



# Preliminary Tree Assessment

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76 BEATRICE STREET BALGOWLAH HEIGHTS  
2093

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## EXECUTIVE SUMMARY

Complete Arborcare have been commissioned by Hall & Hart to undertake a Preliminary Tree Assessment (PTA) regarding the proposed development of Lot 1/-/DP20695, No. 76 Beatrice Street Balgowlah Heights 2093 (the subject site).

Fourteen (14) x trees upon and adjacent to the subject site were assessed.

Relevant data for the preparation of this PTA was compiled in accordance with the Australian Standard (AS) 4970-2009, Protection of Trees on Development Sites.

Each of the trees were allocated a retention value, these retention values were determined using the IACA Significance of a Tree Assessment Rating System (STARS) © (IACA, 2010). *See table below & Appendix B.*

Trees with High Retention Values	Trees with Medium Retention Values	Trees with Low Retention Values	Council Exempt Trees due to Dimensions & or <i>Genus /species</i>
None	T4-7,9,11 & 14	T1-3,8,10,12-13	T1-3,8,10,12-13

This report has been designed to supply quantitative & qualitative information regarding the subject site trees and is a prelude for an Arboricultural Impact Assessment (AIA).

A tree location plan has also supplied as part of this report.

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## 1. INTRODUCTION

- 1.1.1 Complete Arborcare have been commissioned by Hall & Hart to undertake a Preliminary Tree Assessment (PTA) regarding the subject site.
- 1.1.2 This PTA report is designed to supply quantitative & qualitative information for all site trees that are protected under Northern Beaches Council (NBC) Trees and Development (2015).
- 1.1.3 This PTA supplies all relevant information for the subject trees and has been undertaken in accordance & complies with AS 4970-2009.
- 1.1.4 The subject site is zoned as R2- Low Density Residential.

## 2. THE SITE



**Figure 1:** The subject site located by red marker (*property boundaries shown by white lines referenced from metromap 2023*).

### 3. METHOD

- 3.1 The trees and site were visually assessed from ground level on the March 2023. The Common Name and *Genus/species* of the trees were recorded as well as the dimensions for Diameter at Breast Height (DBH) and Diameter at Base (DAB). Height and age of the trees were estimated. Health/vigour and structure were rated. Any comments were also recorded.
- 3.2 Calculations have been made using guidelines supplied in AS 4970-2009, Protection of Trees on Development Sites (Standards Australia, 2009) for the;
- Tree Protection Zone (TPZ),
  - Structural Root Zone (SRZ),
- 3.3 The trees have been allocated a landscape significance rating of Low, Medium or High using the *IACA Significance of a Tree, Assessment Rating System (STARS)©* (IACA, 2010). Stars assessment criteria includes:
- Condition and Vigour
  - Form, species specific
  - Provenance, age and botanical significance
  - Heritage and Ecological significance
  - Size, shape, and local amenity value
  - Restrictions to tree growth
- Appendix 1 contains the assessment criteria in full.
- 3.4 The trees have been given a Useful Life Expectancy (ULE) rating, categorised as either;
- Long – 40+ years
  - Medium – 15-40 years
  - Short – 5-15 years
  - Consider for removal - <5 years

## 4. OBSERVATIONS

4.1 Listed in Table 1 below are observations from the subject tree relating to:

- Health and condition (Excellent/Good/Fair/Poor)
- Percentage of deadwood
- Structure (Excellent/Good/Fair/Poor)
- Pest & diseases
- A landscape significance rating determined using the STARS© (IACA, 2010) matrix
- A Useful Life Expectancy (ULE) rating of either long, medium, short or consider for removal
- A retention value determined using the STARS© (IACA, 2010) matrix

