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# **rainTree consulting**

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DA2025/1391 – PAN-573675

**3A BEACH ROAD**

**NEWPORT, NSW**

## **DEVELOPMENT PROPOSAL**

## **ARBORICULTURAL IMPACT ASSESSMENT (AIA) REPORT**

*Ref No- 9625*

Prepared for  
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## INTRODUCTION

This report has been commissioned by Byron & Sophie Rowe C/- Incidental Architecture. The purpose & scope of work is to assess potential impacts that may occur to trees plotted within survey documentation to address a new development proposal within Lot 2 of DP1022509, known as 3A Beach Road NEWPORT NSW. Recommendations for retention or removal of trees are based on the tree's protection status being prescribed (LGA protected) trees, environmental and landscape significance, tree structural condition, estimated remaining Useful Life Expectancy (U.L.E.) and potential impacts to trees by the development proposal.

This report acknowledges and utilizes the current Australian Standards 'Protection of Trees on Development Sites' AS4970 – 2025 as explained within Notes of Appendix- A. Within this report development incursions within Notional Root Zone's (NRZ's) are based on percentages of incursion noted within Note 2 of Appendix- A; described as *Negligible* (0%), *Minor* (<10%), manageable *Moderate* (<20%) or *Major* (>20%) NRZ occupancy; having *low*, *moderate* to *high-level* impacts within tree protection zones. Where site restrictions within notional root zone radiuses exist development impacts or encroachment disturbances are based on author's experience, observations of site conditions, soil type and topography.

Each tree within this report is identified by the accorded tree number corresponding with tree numbers provided within Survey Plan No: 11920 / 23. An additional tree (T19.1) has been included due to the trees significance within the area and has been estimated for location by taking offsets from existing trees and structures.

The trees, their location, development impact and design requirements have been detailed within the Tree Assessment Schedule of Appendix- D and plotted for location within the Tree Location Plan provided within Appendix- E.

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

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

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

## METHODOLOGY

1. In preparation for this report a site and ground level visual tree inspection was conducted on Wednesday 8 October 2025 by the author of this report. The principles of visual tree inspection were primarily adopted from components of Mattheck & Breloer 1994 'The Body Language of Trees' with basic risk values determined by criteria explained within the ISA TRAQ (tree risk) manual 2017. The inspection included observing the vigour of trees, tree form, structure and structural condition as best as site conditions would allow. On completion of the inspection the retention value of the tree was summarised utilizing the compressed tree inspection Checklist provided within Appendix- C.
2. Where neighbouring trees were unable to be visually inspected trunk diameters and structural condition was estimated with the trees Useful Life Expectancy (ULE) and retention value estimated based on the condition of above ground visual parts only.
3. The inspection was limited to visual observations where no invasive investigation was undertaken. Tree height and canopy spread was estimated and expressed in metres with trunk diameters measured at approximately 1.4 metres above ground level, rounded off to the nearest 50mm and expressed as DSH (Diameter at Standard Height).
4. Unless specified otherwise all distances and development offsets within this report are taken from the centre of the tree as indicated within provided survey and/or design documentation.
5. Plans and/or documentation provided and reviewed to assist in preparation of this report include:

Incidental Architecture, *design plans specific to:*

- Site Plan / Site Analysis Dwg No: DA1 rev No: --, dated Aug-2025
- Upper Floor Plan Dwg No: DA2 rev No: --, dated Aug-2025
- Middle Floor Plan Dwg No: DA3 rev No: --, dated Aug-2025
- Lower Floor Plan Dwg No: DA4 rev No: --, dated Aug-2025
- N, E, W & S Elevations Dwg No: DA5, 6, 7 & 8 rev No: --, dated Aug-2025
- Section AA Dwg No: DA9 rev No: --, dated Aug-2025
- Landscape Open Space Dwg No: DA11 rev No: --, dated Aug-2025

Stutchbury Jaques Pty Limited

- Detailed Survey, ref No: 11920 / 23 dated 25.9.2023.

## 1. SUMMARY OF ASSESSMENT

### 1.1 General tree assessment

- 1.1.1 Forty-one (41) trees have been assessed for the purpose of this development proposal. Of the forty-one trees three (3) trees are located within neighbouring properties. Within the site one (1) tree has been identified with a low retention value and three (3) trees plotted within provided documentation are Local Government Authority (LGA) exempt non-prescribed trees being <5m in height.
- 1.1.2 Neighbouring trees are identified as T36, 39 & 40.  
The design footprint proposes *Negligible* or *Minor* (<10%) encroachment within NRZ radiuses having low level impacts by the design proposal.
- 1.1.3 Low retention value tree(s) is identified as T2.  
The tree is a structurally defective tree having significant trunk damage from a past branch bark inclusion failure on the NTH side. Given the trees low retention value the tree should generally not restrict development proposals due to the trees short remaining safe site usefulness.
- 1.1.4 Trees within the site: Based on steep topography, tightly group plantings and closed canopy unit the tree cluster provides tree canopy wind protection factors across the site. Should a tree or group of trees be removed, the result of sudden exposure would likely affect the retention value of adjacent trees. Based on observations, the majority of trees are considered viable for retention without change in existing site conditions or modification within Notional Root Zone (NRZ) radiuses as indicated within the SRZ & NRZ distance column shown within Appendix- D.

### 1.2 The development proposal

- 1.2.1 The development proposal consists of constructing a new residential dwelling and associated infrastructure within vacant. Being on steep topography deep excavations are required to accommodate the building footprint with excavations required within Structural Root Zone (SRZ's) and Notional Root Zone's (NRZ's) radiuses of prescribed (protected) and non-prescribed trees.

