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ARBORICULTURAL IMPACT ASSESSMENT TREE PROTECTION SPECIFICATION

Prince of Wales Hospital, Randwick Acute Services Building – Early Works

Prepared for: LEND LEASE

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Revision A

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1.0 INTRODUCTION

1.1 Background

1.1.1 This Arboricultural Impact Assessment Report and Tree Protection Specification was prepared for Lend Lease, on behalf of NSW Health Infrastructure, in relation to the proposed early works for the Acute Services Building at Prince of Wales Hospital, Randwick. The purpose of this Report is to undertake a Visual Tree Assessment¹ (VTA), determine the impact of the proposed works on the trees, and where appropriate, recommend the use of sensitive construction methods to minimise adverse impacts.

1.1.2 In preparing this report, the author is aware of and has considered the objectives of Part B5 of the *Randwick Development Control Plan*, *State Environmental Planning Policy Vegetation in Non-Rural Areas (2017)*, *Australian Standard 4970 Protection of Trees on Development Sites (2009)*, *Australian Standard 4373 Pruning of Amenity Trees (2007)*, *Australian Standard 2303 Tree Stock for Landscape Use (2015)* and *Safe Work Australia Guide for Managing Risks of Tree Trimming and Removal Work (2016)*.

Refer to Methodology (**Appendix 1**)

1.1.3 This impact assessment is based on an assessment of the following supplied documentation/plans only:

- Demolition Plan – Development Application (RCR-BVN-AR-00-DWG-U1-XX-03), dated 14.03.2018

Refer to Plan (**Appendix 2**)

1.2 The Proposal

1.2.1 The Prince of Wales Acute Services Building Project involves the construction of a new ten (10) storey building adjacent to the existing Prince of Wales Hospital in Randwick. The project includes a new emergency department, helipad, IPUs, ICU, MAU, expanded rehab and ambulatory care facilities, and operating theatres.

1.2.2 This Report specifically addresses the early/enabling works to prepare the proposed site. This includes the compulsory acquisition and demolition of ninety (91) existing residences on Eurimbla Avenue and a series of infrastructure diversions and/or upgrades.

Refer to Plans (**Appendix 2**)

2.0 RESULTS

2.1 The Site

2.1.1 The site is a rectangular-shaped area which is bound by High Street to the north, Magill Street to the south, Botany Street to the west and Hospital Road to the east. The site is intersected by Eurimbla Avenue.

2.1.2 The site covers all lots on Eurimbla Avenue, 49 to 101 Botany Street and 2-14 Magill Street, and contains a mix of single and double-storey residential buildings.

2.1.3 The site has a slight fall from north to south.

¹Mattheck & Breloer (2003)

2.2 The Trees

- 2.2.1 Eighty-eight (88) trees were assessed using the Visual Tree Assessment² (VTA) criteria and notes Trees suffixed with NS were not shown on the supplied plans and have been plotted in their approximate locations only. Trees 1-17, 27-34, 35-55, 89NS and 106NS are located on the Botany, Magill and Eurimbla road reserves, and are street trees management by Randwick City Council. Trees 22-26, 90NS, 96 NS, 56-75, 79-83 and 107 are located outside the site and within hospital grounds to the east.
- 2.2.2 The trees comprise of a mix of locally indigenous, Australian native and exotic species including *Glochidion ferdinandi* (Cheese Tree), *Angophora costata* (Sydney Red Gum), *Lophostemon confertus* (Brush Box), *Agonis flexuosa* (Willow Myrtle), *Tristanopsis laurina* (Water Gum), *Jacaranda mimosifolia* (Jacaranda) and *Ulmus parvifolia* (Chinese Weeping Elm).
- 2.2.3 Tree 8 is dead. Trees 18-21, 76-78 and 107 have been removed.
- 2.2.4 An additional eighteen (18) trees are located within the lots on Eurimbla Avenue and were viewed from the properties boundaries only. No VTA was undertaken on these trees due to limited access. The species and Diameter at Breast Height (DBH) measurements were estimated for the purposes of determining Tree Protection Zone (TPZ) calculations only.
- 2.2.5 None of the trees are listed on the *Randwick Council Register of Significant Trees (2007)*.
- 2.2.6 A search of the BioNet Atlas of NSW Wildlife Database was undertaken in August 2018. No individual threatened tree species listed within this database for the area were identified during the current field investigations of the site.³ The ecological significance and habitat value of the trees has not been assessed and is beyond the scope of this report.
- 2.2.7 As required by Clause 2.3.2 of *Australian Standard 4970 (2009) Protection of Trees on Development Sites (AS-4970)*, each tree assessed has been allocated a Retention Value. The Retention Value is based on the tree's Useful Life Expectancy and Landscape Significance with consideration to its health, structural condition and site suitability. The Retention Values do not take into account any proposed development works and are not a schedule for tree retention or removal. The trees have been allocated one of the following Retention Values:
- Priority for Retention
 - Consider for Retention
 - Consider for Removal
 - Priority for Removal

Refer to Tree Assessment Schedule (**Appendix 3**)

3.0 ARBORICULTURAL IMPACT ASSESSMENT

3.1 Trees Approved for Removal

- 3.1.1 It is understood that the trees listed in Table 1 have been approved for removal under separate *Review of Environmental Factors* (REF) and *Development Application* (DA) processes.

