# rain Tree consulting

Arboricultural Management

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25 May 2022

# NEWPORT MARINA & RESIDENTIAL DEVELOPMENT

**122 – 128 CRESCENT ROAD &**
**55 - 57 THE AVENUE – NEWPORT, NSW**

# PROPERTY SUBDIVISION

# ARBORICULTURAL ASSESSMENT REPORT

*Report Ref No- 6422*

Prepared for
Essex Development
Suite 14, 26 – 32 Pirrama Road
PYRMONT, NSW 2009


Prepared by
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AQF Level 5 consulting arborist

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## INTRODUCTION

This arboricultural report has been commissioned by Essex Development to assess the remaining Useful Life Expectancy (ULE) of significant trees in relation to a property subdivision development proposal. The proposed subdivision consists providing nine (9) separate allotments occupying:

- Lots 2 & 3 in DP 210342
- Lot 1 in DP 503390
- Lot 21 in DP 545339
- Lots 111 & 112 in DP 556902 and Lot 295 in DP 820302, being known as 122 – 128 Crescent Road and 55 & 57 The Avenue NEWPORT NSW.

This report is not an Arboricultural Impact Assessment (AIA) report required for tree protection during construction of new dwellings and associated infrastructure. This report includes identification of significant and non-significant trees likely to be removed to accommodate the proposal and provides a guide for tree protection based on indicative building footprints and driveway access handles to accommodate the subdivision proposal.

Within this report the Structural Root Zone (SRZ) and Tree Protection Zone (TPZ) radiuses of individual trees has been provided and may be referenced within the SRZ & TPZ distance column of Appendix-C. For those trees to be retained the radial SRZ & TPZ setbacks are recommended to be utilized for initial architectural and associated design works to identify encroachment and restriction area within the SRZ & TPZ.

To ensure trees remain viable design should be limited Minor (<10%) incursion within the TPZ as shown within Appendix- A *diagram of acceptable incursions* (AS4970), with no access within SRZ setbacks without prior arborist advice.

Development incursions within tree protection zones (TPZ) and impacts to trees have been outlined within Notes of Appendix- A and are described as Minor (<10%) & Major (>10%) TPZ occupancy having low, moderate to high level encroachment 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.

Within this report each tree 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 subject trees, their significance and location have been identified within the Tree Assessment Schedule and Tree Location Plan of Appendices C and 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.

## METHODOLOGY

1. In preparation for this report a limited site and ground level visual tree inspection Tuesday 17th May 2022 by the author of this report. The principles of visual inspection were primarily adopted from components of Mattheck *& Breloer* 1994 '*The Body Language of Trees*' with very basic risk values determined by criteria explained within the ISA Tree Risk Assessment Qualification (TRAQ) manual 2017. The inspection included assessment of the overall health and vigour of the trees, tree form, structure and structural condition commencing from near the lower trunk to the upper first & second order branch division as best as site conditions would allow. On completion of the tree inspection the retention value of the tree was summarised utilizing the tree assessment Checklist shown within Appendix- B.

2. The inspection was limited to a visual assessment from within the subject site and surrounding Council verge easements where the retention value, condition and diameters of any neighbouring trees was estimated. The height of trees and canopy spread was estimated and expressed in metres with trunk diameters measured at approximately 1.4 metres above ground level or as specified within appropriate tree management standards, rounded off to the nearest 50mm and expressed as DBH (Diameter at Breast Height).

3. This report acknowledges the current Australian Standards 'Protection of Trees on Development Sites' AS4970 with reference to section 2.3.2 *The preliminary assessment of trees should take place at the beginning of the project once any site surveys have been completed. The purpose of this assessment is to provide quantitative and qualitative information on trees. All trees included in the site survey should be numbered and assessed by the project arborist as the basis for deciding which trees are suitable for retention.*

4. Plans and/or documentation received to assist in preparation of this report include:

   Scott Carver, project ref: 20220005
   - Architectural Envelope Plan Dwg No: AD-DA903 rev: C dated 19.5.2022
   - Demolition Plan Dwg No. AD-DA902 rev C dated 19.5.2022

   Boxall Surveyors
   - Survey Plan Dwg No. 11369-001, Sheet 1, rev: --- , dated 416.2.2022

5. NOTE:
   Unless specified otherwise all distances and development offsets stated within this report are radiuses taken from the centre of the tree.

   Limitations: Based on the design plans assessed development encroachments within the TPZ are based on estimated tree location as RL's for building footprint and final site clearing RL's to accommodate the proposal are unclear.

## 1. SUMMARY OF ASSESSMENT

### 1.1 General tree assessment

1.1.1 Seventy-six (76) trees or tree groups have been assessed for the purpose of this property subdivision proposal. Of the seventy-six trees within the site forty-three (43) trees are exempt non-prescribed species, three (3) are dead or at risk of failure trees, six (6) trees contain low retention values, and twelve (12) trees are located within Council verges or within the front Pittwater high water mark foreshore area.

1.1.2 *Dead or at risk of failure trees.* The three (3) trees assessed as containing significant structural faults or are dead trees capable of failure are trees:

- T19, 29 & 68

The trees should be considered for removal to eliminate consequences of damages in the event of failure where consideration to habitat values of T68 is recommended due to the tree's location.

1.1.3 *Exempt non-prescribed species.* Forty-three (43) trees have been identified as non-prescribed or exempt species being located within 2m of an existing approved structural dwelling noted within Pittwater DCP B4.22 Preservation of Trees and Bushland Vegetation. Several smaller shrubs and trees <3m in height are scattered throughout the site with specific exempt trees identified as:

- T4, 5, 7, 8, 11, 12, 13, 14, 15, 18x2, 20, 21, 22, 23, 24, 25, 26, 27, 28, 31, 32x2, 33, 34, 35, 36, 38, 39, 40x2, 41x2, 42, 44, 46, 47, 49, 50, 52, 53, 54, 55, 65, 67, 71 & 72.

Being exempt, non-prescribed species the trees are permitted to be managed (pruned, removed or relocated) without Council consent. For the purpose of the property subdivision proposal the exempt trees have been specified for removal to accommodate design.

1.1.4 *Low retention value trees.* The six (6) low retention value trees are identified as trees:

- T9, 30, 43, 48, 70 & 75

Given the trees accorded low retention value the trees should not restrict works within the site due to their short remaining safe site usefulness.

1.1.5 *Council verge trees.* The twelve (12) Council verge trees are identified as trees:

- T1, 2, 3, 57, 58x2, 59, 60, 61, 62, 63, 64 & 69

Of the above trees T1, 2 & 58x2 are low value trees and have been identified for removal to accommodate driveway access areas.

1.1.6 The subject trees have been summarised within Table 1, and may be referenced for design requirements within the following sections specific to design and impact summary comments provided within the Tree Assessment Schedule of Appendix- C.

Table 1, Summary of tree retention values

| | | | |
|---|---|---|---|
| | Dead or defective at-risk trees of failure | 3 | T19, 29 & 68 |
| | Exempt species | 43 | T4, 5, 7, 8, 11, 12, 13, 14, 15, 18x2, 20, 21, 22, 23, 24, 25, 26, 27, 28, 31, 32x2, 33, 34, 35, 36, 38, 39, 40x2, 41x2, 42, 44, 46, 47, 49, 50, 52, 53, 54, 55, 65, 67, 71 & 72 |
| | Low retention value trees | 6 | T9, 30, 43, 48, 70 & 75 |
| | Council verge trees | 12 | T1, 2, 3, 57, 58x2, 59, 60, 61, 62, 63, 64 & 69 |

## 1.2 Proposed tree removal

1.2.1 From the above list forty-six (46) exempt, dead or hazardous trees recommended or requiring removal to accommodate design are summarised as trees:

- T4, 5, 7, 8, 11, 12, 13, 14, 15, 18x2, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 31, 32x2, 33, 34, 35, 36, 38, 39, 40x2, 41x2, 42, 44, 46, 47, 49, 50, 52, 53, 54, 55, 65, 67, 68, 71 & 72.