### 1.3 Tree removal to accommodate design

- 1.3.1 The design proposal requires the removal of thirty-three (33) prescribed trees identified as trees:
- T1 to 25, 28, 29, 30, 31, 33, 34 & 38.
- 1.3.2 Exempt non-prescribed trees permitted to be removed to accommodate the design proposal include trees:
- T26, 27 & 32, of which T27 is a dead tree.

Figure 1: showing proposed design footprint & tree removal plan



1.3.3 The identified development impacts and design requirements have been detailed and required to be reviewed as part of this report within Appendix-D, with the following sections summarising impacts by the design proposal.

## 1.4 Discussion of development impacts

### Tree removal

*Trees that fall within the building footprint or receive direct SRZ impact that may cause decline or complete failure due to Significant design encroachments.*

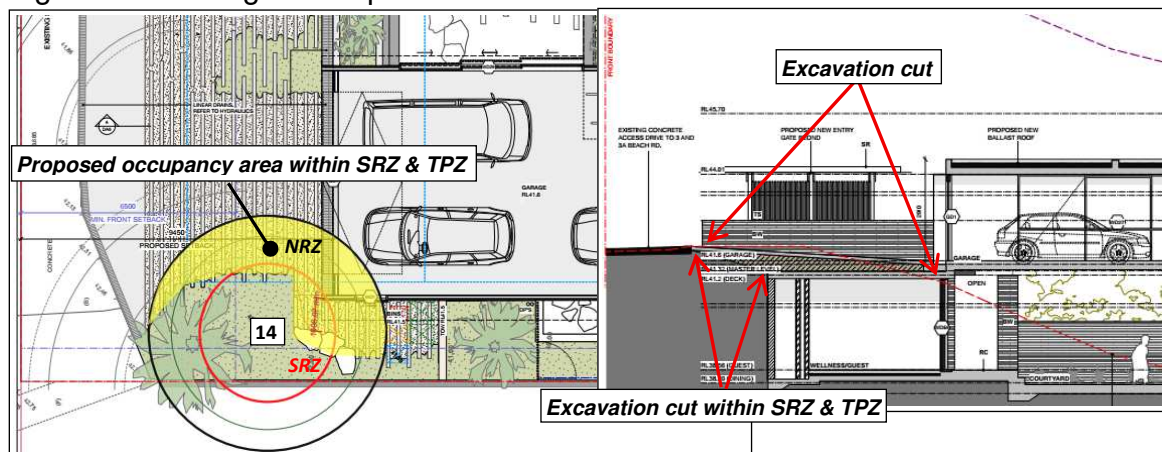
1.4.1 The following thirty-three (33) trees fall within the design footprint or will be adversely affected by significant SRZ encroachment impacts.

- T1 to 25, 28, 29, 30, 31, 33, 34 & 38.

Of the above trees T14, 20, 21, 25, 33 & 34 receive *Significant* occupancy within Structural Root Zone (SRZ) radiuses, being the *area required for tree stability* (AS4970).

1.4.2 Tree 14 discussions: Noted to be retained within documentation, given tree age, species type and the extent of encroachment impact within the SRZ & NRZ the tree would unlikely tolerate the design proposal, indicating tree removal and replacement should be considered.

Figure 2: showing T14 impact area



**Tree retention:**

*Trees receiving Negligible, Minor (<10%) or Moderate (10-<20%) NRZ encroachments without SRZ occupancy.*

1.4.3 The following five (5) trees receive *Negligible or Minor* NRZ design footprint encroachment without SRZ occupancy.

- T35, 36, 37, 39 & 40.

Having works outside the SRZ the trees are capable of being managed in accordance with standard practices outlined within Section 2.3 *General tree protection requirements* specific to the below requirements:

- a) T35, 36 & 37: Prior to works, within the site tree protection fencing is recommended to be installed at the extremity of NRZ radiuses forming a designated Tree Protection Zone (TPZ).
- b) No access, work or excavation shall occur within the fenced TPZ without project arborist advice and certification.
- c) T35 specific: Given tree age and likely restricted radial root development temporary irrigation is recommended to be installed and remain functional throughout the construction stage.
- d) T39: Within the NRZ, should excavation for services be required within the existing driveway access area all excavations are to be supervised and certified by an appointed site arborist.
- e) Encountered tree roots are to be managed as instructed by the supervising arborist and treated / clean cut as per Section 2.3 subsection g), or as stated within AS4970–2025 Section 4.5.4 *Root protection during works within the TPZ*.

## 2. CONCLUSIONS & RECOMMENDATIONS

### 2.1 Tree removal

2.1.1 Based on the assessment conducted the following thirty-three trees require or are recommended for removal to accommodate the development proposal.

- T1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 19.1, 20, 21, 22, 23, 24, 25, 28, 29, 30, 31, 33, 34 & 38.

2.1.2 Exempt non-prescribed trees while under 5m in height requiring removal to accommodate the design proposal are identified as:

- T26, 27 & 32.