² Mattheck & Breloer (2003)

³ NSW Office of Environment and Heritage (2011)

3.1.2 Table 1

Species	Tree No.
<i>Agonis flexuosa</i> (Willow Myrtle)	22, 23, 40
<i>Tristaniaopsis laurina</i> (Water Gum)	25, 26
<i>Lophostemon confertus</i> (Brush Box)	35, 36, 38, 39, 41 & 43-55
<i>Callistemon viminalis</i> (Weeping Bottlebrush)	37
<i>Glochidion ferdinandi</i> (Cheese Tree)	42
<i>Brachyciton acerifolius</i> (Illawarra Flame Tree)	68
<i>Angophora costata</i> (Sydney Red Gum)	69, 70, 72 & 73

3.2 Trees Proposed for Removal

3.2.1 Trees 1-4, 9, 10, 13, 14, 16, 17 & 89NS

Trees 1-4, 9, 10, 13, 14 and 89NS *Lophostemon confertus* (Brush Box), Tree 16 *Agonis flexuosa* (Willow Myrtle) and Tree 17 *Acacia saligna* (Golden Wreath Wattle) are located within the Botany Street road reserve.

3.2.2 Trees 1-4, 9, 10, 13, 14 and 89NS *Lophostemon confertus* (Brush Box) have developed poor crown forms from repeated line clearance works. Tree 16 *Agonis flexuosa* (Willow Myrtle) has also been repeatedly lopped for powerline clearance works resulting in multiple wounds which exhibit various stages of decay. In addition, the tree's co-dominant stems appear to have partially failed. Tree 17 *Acacia saligna* (Golden Wreath Wattle) is a late mature specimen which has a reduced crown density range of 50-75%.

3.2.3 It is understood the early works package includes the undergrounding of powerlines along Botany Road at an approximate depth of 400mm. In general, a minimum boring depth of 1200mm is required to ensure sufficient clearance is provided between the bore and tree root systems. Boring depths above this level have the potential to sever and damage tree roots which are important for tree stability.

3.2.4 Trees 1-4, 9, 10, 13, 14, 16, 17 and 89NS may need to be Reduction Pruned on the western-side of their crowns to provide clearance to high-sided construction vehicles accessing Botany Street. These pruning works may have a significant impact on the trees' aesthetic value and viability as their crowns have already been highly modified by the ongoing powerline clearance works.

3.2.5 Trees 5, 6, 7, 11, 12 and 15 (which are also located within the Botany Street road reserve) have been approved for removal through separate a separate REF/DA process. Trees 1-4, 9, 10, 13, 14, 16 and 17 have transient (less than 5 years) and short (5-15 years) Useful Life Expectancies. The undergrounding of the existing powerlines provides an opportunity to replace all the existing street trees on the eastern side of Botany Avenue (from High St to Magill St) with new advanced-size specimens. New trees which do not require ongoing pruning for powerline clearance will have better crown forms which will provide an increased canopy cover in the medium term.

3.2.6 Trees 27-34

Trees 27-34 are a mix of species including *Citrus sinensis* (Orange), *Lophostemon confertus* (Brush Box), *Agonis flexuosa* (Willow Myrtle), *Alnus jorullensis* (Evergreen Alder), *Betula pendula* (Silver Birch), *Nerium oleander* (Oleander) and *Eriobotrya japonica* (Loquat Tree) located within the Magill Street Road reserve. Trees 27 and 30-34 are all small specimens with transient (less than 5 years) and short (5-15 years) Useful Life Expectancies. Tree 27 *Lophostemon confertus* is a mature specimen with a medium (15-40) Useful Life Expectancy. Tree 28 *Agonis flexuosa* (Willow Myrtle) has a reduced crown density of 50-75% and significant structural defects including major bark inclusions and wounds with advanced stages of decay, and has a transient (less than 5 years) Useful Life Expectancy.

3.2.7 Tree 106NS (which is also located within the Magill Street road reserve) has been approved for removal through a separate REF/DA process. The early works package does not impact Trees 27-34. However, the Prince of Wales Acute Services Building Project provides an opportunity to replace the existing street trees on the northern side of Botany Avenue (from Botany St to the hospital site) with new advanced-size specimens of a larger species which will provide an increased canopy cover in the medium term. Tree 27 *Lophostemon confertus* (Brush Box) should be considered for retention as it contains no significant defects and is a medium-size species.

3.2.8 Tree 88NS

Tree 88NS *Jacaranda mimosifolia* (Jacaranda) is located within the front garden at 2 Eurimbla Avenue. The tree has been pruned for powerline clearance and has developed an asymmetrical crown form with a large portion of the crown extending over High Street. The tree has produced multiple epicormic shoots in response to the powerline clearance works.

3.2.9 Tree 88NS is proposed for removal as part of the early works package. Concern has been raised concerns over potential impacts of the tree root removal process on newly installed light rail infrastructure within the street to the north of the tree. A timber and masonry palisade fence run around the front boundary of 2 Eurimbla Avenue. Although the footing of the fence is unlikely to extend to a great depth, this structure will have partially restricted the spread of roots into the street.

3.2.10 When removing the tree stump and root system, the excavator operator should lower ground levels in small increments to a depth of 750mm (approx.) to ensure root removal does not impact any structures outside of the site boundary. The excavator operator should work in a radial fashion, starting at the site boundary and working towards the stump of the tree. This will sever the smaller diameter roots towards the outer edge of the rootplate, leaving the stump and root crown isolated from any adjacent structures.

3.3 Future Tree Retention & Removals

3.3.1 Trees 24, 56-67, 71, 74 & 79-83

Trees 24, 56-67, 71, 74 and 79-83 are located within the hospital site to the east. Of these, Trees 59 and 60 *Ulmus parvifolia* (Chinese Weeping Elm) and Tree 65 *Angophora costata* (Sydney Red Gum) have medium (15-40) Useful Life Expectancies, are of high Landscape Significance and should be retained if possible.