Tree No.	Common Name <i>Genus/species</i>	Condition/ Vigour	Dead wood %	Structural Defects	Pests/ Disease	Landscape Significance Rating	ULE Rating	Retention Value
1	Frangipani <i>Plumeria spp.</i>							Exempt due to dimensions
2	Swiss Cheese Plant <i>Monstera spp.</i>							Exempt due to dimensions
3	Hibiscus <i>Hibiscus spp.</i>							Exempt due to dimensions
4-5	Bangalow Palms <i>Archontophoenix cunninghamiana</i>	G/G	NA	None observed	None observed	Medium	Medium	Medium
6,7,9 & 11	Camellia <i>Camellia spp.</i>	G/G	<5	None observed	None observed	Medium	Medium	Medium
8	Azalea <i>Rhododendron spp.</i>							Exempt due to dimensions
10	Oleander <i>Nerium spp.</i>							Exempt species
12	Crepe Myrtle <i>Lagerstroemia Spp.</i>							Exempt species
13	Dracaena <i>Dracaena spp.</i>							Exempt due to dimensions
14	Water Gum <i>Tristanopsis laurina</i>	G/G	<5	None observed	None observed	Medium	Medium	Medium

Table 1: Tree Observations

4.2 Listed in Table 2 below are measurements for non-exempt trees relating to;

- Age
- Tree Height
- Lowest Scaffold branch
- Canopy spreads
- Diametre at Breast Height (DBH)
- Diametre at Base (DAB)

Tree No.	Genus/species	Age	Height (m)	Lowest Scaffold (m)	Spread (m)				DBH (cm)	DAB (cm)
					N	S	E	W		
4-5	<i>Archontophoenix cunninghamiana</i>	M	6-8	NA	2	2	2	2	NA	NA
6,7,9 & 11	<i>Camellia spp.</i>	M	3.5	0.2	1	1	1	1	12	20
14	<i>Tristaniopsis laurina</i>	SM	4	0.1	1	1	1	1	12	15

Table 2: Tree Measurements

4.3 Listed in Table 3 Below are calculations for non-exempt trees relating to;

- Tree Protection Zone (TPZ)
- Structural Root Zone (SRZ)
- Estimated Live Crown Size (ELCS)

Tree No.	Genus/species	TPZ (m)	SRZ (m)	Estimated Live Crown Size (m <sup>2</sup> )
4-5	<i>Archontophoenix cunninghamiana</i>	3	NA	8
6,7,9 & 11	<i>Camellia spp.</i>	2	1.68	3
14	<i>Tristaniopsis laurina</i>	2	1.5	4

Table 3: Tree Calculations

## 5. ASSUMPTIONS

Care has been taken to obtain information from reliable resources. All data has been verified insofar as possible; however, the author of this report can neither guarantee nor be responsible for the accuracy of information provided by others.

Unless stated otherwise:

Information contained in this report covers only the trees that were examined & reflects the condition of the trees at the time of inspection.

The inspection was limited to visual examination of the subject trees without dissection, excavation, probing or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the subject trees may not arise in the future.

This report does not represent or contain a tree risk assessment.

## 6. LIMITATIONS ON THE USE OF THIS REPORT

This report is to be utilised 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 a copy) is referenced in, & directly attached to that submission, report or presentation.

## 7. REFERENCES

IACA, 2010. *IACA Significance of a Tree, Assessment Rating System (STARS)*, Institute of Australian Consulting Arboriculturists, Australia. [Online] Available at: [www.iaca.org.au](http://www.iaca.org.au) [Accessed 19 June 2015].

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## 8. RELEVANT APPENDICES

### APPENDIX A – GLOSSARY OF TERMS

**Photographs** – all images have been taken from metromap.

**Common name/genus** - the common name and genus/ species of the tree.

**Age Class**- assessment of the trees current age.

**Immature (IM)** - refers to a tree at growth stages between immaturity and full size.

**Semi-mature (SM)** - refers to a full-sized tree with some capacity for further growth.

**Mature (M)**-refers to a full-sized tree with some capacity for further growth.

**Over-mature (OM)** - a mature tree has reached a near stable size (biomass) above and below the ground. Trees can have a Mature Age Class for > 90% of their life span. Over-mature (**OM**) trees show symptoms of irreversible decline and decreasing biomass.

**Live Stag (LS)** - refers to a tree in a significant state of decline. This is the last stage of a tree prior to death.