## 2.2 Specific recommendations & Critical stages

### 2.2.1 Specific recommendations:

- a) For trees to be retained no excavation, compaction or disturbance to existing site conditions is to occur within Structural Root Zone (SRZ) radiuses without project arborist advice and certification.
- b) Unless approved and certified otherwise by an appointed project arborist the SRZ being *the area required for tree stability* (AS4970) is to remain a development activity and excavation exclusion zone.
- c) Prior to works occurring, trees nominated for retention are to be protected with tree protection fencing or similar being endorsed and certified by appointed project arborist, refer Appendix- B.
- d) Unless approved otherwise, a Tree Protection Plan (TPP) with Tree Protection Specifications (TPS) in accordance with AS4970-2025 Section 2.2.6 is recommended or may be required by the consent authority. The TPP should be based on all final design documentation once the final design (layout) is approved and complete, and it is known what trees are to be retained or removed to accommodate the proposal (AS4970-2025).
- e) For trees to be retained all standard requirements outlined within Section 2.3 *General tree protection requirements* apply.  
Specific attention to Section 2.3 subsection *h) additional inground services* applies. This includes all final design and impact to trees shall be reviewed and endorsed by the project arborist prior to works occurring within the NRZ or designated Tree Protection Zone (TPZ) for items such as landscape works, fencing, sewer, stormwater, water and electrical services.

### 2.2.2 Critical stages & certification points:

- a) Arborist certification shall be provided at the following stages:
  - Certify tree protection measures such as tree protection fencing or other tree protection measures prior to works commencing.
  - T35: ensure drip irrigation or similar is provided throughout the construction stage.
  - Provide routing inspections of tree protection fencing at six (6) week intervals and provide any necessary remedial advice.



## 2.3 General tree protection requirements

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

Activities that minimize the impact of TPZ disturbances include:

- Within NRZ or arborist specified TPZ radius or extending 2m outside the canopy dripline installation of native leaf mulch not greater than 80mm in depth with routine irrigation based on arborist advice is recommended.
- c) In accordance with AS4970 – 2025, a Project or Site Arborist is to be engaged to oversee works within TPZ's, monitor, supervise excavation and provide certification of protection works conducted. The project arborist is recommended to hold a minimum Australian Qualification Framework (AQF) Level 5 certification and be competent in methodology of protecting trees on development sites.
  - d) The project arborist is to provide final certification outlining tree protection measures with photographic evidence of ongoing works retained for certification purposes (AS4970 S/5.5.2 *Final certification*).
  - e) The project arborist is to be familiar with protection measures specific to Australian Standard AS4970 'Protection of Trees on Development Sites' – 2025 requirements with any modification in Tree Protection Fencing (TPF) or Zones (Z) to be compliant with AS4970 Section 4.5 *Other Tree Protection Measures*.
  - f) Approved excavation within Notional or TPZ setbacks; there shall be no over excavation beyond the line of cut as shown within construction drawings without arborist advice. Should over excavation be required the extent of excavation should be detailed within approved drawings or a construction management plan for arborist review and certification.

- g) Unless specified otherwise during approved excavation within TPZ setbacks excavation is to be conducted manually (by hand) under the supervision of an appointed site arborist. Where approved by the arborist the pruning of roots at or <30mm(Ø) is to be conducted in accordance with AS4970 – 2025 Section 4.5.4 *Root protection during works within the TPZ*, such that tree roots are not damaged or ripped beyond the point of excavation by site machinery.
- Where larger roots have been encountered, they are to be referred to an independent Level 5 arborist for further advice. For deep excavations exposed roots at the excavated cut face are to be protected with jute mesh, geotextile fabric or similar being secured in place to avoid drying of roots and the exposed soil profile.
- h) *Additional inground services* which may include landscape works, fencing, sewer, stormwater, water and electrical services, final design and impact to trees shall be reviewed and endorsed by the project arborist prior to works. Where landscaping (excavation) is required within the SRZ further advice from an appointed project arborist is recommended.
- i) *Tree sensitive construction measures* such as pier and beam bridging over critical roots, suspended slabs, cantilevered building sections, screw piles and contiguous piling can minimise the impact of encroachment (AS4970). Where Bushfire BAL conflicts exist with tree management advice the appointed project arborist shall be consulted to advise on an appropriate design outcome.
- j) *Canopy pruning / tree removal*: where required tree removal and canopy reductions are to be approved by the Local Government Authority. Works are to be conducted by a suitably qualified AQF Level 3 certified arborist in accordance with AS4373 Pruning Standards, and specifically be conducted in accordance with Safe Work Australia – Guide to managing risks of tree trimming and removal works 2016 ([www.swa.gov.au](http://www.swa.gov.au)).
- k) *Hold points*: specific to no works are to commence without arborist advice, inspections & certifications:
- 1) Prior to construction arboricultural certification is to be provided ensuring that all trees have been adequately protected in accordance with this report, or as indicated within AS4970 Protection of Trees on Development Sites 2025.
  - 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 specified TPZ's or NRZ's without prior project arborist notification, approval or site supervision.