3.3.2 Trees 84NS, 85NS, 87NS, 91NS, 92NS, 94NS, 95NS & 97NS-105NS

Trees 84NS, 85NS, 87NS, 91NS, 92NS, 94NS, 95NS and 97NS-105NS are located within the lots on Eurimbla Avenue. No VTA was undertaken on these trees due to limited access. These trees will be allocated for removal or retention as part of future approvals for the site. These trees are generally small and medium in size. The amenity provided by small size trees can normally be replaced in the short term with new tree planting and they should not be considered a constraint to development works. Individual comments for the medium-size trees within this group are provided below:

- Tree 94 NS *Liquidambar styraciflua* (Liquidambar) makes a substantial contribution to the canopy cover of the site. However, this species has a tendency to develop a relatively weak branching structure. It is not uncommon to see branch failures in *Liquidambar* specimens where a tree's crown is subject to altered wind loading forces either through branch removal (pruning or storm damage) or where adjacent trees or structures have been removed.

- Trees 92NS and 93NS *Glochidion ferdinandi* (Cheese Tree) are locally indigenous species. The trees have a reduced crown density indicating they may be subject to physiological stress.
- Tree 95 *Eucalyptus scoparia* (Willow Gum) can be a relatively short-lived species in the Sydney area.
- Trees 99NS and 100NS are *Eucalyptus nicholii* (Narrow Leaf Peppermint) can be a relatively short-lived species in the Sydney area.
- Tree 101NS *Eucalyptus saligna* (Sydney Blue Gum), Tree 103NS *Eucalyptus botryoides* (Bangalay) and Tree 104NS *Angophora costata* (Sydney Red Gum) are Australian-native plantings located adjacent to the hospital site.

3.3.3 Tree Protection Zones

Australian Standard 4970 (2009) Protection of Trees on Development Sites (AS-4970), outlines that a Tree Protection Zone (TPZ) is the principal means of protecting trees on development sites. It is an area isolated from construction disturbance, so that the tree remains viable.⁴ The TPZ of the trees has been calculated in accordance with the AS-4970 and are included in the Tree Assessment Schedule (**Appendix 3**).

- 3.3.4 AS-4970 outlines that the TPZ may need to be modified (extended) to provide additional protection to the above ground parts of the tree. Where conflict between branches and structures/machinery could occur, branches may be protected with padding and timber battens, temporarily tied back or in some cases pruned, only where pruning would not impact the tree's health, structural condition, long-term viability or form.

3.4 Tree Replacement

- 3.4.1 New advanced-sized replacement trees should be provided where trees are removed to help offset the impact of the tree removal on the amenity and canopy over on the site. Replacement planting should be supplied in accordance with *Australian Standard 2303 (2015) Tree Stock for Landscape Use*.
- 3.4.2 Sufficient soil depth (minimum 750mm) and volumes (species dependent) should be provided for the new tree plantings to support healthy tree growth over a long-time frame. Wherever possible, isolated planting areas should be increased in size or linked below pavement surfaces to adjacent planting areas to maximize the available growing environment.
- 3.4.3 Various products are available which can be used beneath pavement surfaces to provide adequate support for the pavement whilst providing a suitable growing environment for tree roots. In addition, research shows that the use of tree friendly paving products can significantly reduce pavement damage and maintenance costs over the long term.

4.0 CONCLUSION

- 4.1 Eighty-eight (88) trees were assessed in preparation of this Report and comprise of a mix of locally indigenous, Australian native and exotic species. Tree 8 is dead. Trees 18-21, 76-78 and 107 have been removed. An additional eighteen (18) trees are located within the lots on Eurimbla Avenue. No VTA was undertaken on these trees due to limited access.
- 4.2 For the purpose of this Report the proposal is for early/enabling works to prepare the site including the compulsory acquisition and demolition of ninety (91) existing residences on Eurimbla Avenue and a series of infrastructure diversions and/or upgrades.

- 4.3 Trees 1-4, 9, 10, 13, 14 and 89NS *Lophostemon confertus* (Brush Box), Tree 16 *Agonis flexuosa* (Willow Myrtle) and Tree 17 *Acacia saligna* (Golden Wreath Wattle) are located within the Botany Street road reserve. The undergrounding of the existing powerlines provides an opportunity to replace all the existing street trees on the eastern side of Botany Avenue (from High St to Magill St) with new advanced-size specimens.
- 4.4 Trees 27-34 are a mix of species including *Citrus sinensis* (Orange), *Lophostemon confertus* (Brush Box), *Agonis flexuosa* (Willow Myrtle), *Alnus jorullensis* (Evergreen Alder), *Betula pendula* (Silver Birch), *Nerium oleander* (Oleander) and *Eriobotrya japonica* (Loquat Tree) located within the Magill Street Road reserve. The early works package does not impact Trees 27-34. However, the project provides an opportunity to replace the existing street trees on the northern side of Botany Avenue with new advanced-size specimens of a larger species which will provide an increased canopy cover in the medium term. Tree 27 *Lophostemon confertus* (Brush Box) should be considered for retention as it contains no significant defects and is a medium-size species.
- 4.5 Tree 88NS *Jacaranda mimosifolia* (Jacaranda) is located within the front garden at 2 Eurimbla Avenue. Tree 88NS is proposed for removal as part of the early works package. The tree should be removed using the method outlined within Sections 3.2.9 and 3.2.10 to prevent damage to the adjacent infrastructure.
- 4.6 Trees 24, 56-67, 71, 74 and 79-83 are located within the hospital site to the east. Of these, Trees 59 and 60 *Ulmus parvifolia* (Chinese Weeping Elm) and Tree 65 *Angophora costata* (Sydney Red Gum) have medium (15-40) Useful Life Expectancies, are of high Landscape Significance and should be retained if possible.
- 4.7 Trees 84NS, 85NS, 87NS, 91NS, 92NS, 94NS, 95NS and 97NS-105NS are located within the lots on Eurimbla Avenue. These trees will be allocated for removal or retention as part of future approvals for the site. An Arboricultural Impact Assessment and Tree Protection Plan should be prepared (by an AQF Level 5 Arborist) upon completion of detailed plans to examine the potential impact of the proposal on the trees to be retained. The report should also detail the proposed design and construction methods, and tree protection measures required to minimise impacts on trees to be retained.
- 4.8 New advanced-sized replacement trees should be provided where trees are removed to help offset the impact of the tree removal on the amenity and canopy over on the site. Replacement planting should be supplied in accordance with *Australian Standard 2303 (2015) Tree Stock for Landscape Use*.