1.2.2 Seventeen (17) prescribed (protected) & Council verge trees require removal to accommodate the design proposal and are identified as trees:

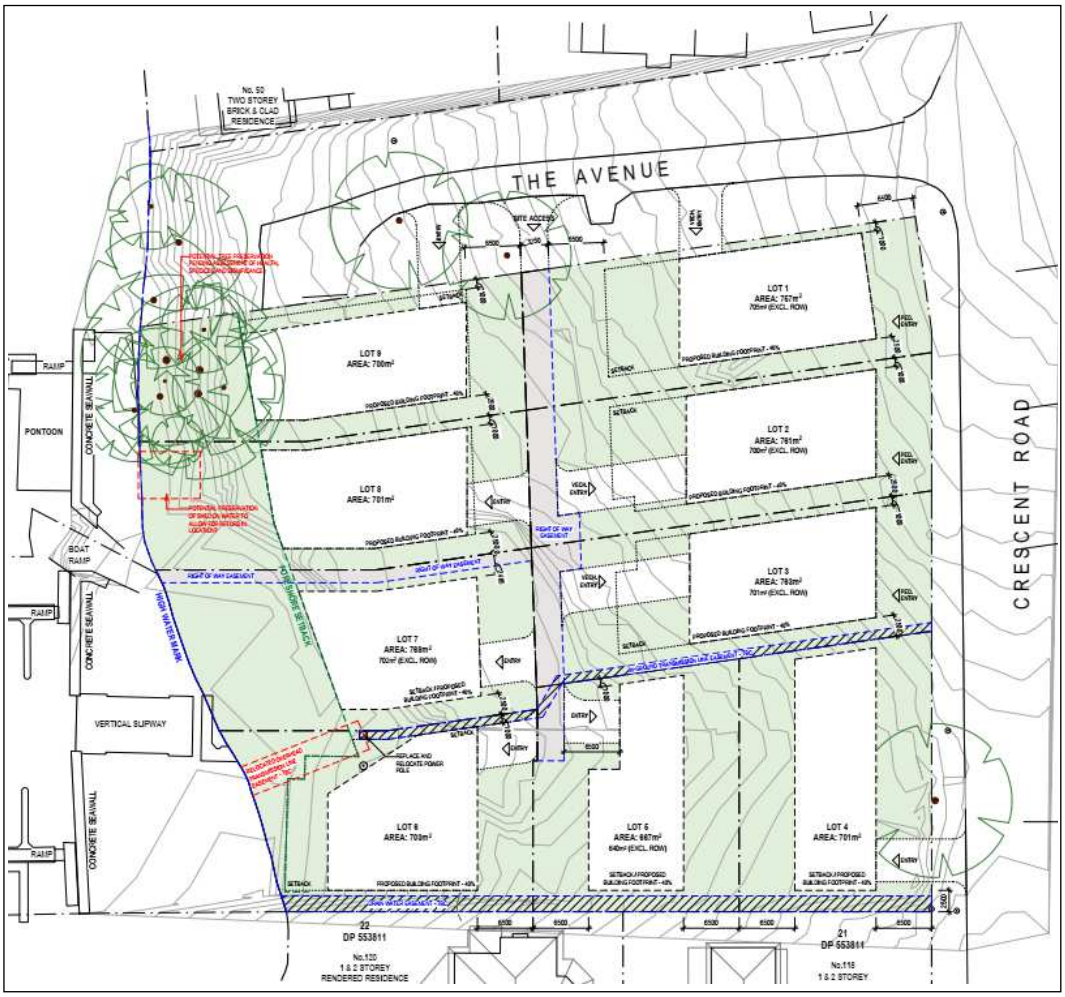
- T1, 2, 6, 9, 10, 16, 17, 30, 37, 43x4, 45, 48, 51, 56 & 58x2, 70 & 75.

1.2.3 Removal of prescribed trees is based on the following discussions:

- T1 & 2: proposed removal to accommodate Lot 1 driveway access.
- T6, 9 & 10: proposed removal to accommodate Drain Water Easement & Lot 5 building footprint.
- T16 & 17: proposed for removal to accommodate Lots 4 & 5 building footprint.
- T30: removal due to appearing located within proposed Easement for Inground Transmission Line.
- T37: located within Lot 4 dwelling footprint.
- T43x4 & 45: remove to accommodate Lot 2 proposal with T43x4 located within the building footprint.
- T48 & 51: remove to accommodate Lot 1 & 2 proposal with T48 within Lot 1 building footprint.
- T56 & 58x2: proposed removal to accommodate Lot 9 building footprint & driveway access with 58x2 located within or near the proposed driveway footprint.
- T70: recommended removal as demolition of adjacent wall (support factor) will likely result in whole tree collapse.
- T75: removal of small fallen dead tree to make space for new plantings.

1.2.4 The above trees have been detailed within Appendix- C and shown within Sheet 1 Tree Location & tree value plan of Appendix- D.

Figure 1, showing property subdivision proposal




## 1.3 Trees specified for retention

1.3.1 Those trees specified for retention are identified as trees:

- T3, 57, 59, 60, 61, 62, 63, 64, 66, 69, 73, 74 & 76.

Of the above trees those receiving negligible, Minor (<10%) or manageable (10-15%) building footprint occupancy within the TPZ are trees: T60, 61, 62, 63, 64, 66, 69, 73 & 74.

Those receiving Major (>10%) building footprint occupancy within the TPZ requiring tree sensitive dwelling & infrastructure design to ensure the trees remain viable are trees: T3, 57, 59 & 76.

1.3.2 For those trees located near works and/or specified for retention the SRZ & TPZ radiuses are recommended to be shown within construction drawings such that development incursions and restrictions in design can be clearly identified. For allowable incursions within the TPZ refer to Appendix- A *diagram of acceptable incursions* based after Australian Standard AS4970 Protection of Trees on Development Sites - 2009.

Where greater than 10% incursion is proposed tree sensitive design and further arborist advice is required at the initial design stage to ensure trees remain viable.

1.3.3 In general the impact of development on vegetation can be minimised by:

- Tree sensitive construction measures such as suspended design, pier and beam bridging over critical roots within the SRZ & TPZ, suspended slabs, cantilevered building sections, screw piles and contiguous piling can minimise the impact of encroachment (AS4970).
- This should include but not be limited to avoiding strip footings and slab on ground construction within the TPZ.
- Locating buildings to minimise the amount of disturbance on vegetation and landforms by providing adequate distance between the dripline of trees and development. Development should ideally not exceed 15% TPZ encroachment and not be located within the SRZ. This avoids destabilising trees, compacting soil or altering drainage that helps in tree preservation.
- Constructing with isolated stump footings usually associated with lightweight construction on sloping sites with pier and beam footings that allow beams to span the root systems and minimise tree root damage. Suspended design by pier and beam also allows trees to be maintained closer to development where no other alternative exists.
- Locating paved areas outside the dripline of trees and minimise paved area impact on understorey vegetation or native groundcover species and minimising hard surfaces to allow water infiltration to the root system within the Tree Protection Zone (TPZ).
- Locating trenches outside the TPZ & dripline of a tree.
- Adequately protecting and managing trees and vegetation during construction in accordance with Australian Standard AS 4970 – 2009 'Protection of Trees on Development Sites' and protecting root zones and trees with fencing or tree barriers during construction.