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

Yours sincerely



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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



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## APPENDIX- A: Terminology, notes & references

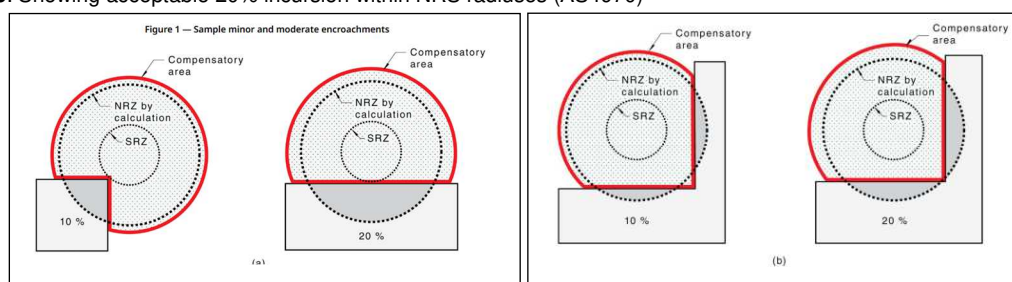
**Acceptable Risk:** Exposure to or reject risk of varying degrees. The acceptable risk is defined as 'The person who accepts some degree of risk in return for a benefit being exposed to some risk of varying degree. **Age classes:** (I) Immature refers to a well established but juvenile tree. (ESM) refers to an early semi mature tree not of juvenile appearance. (SM) Semi-mature refers to a tree at growth stages advancing into maturity and full size. (LSM) Late Semi- Mature, refers to a tree between semi-mature and close to mature. (EM) refers to a tree at the first stages of maturity. (M) Mature refers to a full size tree with some capacity for future growth. **Health:** Refers to a trees vigor exhibited by the crown density, leaf colour, presence of epicormic shoots, ability to withstand disease invasion and the degree of dieback. **Condition:** Refers to the tree's form and growth habit, as modified by its environment (aspect, suppression by other trees, soils) and the state of the scaffold (i.e. Trunk and major branches), including structural defects such as cavities, crooked trunks or weak trunk / branch junctions. These are not directly connected with health and it is possible for a tree to be healthy but in poor condition. **Decay:** (N) – an area of wood that is undergoing decomposition. (V) – decomposition of an area of wood by fungi or bacteria. **Decline:** Is the response of a tree to a reduction of energy levels resulting from stress. Recovery from decline is difficult and slow; is usually irreversible. **Defect:** A identifiable fault in a tree. **Epicormic Shoots:** Shoots that arise from latent or adventitious buds that occur on stems and branches and on suckers produced from the base of the tree. A symptom / result of stress related factors. **Footprint:** The area occupied by site structures, including the dwelling driveways and hard surfaces. **Included Bark:** (Inclusion) a genetic weak fault, pattern of development at branch junctions where the bark is turned inwards rather than pushed out, can pose a potential hazard. **Order of branches:** First order being those that are the first to extend from the main trunk or codominant limbs, second order branches extend from the first order and third order branches extend from the second order. **Probability:** The likelihood of some event happening. **Risk:** Is the probability of something adverse happening. **Suppression:** Restrained growth pattern from competition of other trees or structures. **Wound:** Damage inflicted upon a tree through injury to its living cells, may continue to develop further weakening of the structure compromising structural integrity. **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 – 2025 with reference to the **Notional Root Zone (NRZ)** being a radius of 12x the DSH / area for arboricultural advice, and **Tree Protection Zone (TPZ)** being a combination of the root and crown area requiring protection that may be damaged by development. The NRS & 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 *Major* or greater than 20% 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 (>20%), moderate (10-20%) or minor (<10%) 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 NRZ 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 a moderate level of impact provided works are outside the SRZ, and where the project arborist is required to demonstrate the tree/s remain viable. *Medium to high* 20 - <25% incursion impacts, *High level* 25 - <35% impact to *Significant* >35% incursion. Where *Major* (>20%) impacts occur design may require changes or further information to ensure a tree remains viable. **WBF** = located within the building footprint where design necessitates tree removal.

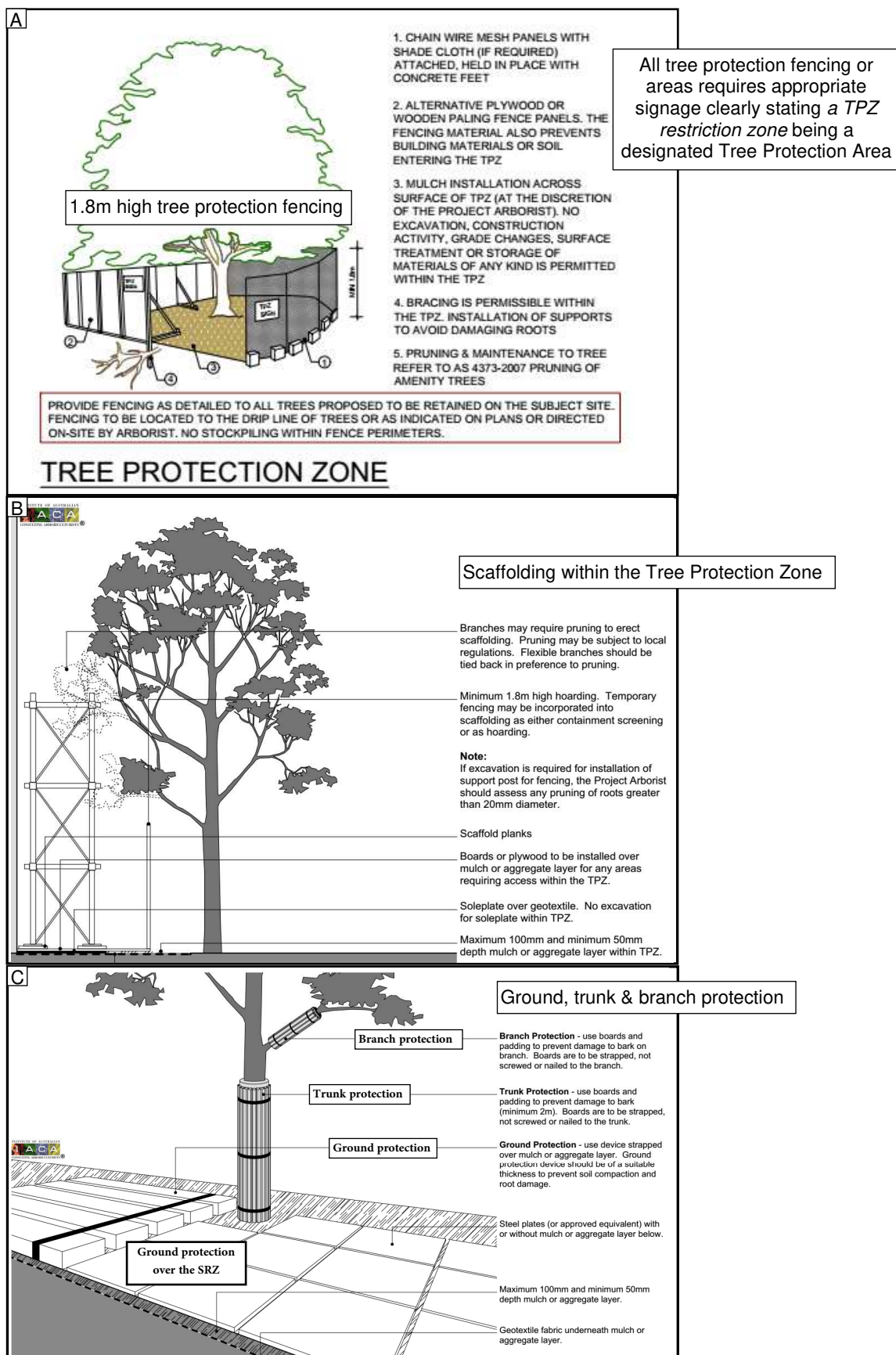
**NOTE-3:** Showing acceptable 20% incursion within NRS radiuses (AS4970)