**Height** -estimated overall height of the tree.

**Tree Protection Zone (TPZ)** - is a “No Go Zone” surrounding a tree to aid in its ability to cope with disturbances associated with construction works. Tree protection involves minimising root damage that is caused by activities such as construction. Tree protection also reduces the chance of a tree’s decline in health or death & the possibly damage to structural stability of the tree from root damage.

**Diameter at Breast Height (DBH)** - the trunk diameter at breast height (in metres) of the tree, 1.4 meters above ground level.

**Diameter above the Buttress (DAB)** - refers to the tree trunk diameter measured above the root buttress and is used to calculate the radius of the SRZ.

**Structural Root Zone (SRZ)** – the structural root zone is the area required for the trees stability. A larger area is required to maintain a viable tree. The SRZ is only needed to be calculated when a major encroachment into the TPZ is proposed. There are many factors that affect the size of the SRZ (e.g. tree height, crown area, soil type, soil moisture). The SRZ may also be influenced by natural or built structures, such as rock and footings.

**Vigour - Good (G), Fair (F) or Poor (P)** - the general appearance of the canopy of the tree at the time of inspection. Vigour can vary with the season and rainfall frequency

**Condition – Excellent (E), Very Good (VG), Good (G), Fair (F), Declining (D), Poor (P), Very Poor (VP)**.this refers to the tree’s form & growth habit, as modified by its environment (aspect suppression by other tree/s, soils,) & the state of the scaffold (i.e. trunk & major branches),including structural defects such as cavities, crooked trunks or weak trunk/branch junctions. These are not directly connected with health & it is possible for a tree to be healthy but in poor condition/vigour.

**Deadwood** – this refers to any whole limb that no longer contains living issues (i.e. living leaves & /or bark). Some dead wood is common in a number of species.

**Crown Spread** - the greatest width from drip line to drip line of a branch across the trees crown.

**Estimated Live Crown Size (ELCS)** - the area of the crown as viewed from one aspect.

## APPENDIX B - S.T.A.R.S ©

**Significance of a Tree, Assessment Rating System\* (IACA 2010) – S.T.A.R.S. ©**

The landscape significance of a tree is an essential criterion to establish the importance that a particular tree may have on a site. However, rating the significance of a tree becomes subjective and difficult to ascertain in a consistent and repetitive fashion due to assessor bias. It is therefore necessary to have a rating system utilising structured qualitative criteria to assist in determining the retention value for a tree. To assist this process all definitions for terms used in the *Tree Significance - Assessment Criteria* and *Tree Retention Value - Priority Matrix*, are taken from the IACA Dictionary for Managing Trees in Urban Environments 2009.

This rating system will assist in the planning processes for proposed works, above and below ground where trees are to be retained on or adjacent a development site. The system uses a scale of *High*, *Medium* and *Low* significance in the landscape. Once the landscape significance of an individual tree has been defined, the retention value can be determined. An example of its use in an Arboricultural report is shown as Appendix **Tree**

**Significance - Assessment Criteria****High Significance in landscape**

- The tree is in Good condition and Good vigour;
- The tree has a form typical for the species;
- The tree is a remnant or is a planted locally indigenous specimen and/or is rare or uncommon in the local area or of botanical interest or of substantial age;
- The tree is listed as a Heritage Item, Threatened Species or part of an endangered ecological community or listed on Councils Significant Tree Register;
- The tree is visually prominent and visible from a considerable distance when viewed from most directions within the landscape due to its size and scale and makes a positive contribution to the local amenity;
- The tree supports social and cultural sentiments or spiritual associations, reflected by the broader population or community group or has commemorative values;
- The tree's growth is unrestricted by above and below ground influences, supporting its ability to reach dimensions typical for the taxa *in situ* - tree is appropriate to the site conditions.

**Medium Significance in landscape**

- The tree is in Fair-Good condition and Good or Low vigour;
- The tree has form typical or atypical of the species;
- The tree is a planted locally indigenous or a common species with its taxa commonly planted in the local area
- The tree is visible from surrounding properties, although not visually prominent as partially obstructed by other vegetation or buildings when viewed from the street,
- The tree provides a fair contribution to the visual character and amenity of the local area,
- The tree's growth is moderately restricted by above or below ground influences, reducing its ability to reach dimensions typical for the taxa *in situ*.