5.0 LIMITATIONS& DISCLAIMER

TreeiQ takes care to obtain information from reliable sources. However, TreeiQ can neither guarantee nor be responsible for the accuracy of information provided by others. Plans, diagrams, graphs and photographs in this Arboricultural Report are visual aids only and are not necessarily to scale. This Report provides recommendations relating to tree management only. Advice should be sought from appropriately qualified consultants regarding design/construction/ecological/heritage etc issues.

This Report has been prepared for exclusive use by the client. This Report shall not be used by others or for any other reason outside its intended target or without the prior written consent of TreeiQ. Unauthorised alteration or separate use of any section of the Report invalidates the Report.

Many factors may contribute to tree failure and cannot always be predicted. TreeiQ takes care to accurately assess tree health and structural condition. However, a tree's internal structural condition may not always correlate to visible external indicators. There is no warranty or guarantee, expressed or implied that problems or deficiencies regarding the trees or site may not arise in the future. Information contained in this report covers only the trees assessed and reflects the condition of the trees at the time of inspection. Additional information regarding the methodology used in the preparation of this Report is attached as Appendix 1. A comprehensive tree risk assessment and management plan for the trees is beyond the scope of this Report.

Reference should be made to any relevant legislation including Tree Management Controls. All recommendations contained within this Report are subject to approval from the relevant Consent Authority.

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Standards Australia (2009), *Protection of Trees on Development Sites AS-4970*

Standards Australia (2007), *Pruning of Amenity Trees AS-4373*

Standards Australia (2015), *Tree Stock for Landscape Use AS-2303*

Appendix 1: Methodology

- 1.1 Site Inspection:** This report was determined as a result of a comprehensive site during August 2018. The comments and recommendations in this report are based on findings from this site inspection.
- 1.2 Visual Tree Assessment (VTA):** The subject tree(s) was assessed using the Visual Tree Assessment criteria and notes as described in *The Body Language of Trees – A Handbook for Failure Analysis*.⁵ The inspection was limited to a visual examination of the subject tree(s) from ground level only. No internal diagnostic testing was undertaken as part of this assessment. Trees outside the subject site were assessed from the property boundaries only.
- 1.3 Tree Dimensions:** The dimensions of the subject tree(s) are approximate only.
- 1.4 Tree Locations:** The location of the subject tree(s) was determined from the supplied plans.
- 1.5 Trees & Development:** Tree Protection Zones, Tree Protection Measures and Sensitive Construction Methods for the subject tree were based on methods outlined in *Australian Standard 4970-2009 Protection of Trees on Development Sites*.

The *Tree Protection Zone* (TPZ) is described in AS-4970 as a combination of the root area and crown area requiring protection. It is an area isolated from construction disturbance, so that the tree remains viable.

The *Structural Root Zone* (SRZ) is described in AS-4970 as the area around the base of a tree required for the tree's stability in the ground. Severance of structural roots within the SRZ is not recommended as it may lead to the destabilisation and/or demise of the tree.

In some cases it may be possible to encroach into or make variations to the theoretical TPZ. A *Minor Encroachment* is less than 10% of the area of the TPZ and is outside the SRZ. The area lost to this encroachment should be compensated for elsewhere and contiguous with the TPZ. A *Major Encroachment* is greater than 10% of the TPZ or inside the SRZ. In this situation the Project Arborist must demonstrate that the tree would remain viable. This may require root investigation by non-destructive methods or the use of sensitive construction methods.

- 1.6 Tree Health:** The health of the subject tree(s) was determined by assessing:
- I. Foliage size and colour
 - II. Pest and disease infestation
 - III. Extension growth
 - IV. Crown density
 - V. Deadwood size and volume
 - VI. Presence of epicormic growth
- 1.7 Tree Structural Condition:** The structural condition of the subject tree(s) was assessed by:
- I. Assessment of branching structure
(i.e co-dominant/bark inclusions, crossing branches, branch taper, terminal loading, previous branch failures)
 - II. Visible evidence of structural defects or instability
(i.e root plate movement, wounds, decay, cavities, fungal brackets, adaptive growth)
 - III. Evidence of previous pruning or physical damage
(root severance/damage, lopping, flush-cutting, lions tailing, mechanical damage)
- 1.8 Useful Life Expectancy (ULE):** The ULE is an estimate of the longevity of the subject tree(s) in its growing environment. The ULE is modified where necessary to take in consideration tree(s) health, structural condition and site suitability. The tree(s) has been allocated one of the following ULE categories (Modified from Barrell, 2001):
- I. 40 years +
 - II. 15-40 years
 - III. 5-15 years
 - IV. Less than 5 years

⁵Mattheck&Breloer (2003)

- 1.9 Landscape Significance:** Landscape Significance was determined by assessing the combination of the cultural, environmental and aesthetic values of the subject tree(s). Whilst these values are subjective, a rating of high, moderate, low or insignificant has been allocated to the tree(s). This provides a relative value of the tree's Landscape Significance which may aid in determining its Retention Value. If the tree(s) can be categorized into more than one value, the higher value has been allocated.