### 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.
- Standards Australia 2009, Australian Standards 4970 Protection of Trees on Development Sites - Standards Australia, Sydney, Australia.
- Northern Beaches Council DCP <https://www.northernbeaches.nsw.gov.au/planning-development/tree-management/private-land>

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



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

**i) Landscape Significance (LS):** The significance of a tree in the landscape is a combination of its amenity, environmental and heritage values. 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
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**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 structural condition: [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
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**iv) U.L.E. categories** Useful Life Expectancy (after Barrell 1996, modified by the author). A trees U.L.E. category is the life expectancy of the tree modified first by its age, health, condition, safety and location. U.L.E. assessments are not static but may be modified as dictated by changes in trees health and environment.

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



**APPENDIX- D: Tree Assessment Schedule**

Refer Appendix- C Tree retention value Checklist

Trees requiring removal due to hazardous or dead condition - subject to Local Government Authority notification						Trees with low retention value: due to senescence, are significantly environmentally stressed, have developing defects, are NSW Weedwise listed or are LGA *exempt non-prescribed trees						
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 NT= neighbouring tree
1	<i>Banksia integrifolia</i> Costal Banksia	5 x 2.5	200	1.8 2.4	ESM	Good	Good	4-3	2C	2	2	Lower trunk kinked to WST side, tree with no significant visual faults
Design & impact summary: Proposed removal, located within building & excavation footprint for part suspended side access to courtyard and car access [Plan DA-1 & -9]												
2	<i>Banksia integrifolia</i> Costal Banksia	6 x 2	200	1.8 2.4	ESM	Good	Poor	4-3	2	3	4	Structurally defective tree, past large stem inclusion failure N side at 1.1m = low retention value
Design & impact summary: Proposed removal of structurally defective tree, located within building footprint for part suspended side access to courtyard and car access [DA-1&-9]												
3	<i>Banksia integrifolia</i> Costal Banksia	6 x 4	250	2 3	ESM	Good	Good	3	2C	3	<2	Slight learn NE with suppressed canopy form SE side, past mid-trunk wound NW side to 1.6m, margins have good wound wood development, may become problematic if exposed
Design & impact summary: Proposed removal, located within or directly adjacent to building wall footprint for part suspended side access to courtyard and car access [Plan DA-3]												
4	<i>Banksia integrifolia</i> Costal Banksia	7 x 3	200	1.8 2.4	ESM	Good	Fair / Good	3	2B	2	2	Twin stems at 1.7m with minor stem inclusion development, may become problematic if exposed
Design & impact summary: Proposed removal, located within excavation & building footprint for side access and entry [Plan DA-1 & -2]												
5	<i>Banksia integrifolia</i> Costal Banksia	6 x 2	200	1.8 2.4	ESM	Good	Fair / Good	4-3	2C	2	2	Slight lean EST with past pruning cuts at 2m SE side
Design & impact summary: Proposed removal, located within excavation & building footprint for covered parking hardstand and planter [Plan DA-1 & -9]												
6	<i>Ficus coronata</i> Sandpaper Fig	5 x 3	150, 150	2 3.6	ESM	Good	Good	4-3	6	1	2	Twin stems at ground level, suppressed canopy form N side biomass STH
Design & impact summary: Proposed removal, located within excavation & building footprint for covered parking hardstand and planter [Plan DA-1 & -9]												
7	<i>Glochidion ferdinandi</i> Cheese Tree	6 x 4	250at base	1.8 3	ESM	Good	Fair / Poor	3	2	2	<2	Three stems at near ground level with defined branch bark inclusion fault = condition likely to become problematic in the future
Design & impact summary: Proposed removal, located within excavation & building footprint for covered parking hardstand [Plan DA-1 & -9]												