1.3.4 The detailing of final and additional tree protection and impacts by dwelling and infrastructure design is to be specified within an Arboricultural Impact Assessment (AIA) report. This should include but not be limited to the following:

a) Prior to demolition works a detailed Tree Protection Plan (TPP) should accompany a Construction Management Plan (CMP) that clearly identifies Tree Protection Zones (TPZ) or specific tree protection areas (TPA).

b) Both the TPZ or specified TPA's are to be adequately protected and managed as tree protection zones specific to:

- Prior to demolition works tree protection fencing shall be installed to adequality protect trees.
- On site project arborist supervision is to occur where demolition is required within the TPZ.
- Activities that are to be excluded form fenced tree protection areas during demolition should include machine excavation, including trenching, storage & work preparation, wash down areas, soil level change, placement of utility services and physical damage to trees.

## 1.4 Future structural design work recommendations

1.4.1 For the purpose of development trees which have been identified for retention and specific protection require final arboricultural planning advice and reports to be appropriately retained. Report requirements and ongoing arborist activities are identified within the Australian Standard AS4970 '*Protection of Trees on Development Sites*' 2009 being specific to:

- AS4970 section 2.3.4: *Development design and review,* the ongoing review of architectural, engineering (e.g. bulk earthworks and construction drawings) services and landscape drawings. The purpose of this is to determine the potential impacts on trees proposed for retention.
- AS4970 section 2.3.5: *Arboricultural impact Assessment or statement*, to be prepared once the final development layout is complete. This report identifies trees to be removed, retained or transplanted. The report explains tree protection methodology required to minimise development impacts where development encroachment is within the TPZ. The location of tree protection methods should also be shown on other documents such as demolition, bulk earth works, construction and landscape plans.

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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 2024
Member: ISA, Arboriculture Australia & IACA, Working With Children No: WWC0144637E

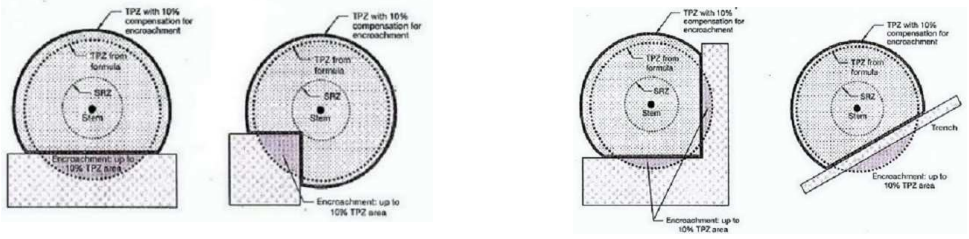
## APPENDICES

## APPENDIX- A: Terminology, notes & references

**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. (LM) Late mature refers to a tree entering into over maturity (OM) and likely first stages of senescence. **Vitality** – the state of being strong & active, capacity for survival or for the continuation of a meaningful or purposeful existence which includes ***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*****:** referring 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 week 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: SRZ:** The anchoring root zone responsible for tree stability. A development exclusion zone pending appropriate arboricultural advice. Determined by AS4970 - 2009 Figure 1, Table of determining the SRZ section 3.3.5. The percentage of encroachment requires to be calculated where development is proposed within the natural area of the SRZ. **TPZ:** The principle means of protecting trees on development sites. It is a combination of the root area and crown area requiring protection. Development occupying 10% of the TPZ is acceptable, greater encroachment requires specific arboricultural assessment. The TPZ forms part of the development exclusion zone. **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)

**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) 2017, 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.
Standards Australia 2009, *Australian Standards 4970 Protection of Trees on Development Sites* - Standards Australia, Sydney, Australia.
ProSafe: TPZ encroachment calculator https://proofsafe.com.au/tpz_incursion_calculator.html
Northern Beaches Council DCP https://www.northernbeaches.nsw.gov.au/planning-and-development/building-and-renovations/planning-controls

## APPENDIX- B: Tree Retention Value *Checklist* ©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 |

**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 where risk mitigation or rectification works may compromise tree anchorage. Tree(s) may be contained by sloid structures with restricted anchoring root potential |
| 0A | Noxious or invasive species located within heritage conservation areas | | |
| 1 | Trees that are dead, significantly declining >75% volume or obviously hazardous | 3 | This rating incorporates trees that require further investigation of faults & defects such as pathogen ID, cavities or symptoms indicating internal damage or decay that cannot be assessed by visual examination.<br>Further inspections may include Plant Disease Diagnostic Unit (PDDU) pathogen testing, arborist climbing inspection within the canopy, root crown investigation, drill penetrating and/or Picus Sonic Tomograph ultrasound testing procedures to determine extent of internal damage or decay. |
| 2 | Trees that are structurally damaged. Have poor structure or weak & detrimental large branch bark stem inclusions capable of sudden failure opposed to 2B. Tree may also be affected by extensive borer damage, fungal pathogens (wood rot) or viruses. Some symptoms may be reversible, remediated or controlled give appropriate arborist advice, 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 the near future, may include trees with included branch 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 pressure, or have tall forest form where exposure may result in windthrow or limb snap |
| | | 5A | Screen trees or shrubs that are routinely hedged or pruned 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 canopies or are visually low risk trees noted under a limited inspection only |
| 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 i.e. fences to neighbouring sites |

**iii) Retention Value (RV):** Determined by [1] High - tree fee of visual defects and viable for retention, [2] Medium – Consider retention with minor visual faults which may reduce ULE, [3] Low - trees which contain faults that are likely to become problematic in the near future, [4] Removal - trees to be considered for removal due to poor 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 to15 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

*Refer Tree Retention Value Checklist Appendix- B*

| | Trees requiring removal due to hazardous or dead condition - subject to Local Government Authority notification | | Trees with low retention values: senescence, appear significantly environmentally stressed, have 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 (m)** | **Age** | **Vitality** (Health) | **Condition** | **LS** | **VTA** | **RV** | **U. L.E.** | **Comments** CV = Council verge tree NT= Neighbouring tree |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 CV | *Syagrus romanzoffiana* Cocos Palm | 8 x 6 | 300 | - / 4 | SM | Good | Fair / Good | 4 | 2C | 2 | 2 | Minor spike mark trunk wounds E side with no significant visual faults |
| *Design & impact summary: Proposed removal to accommodate Lot 4 dwelling driveway entry* | | | | | | | | | | | | |
| 2 CV | *Syagrus romanzoffiana* Cocos Palm | 9 x 4 | 250 | - / 3 | SM | Good | Fair / Good | 4 | 2C | 2 | 2 | Minor spike mark trunk wounds E side with no significant visual faults |
| *Design & impact summary: Proposed removal to accommodate Lot 4 dwelling driveway entry* | | | | | | | | | | | | |
| 3 CV | *Cinnamomum camphora* Camphor Laurel | 15 x 18 | 700 | 2.8 / 8.4 | SM | Fair / Good | Fair / Good | 4/3 | 4 | 2 | 2 | Canopy slightly environmentally stressed with minor fine tip decline in lower canopy, with no significant visual faults |
| *Design & impact summary: Proposed retention. Lot 4 dwelling located within existing asphalt car park with proposed site grading works & RL unclear. Dwelling & driveway footprint outside of SRZ with TPZ encroachment at or near 25.7%, of High level (25-35%) TPZ occupancy. Mitigating impacts requires tree sensitive design & construction methodology.* | | | | | | | | | | | | |
| *4 | *Syagrus romanzoffiana* Cocos Palm | 11 x 5 | 200 | - / 3.5 | SM | Good | Fair / Good | 4 | 0/2C | 2 | 2 | Exempt palm species. Minor spike mark trunk wounds E side with no significant visual faults |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| *5 | *Syagrus romanzoffiana* Cocos Palm | 9 x 5 | 250 | - / 3.5 | SM | Good | Good | 4 | 0/2E | 2 | 2 | Exempt palm species. Located in garden bed with kerb at base = likely to become problematic in the future |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| 6 | *Tristaniopsis laurina* Water Gum | 5 x 4 | x2= 250 | 1.8 / 3 | ESM | Good | Good | 4 | 2C/ 2E | 2 | <2 | In garden bed with kerb at base, minor lower trunk wounds at base, twin stems at 1.1m |
| *Design & impact summary: Proposed removal, located within Drain Water Easement footprint* | | | | | | | | | | | | |
| *7 | *Tristaniopsis laurina* Water Gum | 4.5 x 4 | 200 | 1.8 / 2.4 | ESM | Good | Fair / Poor | 4 | 0/2 | 3 | 3/5 | Exempt tree species height class. Large open wound at base to 1m E side = low retention value |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| *8 | *Syagrus romanzoffiana* Cocos Palm | 11 x 6 | 300 | - / 4 | SM | Good | Good | 4 | 0/2E | 1 | 2 | Exempt palm species, location to infrastructure likely to become problematic in the future |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |

*Refer Tree Retention Value Checklist Appendix- B*

| | Trees requiring removal due to hazardous or dead condition - subject to Local Government Authority notification | | Trees with low retention values: senescence, appear significantly environmentally stressed, have 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 (m) | Age | Vitality (Health) | Condition | LS | VTA | RV | U. L.E. | Comments<br>CV = Council verge tree<br>NT= Neighbouring tree |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | *Callistemon viminalis* Bottle Brush | 6 x 4 | x2= 250 | 1.8 / 3 | ESM | Good | Fair / Good | 4 | 2E | 2 | 3 | Twin stems at near ground level, in garden bed, one sided canopy biomass – NW with low bowing suppressed canopy form, minor wound at 2.2m E at weight loaded bowing trunk bend increasing failure potential = low retention value |
| *Design & impact summary: Proposed removal, located within Drain Water Easement footprint, Lot 5 dwelling footprint likely within SRZ with TPZ occupancy at or near 20.9% of Moderate to High (20-25%) encroachment impact within the TPZ* | | | | | | | | | | | | |
| 10 | *Melaleuca quinquenervia* Paperbark | 14 x 12 | 900 | 3.2 / 10.8 | SM | Good | Fair / Good | 3 | 2B/2E | 2 | 2 | In garden bed with kerb at base, likely lineal root system. Reduction pruned S side, canopy mass N, NE, W with multi stems at 1.5m containing minor stem inclusion development |
| *Design & impact summary: Proposed removal, located within Drain Water Easement footprint, Lot 5 dwelling footprint within SRZ with TPZ occupancy at or near 26.5% of High (25-35%) encroachment impact within the TPZ* | | | | | | | | | | | | |
| *11 | *Brachychiton acerifolius* Illawarra Flame Tree | 11 x 4.5 | 350 | 2.3 / 4.2 | ESM | Good | Fair / Good | 4 | 0/2B/ E | 2 | <2 | Exempt tree species, with suppressed canopy form biomass- W, located in garden bed with minor stem inclusion development on lower branch scaffolds |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| *12 | *Syagrus romanzoffiana* Cocos Palm | 7 x 6 | 200 | - / 4 | SM | Good | Fair / Good | 4 | 0/2E | 2 | 3 | Exempt palm species. Bowing lower trunk to 2.3m, in raised garden bed = location likely to become problematic in the future |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| *13 | *Dypsis Lutescens* Golden Cane Palm/s | 3 x 3 | 100 each | - / 2.5 | ESM | Good | Good | 4 | 0/2E | 2 | 3/5 | Exempt palm species. Multi stemmed at base, in raised garden bed |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| *14 | *Callistemon viminalis* Bottle Brush | 10 x 7 | 250, 250 | 2.5 / 6 | M | Good | Fair | 4 | 0/2E/ 2D | 2 | 3 | Exempt tree species within 2m to dwelling footprint, has one sided canopy mass & lean due to over pruning S side |
| *If dwelling removed unable to make safe due to weight loaded pressure NW* | | | | | | | | | | | | |
| *15 | *Syagrus romanzoffiana* Cocos Palm | 6 x 4.5 | 300 | - / 3.25 | SM | Good | Good | 4 | 0 | 1 | 2 | Exempt palm species with no significant visual faults |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |

*Refer Tree Retention Value Checklist Appendix- B*

| | Trees requiring removal due to hazardous or dead condition - subject to Local Government Authority notification | | Trees with low retention values: senescence, appear significantly environmentally stressed, have 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 (m) | Age | Vitality (Health) | Condition | LS | VTA | RV | U. L.E. | Comments CV = Council verge tree NT= Neighbouring tree |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | *Melaleuca quinquenervia* Paperbark | 8 x 8 | 450 | 2.5 / 5.4 | ESM | Good | Good | 3 | 6 | 1 | 1 | Tree with no significant visual faults, located in asphalt car park |
| *Design & impact summary: Proposed removal. Lot 4 dwelling footprint located within SRZ with TPZ encroachment of at or near 39.2%, of Significant (>35%) impact & TPZ occupancy* | | | | | | | | | | | | |
| 17 | *Melaleuca quinquenervia* Paperbark | 10 x 8 | 550 | 2.7 / 6.6 | ESM | Good | Fair / Good | 3 | 2B | 2 | 2 | Minor lower trunk wounds NE, lower branch scaffolds with minor stem inclusion development, located in asphalt car park |
| *Design & impact summary: Proposed removal. Tree located within Lot 5 dwelling footprint* | | | | | | | | | | | | |
| *18 x2 | *Cupressus sp* Cypress | 4.5 x 1.5 | 200at base | 1.6 / 2.4 | ESM | Good | Fair / Good | 4 | 0/2E | 2 | 3 | Two exempt tree species within 2m to dwelling foundations |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| 19 | *Leptospermun petersonii* Lemon Scented Tea Tree | 6 x 8 | 650at base | 2.7 / 7.8 | LM | Good | Fair / Poor | 4/3 | 2 | 3 | <3 | Structurally defective tree, multi stemmed at base, large open wound N stem extending to ground level of central stem junction, aging specimen with low retention value |
| *Design & impact summary: Proposed removal. Structurally defective tree not viable to retain within new development proposal. Appears located within Lot 7 building footprint* | | | | | | | | | | | | |
| *20 | *Syagrus romanzoffiana* Cocos Palm | 8 x 5 | 300 | - / 3.5 | ESM | Good | Fair / Good | 4 | 0/2C | 2 | 2 | Exempt palm species with minor lower trunk wounds N side |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| *21 | *Syagrus romanzoffiana* Cocos Palm | 7 x 6 | 300 | - / 4 | SM | Good | Fair / Good | 4 | 0/2C | 2 | 2 | Exempt palm species, minor lower trunk wounds N side |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| *22 | *Syagrus romanzoffiana* Cocos Palm | 4 x 5 | 200 | - / 3.5 | ESM | Good | Fair / Good | 4 | 0/2C | 2 | 2 | Exempt palm species, narrow trunk to 1m with minor wounds evident |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| *23 | *Syagrus romanzoffiana* Cocos Palm | 6 x 4 | 200 | - / 3 | SM | Good | Fair | 4 | 0/2 | 2 | 3 | Exempt palm species, very narrow trunk to 1m likely to become problematic in the future |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| *24 | *Syagrus romanzoffiana* Cocos Palm | 8 x 5 | 200 | - / 3.5 | SM | Good | Fair / Good | 4 | 0/2C | 2 | 2 | Exempt palm species, bowing lower trunk to 4m with trunk wounds NE side |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |