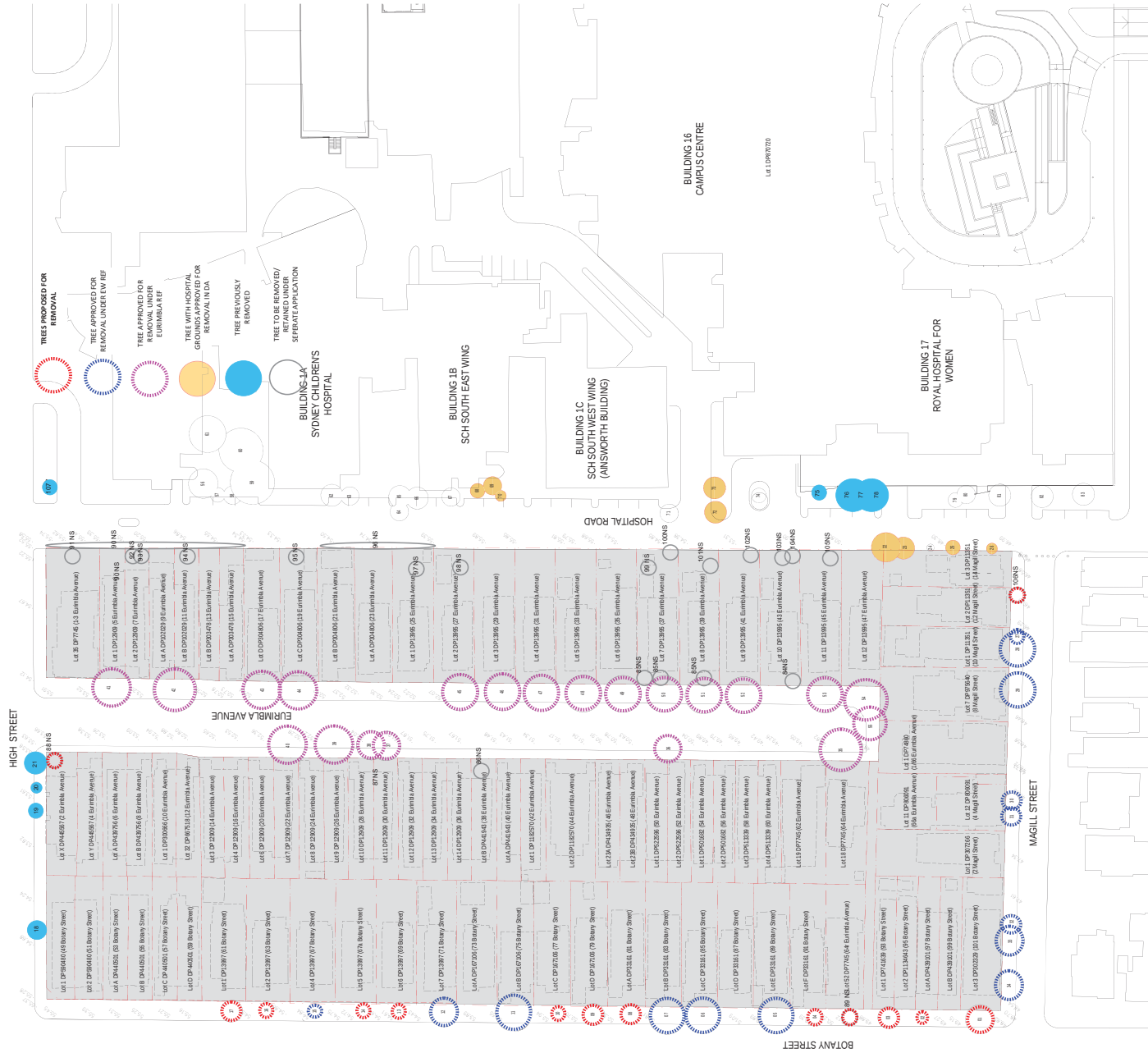
Landscape Significance	Description
Very High	The subject tree is listed as a Heritage Item under the <i>Local Environmental Plan</i> with a local or state level of significance.
	The subject tree is listed on Council's Significant Tree Register or is considered to meet the criteria for significance assessment of trees and/or landscapes by a suitably qualified professional. The criteria are based on general principles outlines in the Burra Charter and on criteria from the Register of the National Estate.
	The subject tree is a remnant tree.
High	The subject tree creates a 'sense of place' or is considered 'landmark' tree.
	The subject tree is of local, cultural or historical importance or is widely known.
	The subject tree has been identified by a suitably qualified professional as a species scheduled as a Threatened or Vulnerable Species or forms part of an Endangered Ecological Community associated with the site, as defined under the provisions of the NSW <i>Biodiversity Conservation Act (2016)</i> or the Commonwealth <i>Environmental Protection and Biodiversity Conservation Act (1999)</i> .
	The subject tree is known to provide habitat to a threatened species.
	The subject tree is an excellent representative of the species in terms of aesthetic value.
	The subject tree is of significant size, scale or makes a significant contribution to the canopy cover of the locality.
	The subject tree forms part of the curtilage of a heritage item with a known or documented association with that item.
Moderate	The subject tree makes a positive contribution to the visual character or amenity of the area.
	The subject tree provides a specific function such as screening or minimising the scale of a building.
	The subject tree has a known habitat value.
	The subject tree is a good representative of the species in terms of aesthetic value.
Low	The subject tree is an environmental pest species or is exempt under the provisions of the local Council's Tree Management Controls
	The subject tree makes little or no contribution to the amenity of the locality.
	The subject tree is a poor representative of the species in terms of aesthetic value.
	The subject tree is a recognised environmental weed species for the area.