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 value: due to senescence, are significantly environmentally stressed, have developing defects, are NSW Weedwise listed or are LGA *exempt non-prescribed trees						
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 NT= neighbouring tree
8	<i>Ficus coronata</i> Sandpaper Fig	9 x 6	400	2.4 4.8	ESM	Good	Fair / Good	3	2B	2	1	Multi stems at base(x5)=400Ø, all codominant, suppressed canopy form E side biomass NNW, may become problematic if exposed
Design & impact summary: Proposed removal, located within excavation footprint for retaining wall and building footprint [Plan DA-1 & -3]												
9	<i>Ficus coronata</i> Sandpaper Fig	7.5 x 5	100, 150	1.8 3	ESM	Good	Good	3	2B	2	1	Twin stems at ground level with minor stem inclusion development, suppressed canopy form S side with low broad form
Design & impact summary: Proposed removal, located within building footprint for retaining wall supporting courtyard [Plan DA-1 & -3]												
10	<i>Ficus coronata</i> Sandpaper Fig	5 x 3	200at base	1.6 2.4	ESM	Good	Good	4-3	2B	2	1	Codominant at base, suppressed canopy form N side biomass STH
Design & impact summary: Proposed removal, located within building footprint for retaining wall supporting courtyard [Plan DA-1 & -3]												
11	<i>Banksia integrifolia</i> Costal Banksia	10 x 5-5	250	2 3	ESM	Good	Fair / Good	3	2B-5	2	2	Tall forest form, minor stem inclusion development at 1.1m E side
Design & impact summary: Proposed removal, located within Bulk Earthwork / excavation footprint for design proposal [Plan DA-1 & -9]												
12	<i>Banksia integrifolia</i> Costal Banksia	10 x 6	250	2 3	ESM	Good	Fair / Good	3	2B	2	2	Twin stems at 1.5m with minor stem inclusion development, kinked lower trunk, may become problematic if exposed
Design & impact summary: Proposed removal, located within Bulk Earthwork / excavation footprint for design proposal [Plan DA-1 & -9]												
13	<i>Banksia integrifolia</i> Costal Banksia	7 x 2.5	200	1.8 2.4	ESM	Good	Fair / Good	3	2C	2	2	Significant low bowing lean NTH with skewed lower trunk
Design & impact summary: Proposed removal, located within Bulk Earthwork / excavation footprint for design proposal [Plan DA-1 & -9]												
14	<i>Banksia integrifolia</i> Costal Banksia	8 x 5	300	2.1 3.6	ESM	Good	Fair / Good	3	2C	2	2	Past limb snap at 4m N side modifying form, minor lean & canopy mass STH
Design & impact summary: Proposed retention with removal required due to high level impacts by the design proposal. Based on the design footprint shown within Plan DA-2 the extent of occupancy including the building footprint proposes a Significant NRZ occupancy at or near 35.6% with SRZ occupancy. The overall building footprint has Minor (<10%) NRZ coverage with over excavation to accommodate Bulk Earthwork cut and levels very likely to increase the SRZ & NRZ impact [Plan DA-2, -8 & -9]. Given tree age, species type and the extent of proposed works within the SRZ & NRZ the tree will unlikely tolerate the design proposal.												

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 value: due to senescence, are significantly environmentally stressed, have developing defects, are NSW Weedwise listed or are LGA *exempt non-prescribed trees						
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 NT= neighbouring tree
15	<i>Banksia integrifolia</i> Costal Banksia	8 x 4	250	2 3	ESM	Good	Fair / Good	3	2B	2	2	Twin stems at 1.7m with very minor stem inclusion development
Design & impact summary: Proposed removal, Bulk Earthwork / excavation cut within SRZ with tree located within bin storage area, at or near 0.5m from building footprint where tree removal is required to accommodate design [Plan DA-1 & -9]												
16	<i>Banksia integrifolia</i> Costal Banksia	10 x 5.5	250	2 3	ESM	Good	Fair / Good	3	2B	2	2	Twin stems at 1.4m with very minor stem inclusion development, suppressed canopy form N side
Design & impact summary: Proposed removal, located within Bulk Earthwork / excavation footprint for design proposal [Plan DA-1 & -9]												
17	<i>Glochidion ferdinandi</i> Cheese Tree	10 x 9	450	2.5 5.4	SM	Good	Good	3	6	1	1	Suppressed canopy form E side by T18 & 19, low biomass WST, Typical for species type in location, no significant visual faults
Design & impact summary: Proposed removal, located within Bulk Earthwork / excavation footprint for design proposal [Plan DA-1 & -9]												
18	<i>Glochidion ferdinandi</i> Cheese Tree	8 x 7	300	2.1 3.6	SM	Good	Good	3	6	1	1	Narrow suppressed canopy form W & E sides, Typical for species type in location with no significant visual faults
Design & impact summary: Proposed removal, located within Bulk Earthwork / excavation footprint for design proposal [Plan DA-1 & -9]												
19	<i>Glochidion ferdinandi</i> Cheese Tree	8 x 6	350	2.3 4.2	SM	Good	Good	3	6	1	1	Suppressed canopy form STH side, biomass all NTH, Typical for species type with no significant visual faults
Design & impact summary: Proposed removal, located within Bulk Earthwork / excavation footprint for design proposal [Plan DA-1 & -9]												
19.1	<i>Glochidion ferdinandi</i> Cheese Tree	8 x 8	450	2.5 5.4	M	Good	Fair / Good	3	2C	2	1	Multi stems at 1m (x5), past pruning cuts with sub end decline, reaction wood folds on lower trunk
Design & impact summary: Proposed removal, located within Bulk Earthwork / excavation footprint for design proposal [Plan DA-1 & -9]												
20	<i>Banksia integrifolia</i> Costal Banksia	7 x 5.5	250	2 3	ESM	Good	Good	3	6	1	1	Lower trunk with significant bow NTH, suppressed canopy form S side, canopy weight loaded NTH side
Design & impact summary: Proposed removal, Bulk Earthwork / excavation cut for building footprint at or near 0.6m from tree proposes a Significant NRZ occupancy at or near 38.5% with direct SRZ impact [Plan DA-1 & -9]												

