arborist advice and certification.

Note 3: **TMA** or designated **tree protection area (TPA)** to be managed in accordance with Section 6.3 of this report.

Note 4: Any additional works, hydraulic or inground services within TPZ's to be reviewed and approved by an appointed project arborist prior to being installed.