- 1.10 Retention Value:** Retention Value was based on the subject tree's Useful Life Expectancy and Landscape Significance. The Retention Value was modified where necessary to take in consideration the subject tree's health, structural condition and site suitability. The subject tree(s) has been allocated one of the following Retention Values:

- I. Priority for Retention
- II. Consider for Retention
- III. Consider for Removal
- IV. Priority for Removal

ULE		Landscape Significance		
	Very High	High	Moderate	Low
40 years +	Priority for Retention	Priority for Retention		Consider for Removal
15-40 years		Priority for Retention	Consider for Retention	
5-15 years		Consider for Retention		
Less than 5 years	Consider for Removal	Priority for Removal		

The above table has been modified from the Footprint Green Tree Significance and Retention Value Matrix.



 REMOVE ALL TREES WITHIN SITE (NOT DRAWN)
 EXISTING SITE BOUNDARIES
 EXISTING STRUCTURES TO BE DEMOLISHED
 TREES TO BE REMOVED - LOCATED ON EXISTING HOSPITAL CAMPUS
 EXISTING TREES

NOTE 1: DEVELOPMENT APPLICATION COVERS AREA SHOWN GREY AND TREES SHOWN IN ORANGE.

NOTE 2: SURVEY INFORMATION BASED ON
SURVEY RECEIVED FROM ARCADIS
(SEPTEMBER 2016)

Appendix 3: Tree Assessment Schedule

Tree No.	Species	Height (m)	Radial Crown Spread (m)	DBH comb. (mm)	Health Rating	Structural Rating	Comments	Age Class	ULE (years)	L/Sign	Retention Value	Radial TPZ (m)	Radial SRZ (m)
1	<i>Lophostemon confertus</i> (Brush Box)	9	7	700	Good	Fair	Mechanical damage to exposed surface roots. Pruned/lopped for powerline clearance. Limited crown clearance. Structures within SRZ.	Mature	5-15	Moderate	Consider for Retention	8	2.8
2	<i>Lophostemon confertus</i> (Brush Box)	5	3	150	Good	Good	Limited crown clearance. Structures within SRZ.	Young	5-15	Low	Consider for Removal	2	1.5
3	<i>Jacaranda mimosifolia</i> (Jacaranda)	5	8	450	Fair	Poor	Crown density 50-75%. Pruned/lopped for powerline clearance. Structures within SRZ.	Mature	5-15	Low	Consider for Removal	5	2.4
4	<i>Lophostemon confertus</i> (Brush Box)	8	7	475	Good	Fair	Crossing branches. Small (<25mmØ) epicormic growth in moderate volumes.	Mature	5-15	Moderate	Consider for Retention	6	2.4
5	<i>Lophostemon confertus</i> (Brush Box)	11	6	675	Good	Fair	Mechanical damage to exposed surface roots. Pruned/lopped for powerline clearance. Limited crown clearance. Structures within SRZ.	Mature	5-15	Moderate	Consider for Retention	8	2.8
6	<i>Lophostemon confertus</i> (Brush Box)	6	6	650	Good	Fair	Mechanical damage to exposed surface roots. Pruned/lopped for powerline clearance. Limited crown clearance. Structures within SRZ.	Mature	5-15	Moderate	Consider for Retention	8	2.8
7	<i>Lophostemon confertus</i> (Brush Box)	6	6	650	Good	Fair	Crossing branches. Mechanical damage to exposed surface roots. Pruned/lopped for powerline clearance. Limited crown clearance. Structures within SRZ.	Mature	5-15	Moderate	Consider for Retention	8	2.8
8	DEAD												

Tree No.	Species	Height (m)	Radial Crown Spread (m)	DBH comb. (mm)	Health Rating	Structural Rating	Comments	Age Class	ULE (years)	L/Sign	Retention Value	Radial TPZ (m)	Radial SRZ (m)
9	<i>Lophostemon confertus</i> (Brush Box)	7	7	675	Good	Fair	Mechanical damage to exposed surface roots. Pruned/lopped for powerline clearance. Limited crown clearance. Structures within SRZ.	Mature	5-15	Moderate	Consider for Retention	8	2.8
10	<i>Lophostemon confertus</i> (Brush Box)	4	6	650	Good	Fair	Mechanical damage to exposed surface roots. Pruned/lopped for powerline clearance. Limited crown clearance. Structures within SRZ.	Mature	5-15	Moderate	Consider for Retention	8	2.8
11	<i>Lophostemon confertus</i> (Brush Box)	10	7	700	Good	Fair	Mechanical damage to exposed surface roots. Pruned/lopped for powerline clearance. Limited crown clearance. Structures within SRZ.	Mature	5-15	Moderate	Consider for Retention	8	2.8
12	<i>Lophostemon confertus</i> (Brush Box)	5	5	425	Good	Fair	Mechanical damage to exposed surface roots. Pruned/lopped for powerline clearance.	Semi-mature	5-15	Low	Consider for Removal	5	2.3
13	<i>Agonis flexuosa</i> (Willow Myrtle)	5	4	629	Good	Poor	Pruned/lopped for powerline clearance. Co-dominant inclusions, major. Wound(s), advanced stages of decay. Limited crown clearance. Structures within SRZ.	Mature	5-15	Low	Consider for Removal	8	2.7
14	<i>Lophostemon confertus</i> (Brush Box)	4	3	75	Fair	Good	Small (<25mmØ) deadwood in high volumes. Chlorotic foliage.	Young	5-15	Low	Consider for Removal	2	1.5
15	<i>Agonis flexuosa</i> (Willow Myrtle)	5	5	1000	Fair	Poor	Pruned/lopped for powerline clearance. Co-dominant inclusions, major. Bark inclusion(s), major. Structures within SRZ.	Mature	5-15	Low	Consider for Removal	12	3.3
16	<i>Agonis flexuosa</i> (Willow Myrtle)	5	5	1000	Fair	Poor	Crown density 50-75%. Small (<25mmØ) & medium (25-75mmØ) epicormic growth in moderate volumes. Crossing branches. Pruned/lopped for powerline clearance. Co-dominant inclusions, major with partial failure. Bark inclusion(s), major. Structures within SRZ.	Mature	<5	Low	Priority for Removal	12	3.3