*Refer Tree Retention Value Checklist Appendix- B*

| | Trees requiring removal due to hazardous or dead condition - subject to Local Government Authority notification | | Trees with low retention values: senescence, appear significantly environmentally stressed, have 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 (m) | Age | Vitality (Health) | Condition | LS | VTA | RV | U. L.E. | Comments CV = Council verge tree NT= Neighbouring tree |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *25 | *Prunus sp* Ornamental Prune | 4 x 5.5 | 250 | 2 / 3 | LM | Good+ | Fair / Good | 4 | 0/2B | 2 | 3 | Exempt tree species, +deciduous at time of inspection, minor stem inclusions throughout, 3x Dracaena exempt palms opposite canopy projection NNW side |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| *26 | *Camellia japonica* Camellia | 3 x 2 | 250at base | 1.8 / 3 | LM | Fair | Good | 4 | 0/4 | 2 | <2 | Exempt tree species height, canopy slightly environmentally stressed |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| *27 | *Camellia sasanqua* Camellia | 2.5 x 2 | 250at base | 1.8 / 3 | LM | Fair / Good | Good | 4 | 0/4 | 2 | 2/5 | Exempt tree species height class, multi stemmed at base, with minor stem inclusion development, canopy slightly environmentally stressed |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| *28 | *Prunus sp* Peach tree | 6 x 4 | 300 | 2.1 / 3.6 | LM | Good+ | Fair / Poor | 4 | 0/4 | 3 | 4 | Exempt tree species, +deciduous at time of inspection, structurally defective tree, past termite damage noted within open wounds from lower trunk to upper branch scaffolds |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| 29 | *Leptospermun petersonii* Lemon Scented Tea Tree | 8 x 6 | 500 | 2.6 / 6 | LM | Fair | Poor | 4/3 | 2 | 4 | 4 | Structurally defective tree, large open wounds on lower trunk to upper branch scaffolds, wound at 2.5m S side split to ground level = at risk tree of failure |
| *Design & impact summary: Proposed removal. Structurally defective tree not viable to retain within new development proposal. Appears located near or within Easement for Inground Transmission Line* | | | | | | | | | | | | |
| 30 | *Ceratopetalum gummiferum* NSW Christmas Bush | 7 x 2 | 200 | 1.8 / 2.4 | LM | Good | Poor | 4 | 2D | 3 | 3 | Past lopped N stem at 3.5m modifying form having one sided canopy biomass- S, stem weight loaded = low retention value |
| *Design & impact summary: Proposed removal. Appears located near or within Easement for Inground Transmission Line* | | | | | | | | | | | | |
| *31 | *Cinnamomum camphora* Camphor Laurel | 6 x 3 | 100, 150 | 1.8 / 3 | ESM | Good | Fair | 5 | 0/2 | 3 | 3 | Exempt tree species, twin main stems at ground level with defined stem inclusion development |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |

*Refer Tree Retention Value Checklist Appendix- B*

| | Trees requiring removal due to hazardous or dead condition - subject to Local Government Authority notification | | Trees with low retention values: senescence, appear significantly environmentally stressed, have 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 (m) | Age | Vitality (Health) | Condition | LS | VTA | RV | U. L.E. | Comments<br>CV = Council verge tree<br>NT= Neighbouring tree |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *32 x2 | *Lagerstromia indica*<br>Crepe Myrtle | 7 x 6 | 650 | 2.8 / 7.8 | M | Good+ | Fair / Good | 4 | 0/2B | 2 | 2 | Exempt tree species, +deciduous at time of inspection, 2x trees multi stemmed at base, tightly clumped with minor stem inclusion development |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| *33 | *Camellia japonica*<br>Camellia | 3 x 2 | 250at base | 1.8 / 3 | M | Good | Fair / Good | 4 | 0/2B/ 2C | 2 | 2/5 | Exempt tree species height class, past topped at 1m, twin at ground level with minor stem inclusion development |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| *34 | *Camellia japonica*<br>Camellia | 2.5 x 2 | 200at base | 1.6 / 2.4 | SM | Good | Good | 4 | 0/2B | 2 | 2/5 | Exempt tree species height class, multi stemmed at base |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| *35 | *Grevillea robusta*<br>Silky Oak | 19 x 13 | 650 | 2.8 / 7.8 | SM | Fair / Good | Fair / Good | 4/3 | 0/4/2 A | 2 | <2 | Exempt tree species, canopy slightly environmentally stressed, lower trunk minor bow to 3m, exposed structural roots to SW, root buttressing at base |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| *36 | *Cinnamomum camphora*<br>Camphor Laurel | 6 x 6 | 150, 150 | 2 / 3.6 | ESM | Good | Fair / Poor | 4 | 0/2 | 2 | <2 | Exempt tree species, twin stems at 1m with defined stem inclusion development |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| 37 | *Plumeria sp*<br>Frangipani | 6 x 5 | 200at base | 1.6 / 2.4 | M | Good | Good | 4 | 2A | 2 | 2 | Lower trunk bow to 1.1m, suppressed canopy form biomass- W, appears with poor anchoring root development with minor surface rot damage E side |
| *Design & impact summary: Proposed removal. Tree appears located within Lot 4 dwelling footprint* | | | | | | | | | | | | |
| *38 | *Camellia japonica*<br>Camellia | 4 x 3.5 | 250at base | 1.8 / 3 | SM | Good | Good | 4 | 0/4/ 2C | 2 | 2/5 | Exempt tree species height class. Multi stemmed at base, |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| *39 | *Jacaranda mimosifolia*<br>Jacaranda | 11 x 14 | 400, 400 | 3 / 9.6 | SM | Good | Good | 4/3 | 0/2B | 2 | >2 | Exempt tree species, twin systems at 0.5m, canopy mass one sided to W, appears average root plate development |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |

*Refer Tree Retention Value Checklist Appendix- B*

| | Trees requiring removal due to hazardous or dead condition - subject to Local Government Authority notification | | Trees with low retention values: senescence, appear significantly environmentally stressed, have 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 (m) | Age | Vitality (Health) | Condition | LS | VTA | RV | U. L.E. | Comments CV = Council verge tree NT= Neighbouring tree |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *40 x2 | *Schefflera actinophylla* Umbrella Tree | 8 x 6 | 550at base | 2.6 / 6.6 | SM | Good | Fair / Good | 4 | 0/2E | 2 | <2 | Exempt tree species, multi stemmed at ground level with retaining wall at base |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| *41 x2 | *Archontophoenix cunninghamiana* Bangalow Palm | 4 x 2 | 150 | - / 2 | ESM | Good | Good | 4 | 0 | 1 | 2 | Exempt palm species, x2 palms at ground level |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| *42 | *Cupressus sempervirens* Mediterranean Cypress | 6 x 4 | 350 | 2.3 / 4.2 | M | Fair | Poor | 4 | 0/2D/ 4 | 3 | 3 | Exempt tree species. Environmentally stressed with decline in canopy, slight lean NW, past topped at 3.5m |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| 43 x4 | *Leptospermun petersonii* Lemon Scented Tea Tree | 5 x 2.5 | 200at base | 1.6 / 2.4 | SM | Fair / Good | Fair | 4 | 2C/2 | 3 | 3/5 | Four (4x) trees suppressed by overshadowing, some past topped at 1.6m modifying form, select trees with minor wounds = low retention value |
| *Design & impact summary: Proposed removal. Tree appears located within Lot 2 dwelling footprint* | | | | | | | | | | | | |
| *44 | *Jacaranda mimosifolia* Jacaranda | 7 x 8.5 | 300 | 2.1 / 3.6 | ESM | Good | Fair / Good | 4/3 | 0/2C | 2 | 2 | Exempt tree species, past pruning cuts for pruned for power line clearance E side modifying form |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| 45 | *Camellia sasanqua* Camellia | 5.5 x 5 | 200, 200 | 2.3 / 4.8 | M | Fair | Fair / Good | 4 | 4 | 2 | 2 | Environmentally stressed with decline in canopy evident |
| *Design & impact summary: Proposed removal to accommodate proposal. Lot 2 dwelling footprint appears located outside of TPZ having negligible (0%) TPZ occupancy* | | | | | | | | | | | | |
| *46 | *Camellia sasanqua* Camellia | 4 x 5 | 300at base | 2 / 3.6 | M | Good | Fair / Good | 4 | 0/2B | 2 | 2 | Exempt tree species height class. Multi stemmed at base, with minor stem inclusion development |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| *47 | *Syagrus romanzoffiana* Cocos Palm | 7.5 x 4.5 | 300 | - / 3.25 | M | Good | Good | 4 | 0 | 1 | 2 | Exempt palm species with no significant visual faults |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |

*Refer Tree Retention Value Checklist Appendix- B*

| | Trees requiring removal due to hazardous or dead condition - subject to Local Government Authority notification | | | | | | Trees with low retention values: senescence, appear significantly environmentally stressed, have 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 (m)** | **Age** | **Vitality** (Health) | **Condition** | **LS** | **VTA** | **RV** | **U. L.E.** | **Comments** CV = Council verge tree NT= Neighbouring tree |
| 48 | *Ceratopetalum gummiferum* NSW Christmas Bush | 5 x 3.5 | 250at base | 1.8 / 3 | M | Fair / Good | Fair | 4 | 4/2 | 3 | 3 | Environmentally stressed with decline in canopy, large open wound at base S side, appears not immediately detrimental, wound location likely to become problematic in the future = low retention value |
| *Design & impact summary: Proposed removal. Tree appears located within Lot 1 dwelling footprint* | | | | | | | | | | | | |
| *49 | *Persea americana* Avocado | 3.5 x 2 | 100 | 1.5 / 2 | I | Good | Good | 5 | 0 | 1 | 1 | Exempt tree species with no significant visual faults |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| *50 | *Syagrus romanzoffiana* Cocos Palm | 7 x 5 | 250 | - / 3.5 | ESM | Good | Good | 4 | 0/2E | 2 | 2 | Exempt palm species where location to infrastructure is likely to become problematic in the future |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| 51 | *Marraya paniculata* Marraya | 5.5 x 6 | 650at base | 2.7 / 7.8 | LM | Good | Fair / Good | 4/3 | 2C | 2 | <2 | Multi stemmed at base, over mature tree, with very minor decline within central junction |
| *Design & impact summary: Proposed removal. Lot 1 & 2 dwelling footprints appear located outside of the TPZ having Negligible (0%) TPZ occupancy, driveway access appears to have Minor (<10%) TPZ occupancy of low-level encroachment & impact* | | | | | | | | | | | | |
| *52 | *Strelitzia reginae* Giant Bird of Paradise | av 4 x 2 | 150 each | - / 2 | ESM | Good | Good | 4 | 0/2E | 2 | <2 | Exempt palm species where location to infrastructure is likely to become problematic in the future |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| *53 | *Archontophoenix alexandrae* Alexandra Palm | 7 x 2 | 150 | - / 2 | M | Good | Good | 4 | 0 | 1 | 2 | Exempt palm species with no significant visual faults |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| *54 | *Ligustrum sinense* Small Leaved Privet | 6.5 x 4.5 | 300at base | 2 / 3.6 | ESM | Fair | Fair / Good | 5 | 0/4 | 1 | 2 | Exempt tree species of low environmental significance |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |
| *55 | *Cinnamomum camphora* Camphor Laurel | 9 x 6 | 350at base | 2 / 4.2 | ESM | Good | Fair / Good | 4 | 0/2B | 2 | 2 | Exempt tree species. Multi stemmed at 0.6m, One sided canopy biomass – NW with minor decline in canopy S side |
| *Design & impact summary: Exempt non-prescribed tree, remove to accommodate development proposal* | | | | | | | | | | | | |

*Refer Tree Retention Value Checklist Appendix- B*

| | Trees requiring removal due to hazardous or dead condition - subject to Local Government Authority notification | | Trees with low retention values: senescence, appear significantly environmentally stressed, have 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 (m) | Age | Vitality (Health) | Condition | LS | VTA | RV | U. L.E. | Comments CV = Council verge tree NT= Neighbouring tree |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 56 | *Eucalyptus paniculata* Grey Ironbark | 22 x 15 | 650 | 2.8 / 7.8 | SM | Fair / Good | Fair / Good | 2 | 4/7 | 2 | 2 | Restricted VTA vine to 8m & vegetation at base, canopy slightly environmentally stressed, slight lower trunk lean N |
| *Design & impact summary: Proposed removal. Lot 9 & driveway access within SRZ. TPZ occupancy estimated at 51.3% of Significant TPZ encroachment & impact by design* | | | | | | | | | | | | |
| 57 CV | *Eucalyptus saligna* Sydney Blue Gum | 18 x 14 | 800 | 3 / 9.6 | SM | Fair / Good | Fair / Good | 3 | 4/2C | 2 | 2 | Canopy slightly environmentally stressed with minor decline & low foliage volume, minor wound at 3.5m SE appears not immediately detrimental |
| *Design & impact summary: Retain & protect. Lot 9 dwelling & driveway access occupancy estimated at 19.5% occupancy within TPZ, adjacent site access driveway located within SRZ with additional TPZ encroachment of at or near 17.8%. Combined SRZ & TPZ occupancy by design footprint likely at or near 37.2% excluding Avenue Rd surface. Proposed footprint impact considered of Significant (>35%) TPZ impact & occupancy where tree sensitive design is required to ensure the tree remains viable.* | | | | | | | | | | | | |
| 58x2 CV | *Nerium oleander* Oleander | av 5.5 x 6 | 650at base | - / 4 | SM | Good | Fair / Good | 4 | 2B | 2 | 2 | Multi stemmed at base, with minor stem inclusion development, low broad canopy form |
| *Design & impact summary: Proposed removal to accommodate Lot 9 dwelling footprint & driveway entry* | | | | | | | | | | | | |
| 59 CV | *Eucalyptus paniculata* Grey Ironbark | 22 x 18 | 750 | 3 / 9 | SM | Good | Good | 2 | 2C | 2 | 2 | Slight lean- NW, minor wound at 0.6m on central stem, one sided canopy biomass- N, NW, W |
| *Design & impact summary: Retain & protect. Lot 9 dwelling footprint located outside of TPZ having Negligible (0%) TPZ occupancy with proposed RL's and site grading unclear. Driveway access located within SRZ having Moderate (15-20%) occupancy at or near 15.2%. Given driveway footprint within the SRZ tree sensitive design without excavation cut or compaction within the SRZ is required.* | | | | | | | | | | | | |
| 60 CV | *Angophora costata* Angophora | 3 x 1.5 | 100at base | 1.5 / 2 | I | Good | Good | 4/3 | 6 | 1 | 1 | Young tree with no significant visual faults |
| *Design & impact summary: Retain & protect. Negligible (0%) TPZ occupancy by design proposal.* | | | | | | | | | | | | |
| 61 CV | *Banksia integrifolia* Costal Banksia | 9 x 4.5 | 200 | 1.8 / 2.4 | ESM | Good | Good | 4/3 | 6 | 1 | 1 | Tree with no significant visual faults |
| *Design & impact summary: Retain & protect. Negligible (0%) TPZ occupancy by design proposal.* | | | | | | | | | | | | |
| 62 CV | *Eucalyptus paniculata* Grey Ironbark | 18 x 17 | 650 | 2.8 / 7.8 | SM | Good | Good | 2 | 7/2A | 2 | 2 | Located at edge of steep embankment, above ground visual parts appear in good order |
| *Design & impact summary: Retain & protect. Negligible (0%) TPZ occupancy by design proposal.* | | | | | | | | | | | | |