**Low Significance in landscape**

- The tree is in fair-poor condition and good or low vigour;
- The tree has form atypical of the species;
- The tree is not visible or is partly visible from surrounding properties as obstructed by other vegetation or buildings,
- The tree provides a minor contribution or has a negative impact on the visual character and amenity of the local area,
- The tree is a young specimen which may or may not have reached dimension to be protected by local Tree Preservation orders or similar protection mechanisms and can easily be replaced with a suitable specimen,
- The tree's growth is severely restricted by above or below ground influences, unlikely to reach dimensions typical for the taxa *in situ* - tree is inappropriate to the site conditions,
- The tree is listed as exempt under the provisions of the local Council Tree Preservation Order or similar protection mechanisms,
- The tree has a wound or defect that has potential to become structurally unsound.

**Environmental Pest / Noxious Weed Species**

- The tree is an Environmental Pest Species due to its invasiveness or poisonous/ allergenic properties,
- The tree is a declared noxious weed by legislation.

**Hazardous/Irreversible Decline**

- The tree is structurally unsound and/or unstable and is considered potentially dangerous,
- The tree is dead, or is in irreversible decline, or has the potential to fail or collapse in full or part in the immediate to short term.

**The tree is to have a minimum of three (3) criteria in a category to be classified in that group.**

Note: The assessment criteria are for individual trees only, however, can be applied to a monoculture stand in its entirety e.g. hedge.

Institute of Australian Consulting Arboriculturists (IACA 2010), *IACA Significance of a Tree, Assessment Rating System (STARS)*, [www.iaca.org.au](http://www.iaca.org.au)

**Table 1.0 Tree Retention Value - Priority Matrix.**

		Significance				
		1. High	2. Medium	3. Low		
		Significance in Landscape	Significance in Landscape	Significance in Landscape	Environmental Pest / Noxious Weed Species	Hazardous / Irreversible Decline
Estimated Life Expectancy	1. Long >40 years					
	2. Medium 15-40 Years					
	3. Short <1-15 Years					
	Dead					
Legend for Matrix Assessment						
		<b>Priority for Retention (High)</b> - These trees are considered important for retention and should be retained and protected. Design modification or re-location of building/s should be considered to accommodate the setbacks as prescribed by the Australian Standard AS4970 <i>Protection of trees on development sites</i> . Tree sensitive construction measures must be implemented e.g. pier and beam etc if works are to proceed within the Tree Protection Zone.				
		<b>Consider for Retention (Medium)</b> - These trees may be retained and protected. These are considered less critical; however their retention should remain priority with removal considered only if adversely affecting the proposed building/works and all other alternatives have been considered and exhausted.				
		<b>Consider for Removal (Low)</b> - These trees are not considered important for retention, nor require special works or design modification to be implemented for their retention.				
		<b>Priority for Removal</b> - These trees are considered hazardous, or in irreversible decline, or weeds and should be removed irrespective of development.				

**USE OF THIS DOCUMENT AND REFERENCING** The IACA Significance of a Tree, Assessment Rating System (STARS) is free to use, but only in its entirety and must be cited as follows', 2010, *IACA Significance of a Tree, Assessment Rating System (STARS)*, Institute of Australian Consulting Arboriculturists, Australia, [www.iaca.org.au](http://www.iaca.org.au)

**REFERENCES** Australia ICOMOS Inc. 1999, *The Burra Charter –The Australian ICOMOS Charter for Places of Cultural Significance*, International Council of Monuments and Sites, [www.icomos.org/australia](http://www.icomos.org/australia) Draper BD and Richards PA 2009, *Dictionary for Managing Trees in Urban Environments*, Institute of Australian Consulting Arboriculturists(IACA), CSIRO Publishing, Collingwood, Victoria, Australia. Footprint Green Pty Ltd 2001, *Footprint Green Tree Significance & Retention Value Matrix*, Avalon, NSW Australia, [www.footprintgreen.com.au](http://www.footprintgreen.com.au) IACA 2010, *IACA Significance of a Tree, Assessment Rating System (STARS)*, Institute of Australian Consulting Arboriculturists