Tree No.	Species	Height (m)	Radial Crown Spread (m)	DBH comb. (mm)	Health Rating	Structural Rating	Comments	Age Class	ULE (years)	L/Sign	Retention Value	Radial TPZ (m)	Radial SRZ (m)
17	<i>Acacia saligna</i> (Golden Wreath Wattle)	6	4	372	Poor	Poor	Crown density 50-75%. Mechanical damage to exposed surface roots. Co-dominant inclusions, major. Structures within SRZ. Storm damage.	Late Mature	<5	Low	Priority for Removal	4	2.2
18	REMOVED												
19	REMOVED												
20	REMOVED												
21	REMOVED												
22	<i>Agonis flexuosa</i> (Willow Myrtle)	9	6	700	Fair	Poor	Crown density 50-75%. Small (<25mmø) & medium (25-75mmø) deadwood in high volumes. Co-dominant inclusions, major. Trunk cavity(s), major. Structures within SRZ.	Late Mature	5-15	Low	Consider for Removal	8	2.8
23	<i>Agonis flexuosa</i> (Willow Myrtle)	9	6	596	Fair	Poor	Crown density 50-75%. Small (<25mmø) & medium (25-75mmø) deadwood in high volumes. Co-dominant inclusions, major. Trunk cavity(s), major. Structures within SRZ.	Late Mature	5-15	Low	Consider for Removal	7	2.7
24	<i>Tristaniaopsis laurina</i> (Water Gum)	4	2	150	Fair	Poor	Crown density 25-50. Wound(s), early signs of decay. Trunk cavity(s), minor. Crown conflict with adjacent structures. Structures within SRZ. Co-dominant inclusions, major.	Young	<5	Low	Priority for Removal	2	1.6

Tree No.	Species	Height (m)	Radial Crown Spread (m)	DBH comb. (mm)	Health Rating	Structural Rating	Comments	Age Class	ULE (years)	L/Sign	Retention Value	Radial TPZ (m)	Radial SRZ (m)
25	<i>Tristaniopsis laurina</i> (Water Gum)	4	2	150	Fair	Poor	Crown density 25-50%. Wound(s), early signs of decay. Trunk cavity(s), minor. Crown conflict with adjacent structures. Structures within SRZ.	Young	<5	Low	Priority for Removal	2	1.6
26	<i>Tristaniopsis laurina</i> (Water Gum)	4	2	150	Fair	Poor	Crown density 25-50%. Wound(s), early signs of decay. Trunk cavity(s), minor. Crown conflict with adjacent structures. Structures within SRZ.	Young	<5	Low	Priority for Removal	2	1.6
27	<i>Citrus sinensis</i> (Orange)	3	2	150	Fair	Fair	Wound(s), early signs of decay.	Mature	5-15	Low	Consider for Removal	2	1.5
28	<i>Lophostemon confertus</i> (Brush Box)	12	8	675	Good	Good	Mechanical damage to exposed surface roots. Wound(s), early signs of decay. Limited crown clearance. Structures within SRZ.	Mature	15-40	Moderate	Consider for Retention	8	2.8
29	<i>Agonis flexuosa</i> (Willow Myrtle)	10	7	2000	Fair	Poor	Crown density 50-75%. Small (<25mmø) & medium (25-75mmø) epicormic growth in moderate volumes. Co-dominant inclusions, major. Crossing branches. Wound(s), advanced stages of decay. Trunk cavity(s), major. Limited crown clearance. Structures within SRZ.	Late Mature	<5	Moderate	Consider for Retention	15	4.4
30	<i>Alnus jorullensis</i> (Evergreen Alder)	6	4	300	Fair	Poor	Localised crown death. Trunk cavity(s), major. Structures within SRZ. Adaptive growth.	Late Mature	<5	Low	Priority for Removal	4	2.0
31	<i>Betula pendula</i> (Silver Birch)	6	4	221	Dormant. No rating.	Good	Structures within SRZ.	Mature	5-15	Low	Consider for Removal	3	1.8
32	<i>Nerium oleander</i> (Oleander)	6	5	700	Good	Poor	Crossing branches. Partially suppressed. Co-dominant inclusions, major. Wound(s), advanced stages of decay. Structures within SRZ.	Mature	5-15	Low	Consider for Removal	8	2.8