*Refer Tree Retention Value Checklist Appendix- B*

| | Trees requiring removal due to hazardous or dead condition - subject to Local Government Authority notification | | Trees with low retention values: senescence, appear significantly environmentally stressed, have 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 (m) | Age | Vitality (Health) | Condition | LS | VTA | RV | U. L.E. | Comments CV = Council verge tree NT= Neighbouring tree |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 63 CV | *Eucalyptus capitallata* Brown Stringybark | 15 x 9 | 600 | 2.7 / 7.2 | SM | Fair / Good | Good | 2 | 4 | 2 | 2 | Canopy slightly environmentally stressed, one-sided biomass- W, located at edge of moderately steep embankment |
| *Design & impact summary: Retain & protect. Negligible (0%) TPZ occupancy by design proposal.* | | | | | | | | | | | | |
| 64 CV | *Eucalyptus capitallata* Brown Stringybark | 13 x 12 | 550 | 2.7 / 6.6 | SM | Fair / Good | Good | 2 | 4/7 | 2 | 2 | Lower canopy slightly environmentally stressed with moderate lean W, Restricted VTA vegetation at base |
| *Design & impact summary: Retain & protect. Negligible (0%) TPZ occupancy by design proposal.* | | | | | | | | | | | | |
| *65 | *Eriobotrya japonica* Loquat | 5 x 5 | 100, 100 | 1.6 / 2.4 | ESM | Good | Good | 4 | 0 | 2 | 2 | Exempt tree species, twin stems at ground level |
| *Design & impact summary: Exempt non-prescribed tree, consider remove to accommodate development proposal* | | | | | | | | | | | | |
| 66 | *Eucalyptus paniculata* Grey Ironbark | 20 x 16 | 800 | 3 / 9.6 | M | Good | Good | 2 | 7/6 | 1 | 2 | Located at edge of moderately steep embankment, suppressed canopy form biomass- W |
| *Design & impact summary: Retain & protect. Proposed Lot 9 dwelling footprint of Minor (<10%) low level TPZ occupancy with extent of RL's & site grading unclear.* | | | | | | | | | | | | |
| *67 | *Phoenix canariensis* Phoenix Palm | 4 x 7.5 | 550 | - / 4.75 | ESM | Good | Good | 4 | 0 | 2 | 2 | Exempt palm species no significant visual faults |
| *Design & impact summary: Exempt non-prescribed tree, could be considered for remove to accommodate development proposal. Lot 9 dwelling footprint outside of TPZ* | | | | | | | | | | | | |
| 68 | DEAD TREE | 13 x 8 | 300 | 2 / - | - | - | - | 6 | 1 | 4 | 4 | Dead tree, consider habitat values due to location |
| *Design & impact summary: Retain or remove pending ecologist advice. Proposed Lot 9 dwelling footprint outside of SRZ* | | | | | | | | | | | | |
| 69 CV | *Eucalyptus paniculata* Grey Ironbark | 12 x 9 | 500 | 2.6 / 6 | SM | Fair / Good | Fair / Good | 2 | 2C/ 2E | 2 | 2 | Restricted by concrete surface W side, appears slightly environmentally stressed with epicormic shoot development to 5m = potential stress factor due to location |
| *Design & impact summary: Retain & protect. Proposed Lot 9 dwelling footprint outside of TPZ of Negligible (0%) TPZ occupancy. Demolition of container to be conducted manually without excavation within the SRZ.* | | | | | | | | | | | | |
| 70 | *Pittosporum undulatum* Native Daphne | 9 x 5.5 | 350 | 2.3 / 4.2 | OM | Fair | Fair | 4 | 4/2E | 2 | 3 | Over mature tree in upper branch scaffolds decline, retaining wall at base, should wall be removed whole tree failure likely = low retention value |
| *Design & impact summary: Proposed removal due to poor condition & likely loss of stability at demolition stage of existing concrete block shed. Proposed Lot 9 dwelling footprint outside of TPZ of Negligible (0%) TPZ occupancy.* | | | | | | | | | | | | |

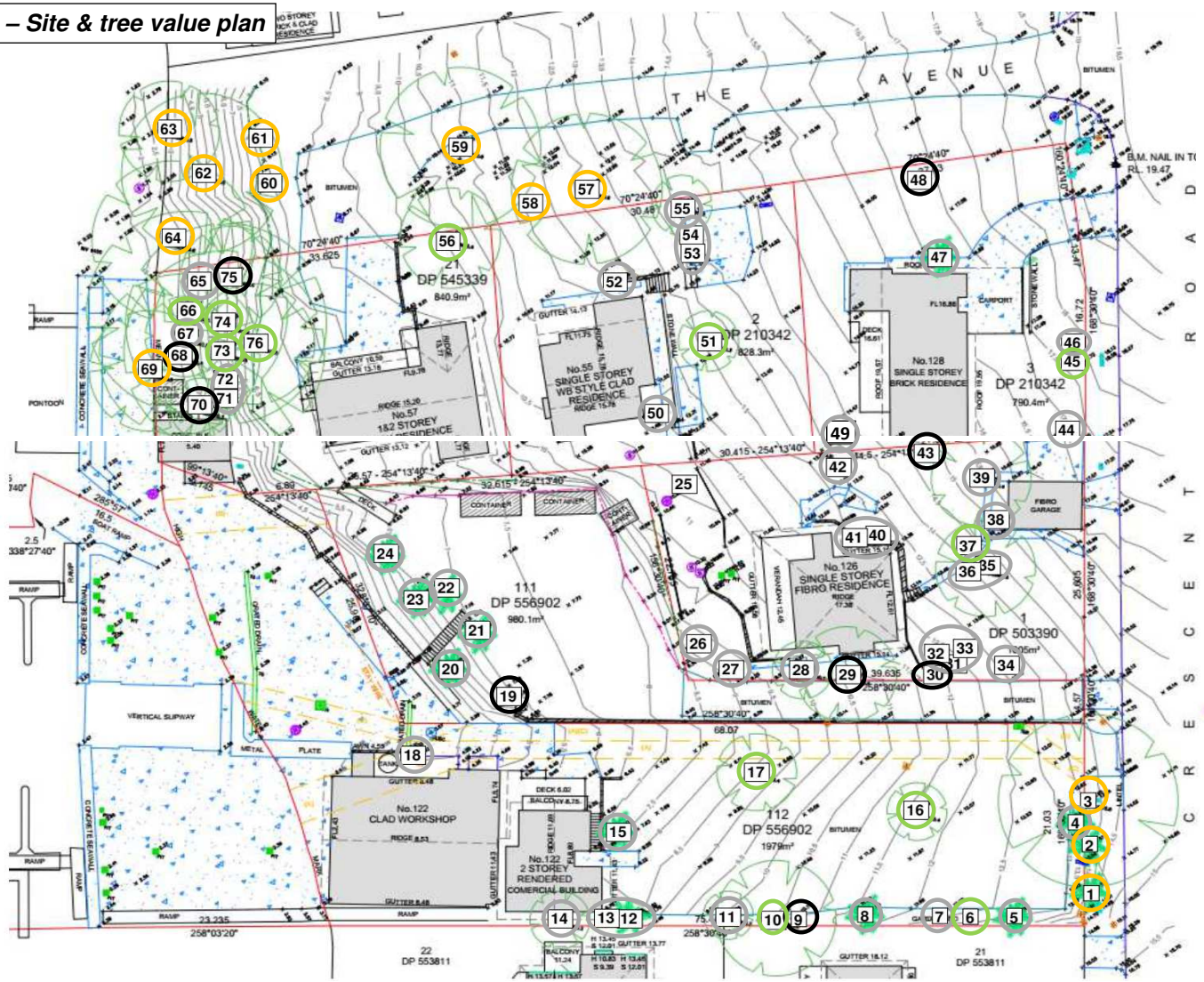
*Refer Tree Retention Value Checklist Appendix- B*