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 value: due to senescence, are significantly environmentally stressed, have developing defects, are NSW Weedwise listed or are LGA *exempt non-prescribed trees						
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 NT= neighbouring tree
21	<i>Glochidion ferdinandi</i> Cheese Tree	7 x 7	200, 250	2.4 5.4	SM	Good	Good	3	2C	2	2	Lower trunk torsion twisted, canopy weight loaded with lean N, E, suppressed canopy form STH side, dead tree adjacent WST side
Design & impact summary: Proposed removal, Bulk Earthwork / excavation cut for building footprint at or near 0.7m from tree proposes a Significant NRZ occupancy at or near 42.3% with direct SRZ impact [Plan DA-1 & -9]												
22	<i>Banksia integrifolia</i> Costal Banksia	7 x 2	200	1.8 2.4	ESM	Good	Good	3	5	2	1	Skewed and kinked lower trunk, significant bowing lean to N-NE, tall forest form, 2 <sup>nd</sup> tree adjacent 7m tall on EST side
Design & impact summary: Proposed removal, located within Bulk Earthwork / excavation footprint for design proposal [Plan DA-1 & -9]												
23	<i>Banksia integrifolia</i> Costal Banksia	8 x 6	200, 200	2.3 4.8	ESM	Good	Fair / Good	3	2B	2	2	Very narrow suppressed canopy form to WST & EST, suppressed canopy form NTH & STH, twin stems at 0.3m codominant
Design & impact summary: Proposed removal, located within Bulk Earthwork / excavation footprint for design proposal [Plan DA-1 & -9]												
24	<i>Banksia integrifolia</i> Costal Banksia	7 x 5	250	2 3	ESM	Good	Good	3	6	1	1	Suppressed canopy form STH side, weight loaded biomass NE, may become problematic if exposed
Design & impact summary: Proposed removal, located within Bulk Earthwork / excavation footprint for design proposal [Plan DA-1 & -9]												
25	<i>Glochidion ferdinandi</i> Cheese Tree	5 x 6	350	2.3 4.2	ESM	Good	Fair / Good	3	2B	2	1	Multi stems at near ground level (x3), with minor stem inclusion development, canopy biomass N-NE, suppressed canopy form E side by T26
Design & impact summary: Proposed removal, located within Bulk Earthwork (Fill) footprint for landscape design changes where the extent of works proposes a Significant >35% SRZ & NRZ occupancy. Site disturbances to accommodate varied landscape design RL's, retaining wall within the SRZ at R7.2 and 34.8, adjacent water tank, pool terrace and likely over excavation to accommodate the dwelling footprint or construction access has an estimated 70% impact within the 4.2m NRZ [Plan DA-1 & -4]												
*26	<i>Glochidion ferdinandi</i> Cheese Tree	4.5 x 5.5	300at base	2 3.6	ESM	Good	Fair / Good	3	0-2B	2	2	Exempt tree species height class <5m, multi stems at 1.2m with minor stem inclusion development, suppressed canopy form STH side, broad canopy biomass NNE
Design & impact summary: Proposed removal of exempt tree to accommodate landscape design footprint and pool area with RL change within the SRZ & TPZ [Plan DA-1]												

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 value: due to senescence, are significantly environmentally stressed, have developing defects, are NSW Weedwise listed or are LGA *exempt non-prescribed trees						
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 NT= neighbouring tree
27	Dead tree Costal Banksia	6 x 1	150at base	1.5 -	-	-	-	6	1	4	4	Dead tree, no obvious habitat values
Design & impact summary: Proposed removal of exempt dead tree to accommodate design footprint												
28	<i>Ficus coronata</i> Sandpaper Fig	7 x 5	200	1.8 2.4	ESM	Good	Good	3	6	1	1	Tree with no significant visual faults
Design & impact summary: Proposed removal, located within Bulk Earthwork / excavation footprint for design proposal [Plan DA-1 & -9]												
29	<i>Banksia integrifolia</i> Costal Banksia	8 x 4	250	2 3	ESM	Good	Fair / Good	3	2B	2	2	Multi stems at 2m (x3) with minor stem inclusion development
Design & impact summary: Proposed removal, located within Bulk Earthwork / excavation footprint for design proposal [Plan DA-1 & -9]												
30	<i>Banksia integrifolia</i> Costal Banksia	9 x 5	250	2 3	ESM	Good	Fair / Good	3	2C	2	2	multi stems at 1.7m, suppressed canopy form SE, minor stem collar wound at 1.7m NTH, bowing upper stems to WST
Design & impact summary: Proposed removal, located within Bulk Earthwork / excavation footprint for design proposal [Plan DA-1 & -9]												
31	<i>Banksia integrifolia</i> Costal Banksia	9 x 3.5	200	1.8 2.4	ESM	Good	Good	3	5	2	2	Tall forest form with lower suppressed canopy, no significant visual faults
Design & impact summary: Proposed removal, located within Bulk Earthwork / excavation footprint for design proposal [Plan DA-1 & -9]												
*32	<i>Banksia integrifolia</i> Costal Banksia	4 x 5	250	2 3	ESM	Fair	Fair	4-3	0-4	2	<2	Exempt tree species height class <5m, environmentally stressed with decline in canopy, vine covered canopy
Design & impact summary: Proposed removal of exempt tree to accommodate swimming pool footprint and landscape design [Plan DA-1]												
33	<i>Glochidion ferdinandi</i> Cheese Tree	5 x 7	400	2.4 4.8	SM	Fair / Good	Fair / Good	3	2C	2	1	Coastal swept low canopy form, lower trunk significant bow & lean weight loaded to WST, all epicormic shoots forming mid-trunk canopy unit, typical for species type in location
Design & impact summary: Proposed removal, located within Bulk Earthwork (Fill) footprint for landscape design and pool footprint where the extent of works proposes a Significant >35% SRZ & NRZ occupancy, with site disturbances to accommodate landscape design RL's, pathways, terrace, retaining wall, seating and associated works having an estimated 85% impact within the 4.8m NRZ [Plan DA-1 & -4]												

## 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 value: due to senescence, are significantly environmentally stressed, have developing defects, are NSW Weedwise listed or are LGA *exempt non-prescribed trees						
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 NT= neighbouring tree
34	<i>Glochidion ferdinandi</i> Cheese Tree	5.5 x 4.5	200	1.8 2.4	ESM	Good	Fair / Good	4-3	2B	2	1	Minor lean NW, suppressed canopy form S-SE by T33, minor stem inclusion development at 2m E side
Design & impact summary: Proposed removal, located within Bulk Earthwork (Fill to RL 33.7) footprint for landscape design where fill and landscape design changes within the SRZ & NRZ proposes a Significant >35% SRZ & NRZ occupancy or 100% fill impact covering the NRZ radius [Plan DA-1 & -4]												
35	<i>Banksia integrifolia</i> Costal Banksia	8 x 9	500	2.6 6	M	Fair / Good	Good	3	2C	2	2	Aging tree, coastal exposed with no significant visual faults
Design & impact summary: Proposed retention with landscape design located outside of the NRZ. Site observation not a likely restricted and asymmetrical root system due to topography where given tree age, species type and establishment within the site impacts may be greater. Based on Negligible (0%) or Minor (<10%) NRZ encroachment the tree is capable of being managed in accordance with Section 2.3 General tree protection requirements, specific to: construction of tree protection fencing at extremity of 6m NRZ within the site prior to works, fenced 6m Tree Protection Zone (TPZ) to remain a development access exclusion zone, access requires arborist advice, site supervision & certification with water / irrigation provided during the construction period.												
36 NT	<i>Banksia integrifolia</i> Costal Banksia	6 x 2.5	200	1.8 2.4	ESM	Good	Good	4-3	2C	2	1	Suppressed canopy form SE side, minor lower trunk wound at 0.4m WST
Design & impact summary: Proposed retention receiving a Negligible (0%) NRZ encroachment, indicating tree is capable of being managed in accordance with Section 2.3 General tree protection requirements, specific to: construction of tree protection fencing at extremity of NRZ prior to works												
37	<i>Banksia integrifolia</i> Costal Banksia	5 x 2.5	250	2 3	ESM	Fair / Good	Good	4-3	4	2	2	Coastal; exposed, canopy slightly environmentally stressed, significant bowing lean NW, 2x same leaning trees adjacent
Design & impact summary: Proposed retention receiving a Negligible (0%) NRZ encroachment, with NRZ located within the 6.5m rear setback indicating tree is capable of being managed in accordance with Section 2.3 General tree protection requirements, specific to: construction of tree protection fencing at extremity NRZ prior to works												
38	<i>Banksia integrifolia</i> Costal Banksia	7 x 7	150, 200	2.1 4.2	ESM	Good	Fair	3	2B	2	2	Twin stems at near ground level with minor stem inclusion development, main forking stems with broad form, will become problematic if exposed
Design & impact summary: Proposed removal, located within Bulk Earthwork / excavation footprint for design proposal [Plan DA-1 & -9]												
39 NT	<i>Araucaria heterophylla</i> Norfolk Island Pine	26 x 16	850	3.1 10.2	SM	Good	Good	3	7	1	2	Restricted visual inspection, above visual parts appear in good order
Design & impact summary: Proposed boundary works beyond the existing driveway footprint propose a Minor (<10%) NRZ encroachment indicating tree is capable of being managed in accordance with Section 2.3 General tree protection requirements, specific to: no excavation for services within the existing driveway footprint without project arborist advice, supervision and certification												

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Trees requiring removal due to hazardous or dead condition - subject to Local Government Authority notification						Trees with low retention value: due to senescence, are significantly environmentally stressed, have developing defects, are NSW Weedwise listed or are LGA *exempt non-prescribed trees						
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 NT= neighbouring tree
40 NT	<i>Phoenix canariensis</i> Phoenix Palm	5 x 5	700	- 2.5	ESM	Good	Good	4	2E	1	2	Restricted visual inspection, above visual parts appear in good order
Design & impact summary: Proposed design footprint is located outside the NRZ having Negligible (0%) NRZ encroachment, no specific palm protection required due to palms location and protection by adjacent retaining wall												

## APPENDIX- E: Tree Location Plan