| | Trees requiring removal due to hazardous or dead condition - subject to Local Government Authority notification | | Trees with low retention values: senescence, appear significantly environmentally stressed, have 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 (m) | Age | Vitality (Health) | Condition | LS | VTA | RV | U. L.E. | Comments CV = Council verge tree NT= Neighbouring tree |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *71 | *Cinnamomum camphora* Camphor Laurel | 6 x 8 | 200 | 1.8 / 2.4 | ESM | Good | Fair / Good | 4 | 0/4 | 2 | <2 | Exempt tree species. Located at edge of steep embankment, suppressed canopy form biomass-S |
| *Design & impact summary: Exempt non-prescribed tree, could be considered for remove to accommodate development proposal. Lot 9 dwelling footprint appears located outside of TPZ* | | | | | | | | | | | | |
| *72 | *Cinnamomum camphora* Camphor Laurel | 9 x 7 | 250, 200 | 2.4 / 5.4 | ESM | Good | Good | 4 | 0 | 2 | <2 | Exempt tree species. Located at edge of steep embankment, suppressed canopy form biomass-SSE |
| *Design & impact summary: Exempt non-prescribed tree, could be considered for remove to accommodate development proposal. Lot 9 dwelling footprint appears located outside of TPZ* | | | | | | | | | | | | |
| 73 | *Eucalyptus paniculata* Grey Ironbark | 23 x 19 | 800 | 3 / 9.6 | M | Good | Good | 2 | 7/2C/ 4 | 2 | 2 | Restricted VTA. Located at edge of embankment, twin stems at 3m, contains large diameter deadwood in lower branch scaffolds, appears slightly environmentally stressed with no significant visual faults |
| *Design & impact summary: Proposed retention. Lot 9 dwelling footprint of Moderate to Low (10-15%) TPZ occupancy at or near 10.8% of low level & manageable encroachment with extent of RL's & site grading unclear.* | | | | | | | | | | | | |
| 74 | *Eucalyptus paniculata* Grey Ironbark | 19 x 16 | 650 | 2.7 / 7.8 | M | Good | Fair / Good | 2 | 7/2C | 2 | 2 | Suppressed canopy form biomass- NNW. Located at edge of embankment with past limb snap 220mm(Ø) at 8m N side |
| *Design & impact summary: Proposed retention. Lot 9 dwelling footprint of Minor (<10%) TPZ occupancy at or near 7.5% of manageable encroachment with extent of RL's & site grading unclear.* | | | | | | | | | | | | |
| 75 | *Eucalyptus paniculata* Grey Ironbark | 7 x 4 | 150 | 1.6 / 2 | ESM | Poor | Poor | 5 | 6 | 4 | 4 | Fallen tree, appears near dead with vine covered canopy |
| *Design & impact summary: Proposed remove fallen tree to make space for new plantings* | | | | | | | | | | | | |
| 76 | *Glochidion ferdinandi* Cheese Tree | 7 x 9 | 400, 450 | 3 / 10.2 | M | Good | Fair / Good | 3 | 2B | 2 | 2 | Main twin stems at ground level, past topped at 1.2m resulting in multi stem regrowth, with no significant visual faults |
| *Design & impact summary: Retain & protect. Lot 9 dwelling footprint located just within SRZ with TPZ occupancy at or near 21.1% of Moderate to High (20-25%) TPZ encroachment with proposed RL's and site grading unclear. Given works within SRZ & TPZ tree sensitive design without excavation cut or compaction within the SRZ is required.* | | | | | | | | | | | | |

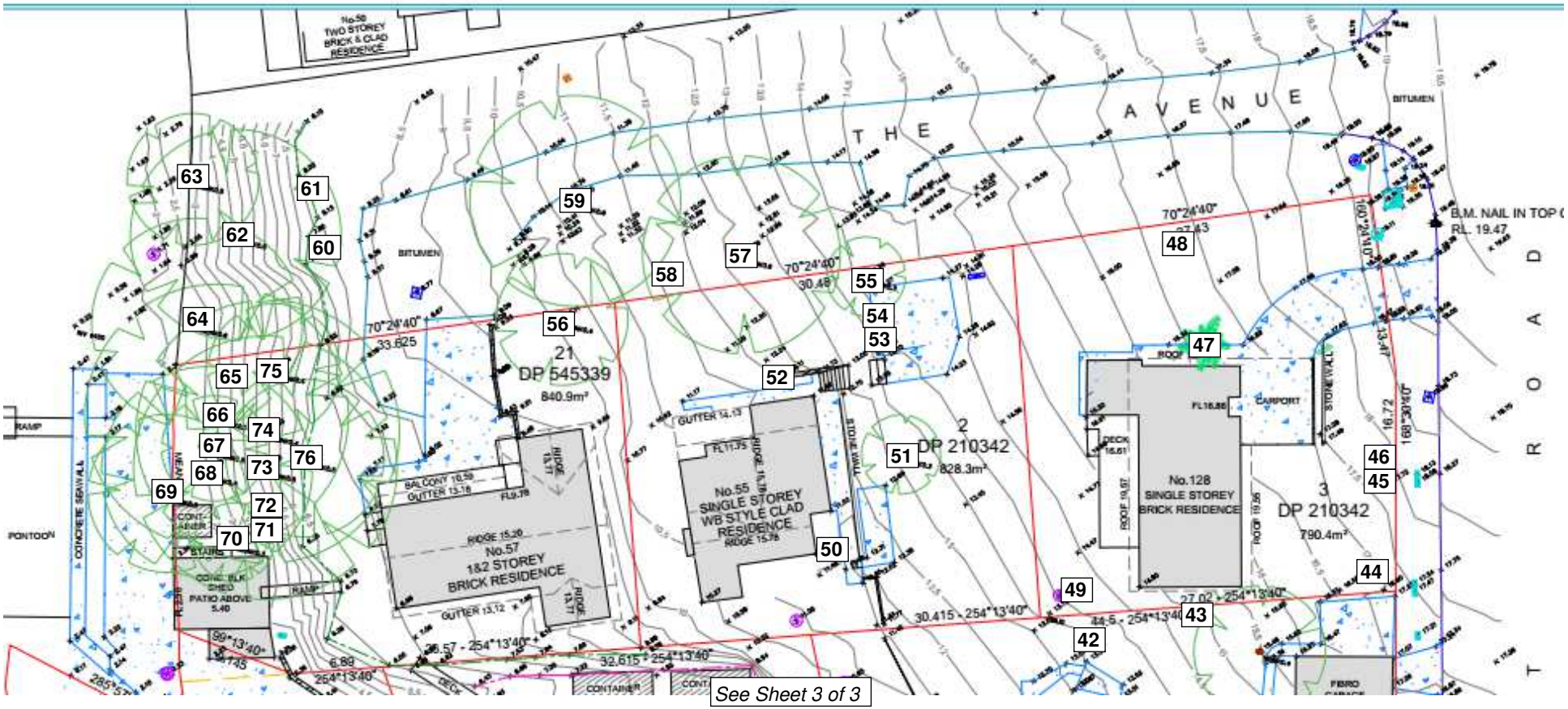
## APPENDIX- D: Tree Location Plan

***Sheet 1 of 3 – Site & tree value plan***




- Exempt trees within the site
- Dead or low retention value trees
- Council verge trees
- Prescribed trees within the site

## Sheet 2 of 3, Tree Location Plan *includes trees 42 - 76*



## Sheet 3 of 3, Tree Location Plan *includes trees 1 - 50*