Tree No.	Species	Height (m)	Radial Crown Spread (m)	DBH comb. (mm)	Health Rating	Structural Rating	Comments	Age Class	ULE (years)	L/Sign	Retention Value	Radial TPZ (m)	Radial SRZ (m)
33	<i>Eriobotrya japonica</i> (Loquat Tree)	7	6	450	Good	Good	Small (<25mmø) & medium (25-75mmø) deadwood in low volumes. Limited crown clearance. Structures within SRZ.	Mature	5-15	Low	Consider for Removal	5	2.4
34	<i>Nerium oleander</i> (Oleander)	6	5	700	Good	Poor	Crossing branches. Partially suppressed. Co-dominant inclusions, major. Wound(s), advanced stages of decay. Structures within SRZ.	Mature	5-15	Low	Consider for Removal	8	2.8
35	<i>Lophostemon confertus</i> (Brush Box)	12	8	900	Good	Fair	Mechanical damage to exposed surface roots. Pruned/lopped for powerline clearance. Co-dominant inclusions, major. Crown conflict with adjacent structures. Structures within SRZ.	Mature	15-40	High	Priority for Retention	11	3.2
36	<i>Lophostemon confertus</i> (Brush Box)	7	4	450	Good	Good	Pruned/lopped for powerline clearance. Limited crown clearance. Structures within SRZ.	Mature	5-15	Low	Consider for Removal	5	2.4
37	<i>Callistemon viminalis</i> (Weeping Bottlebrush)	7	6	355	Fair	Poor	Small (<25mmø) epicormic growth in moderate volumes. Lopped with resultant epicormics. Co-dominant inclusions, major.	Mature	5-15	Low	Consider for Removal	4	2.1
38	<i>Lophostemon confertus</i> (Brush Box)	4	5	475	Good	Fair	Pruned/lopped for powerline clearance. Structures within SRZ.	Semi-mature	5-15	Low	Consider for Removal	6	2.4
39	<i>Lophostemon confertus</i> (Brush Box)	12	8	700	Good	Fair	Congested branches. Crown density 50-75%. Pruned/lopped for powerline clearance. Co-dominant inclusions, minor.	Mature	5-15	Low	Consider for Removal	8	2.8
40	<i>Agonis flexuosa</i> (Willow Myrtle)	11	11	1000	Fair	Poor	Crossing branches. Crown density 50-75%. Pruned/lopped for powerline clearance. Co-dominant inclusions, major. Bark inclusion(s), major. Limited crown clearance. Structures within SRZ.	Mature	5-15	Low	Consider for Removal	12	3.3
41	<i>Lophostemon confertus</i> (Brush Box)	10	6	675	Good	Fair	Pruned/lopped for powerline clearance. Co-dominant inclusions, minor. Limited crown clearance. Structures within SRZ.	Mature	5-15	Moderate	Consider for Retention	8	2.8

Tree No.	Species	Height (m)	Radial Crown Spread (m)	DBH comb. (mm)	Health Rating	Structural Rating	Comments	Age Class	ULE (years)	L/Sign	Retention Value	Radial TPZ (m)	Radial SRZ (m)
42	<i>Glochidion ferdinandi</i> (Cheese Tree)	12	8	1000	Fair	Fair	Localised crown death. Crown density 50-75%. Small (<25mmø), medium (25-75mmø) & large (>75mmø) deadwood in high volumes. Small (<25mmø) & medium (25-75mmø) epicormic growth in moderate volumes. Co-dominant inclusions, major. Wound(s), advanced stages of decay. Crown conflict with adjacent structures. Structures within SRZ.	Mature	5-15	Moderate	Consider for Retention	12	3.3
43	<i>Lophostemon confertus</i> (Brush Box)	10	6	650	Fair	Good	Crossing branches. Crown density 75-95%. Small (<25mmø) & medium (25-75mmø) deadwood in low volumes. Structures within SRZ.	Mature	5-15	Moderate	Consider for Retention	8	2.8
44	<i>Lophostemon confertus</i> (Brush Box)	11	7	700	Good	Good	Mechanical damage to exposed surface roots. Pruned/lopped for powerline clearance. Structures within SRZ.	Mature	5-15	Moderate	Consider for Retention	8	2.8
45	<i>Lophostemon confertus</i> (Brush Box)	11	8	675	Good	Good	Structures within SRZ.	Mature	15-40	High	Priority for Retention	8	2.8
46	<i>Lophostemon confertus</i> (Brush Box)	11	8	600	Good	Good	Small (<25mmø) deadwood in low volumes. Structures within SRZ.	Mature	15-40	High	Priority for Retention	5	2.3
47	<i>Lophostemon confertus</i> (Brush Box)	11	6	475	Poor	Fair	Crown density 50-75%. Small (<25mmø) & medium (25-75mmø) deadwood in moderate volumes. Wound(s), early signs of decay. Structures within SRZ.	Mature	5-15	Low	Consider for Removal	6	2.4
48	<i>Lophostemon confertus</i> (Brush Box)	8	5	425	Good	Fair	Pruned/lopped for powerline clearance. Co-dominant inclusions, major. Structures within SRZ.	Mature	5-15	Moderate	Consider for Retention	5	2.3
49	<i>Lophostemon confertus</i> (Brush Box)	8	6	650	Good	Fair	Pruned/lopped for powerline clearance. Co-dominant inclusions, major. Structures within SRZ.	Mature	5-15	Moderate	Consider for Retention	8	2.8

Tree No.	Species	Height (m)	Radial Crown Spread (m)	DBH comb. (mm)	Health Rating	Structural Rating	Comments	Age Class	ULE (years)	L/Sign	Retention Value	Radial TPZ (m)	Radial SRZ (m)
50	<i>Lophostemon confertus</i> (Brush Box)	9	6	650	Good	Good	Congested branches. Structures within SRZ.	Semi-mature	15-40	Moderate	Consider for Retention	8	2.8
51	<i>Lophostemon confertus</i> (Brush Box)	9	6	525	Fair	Fair	Co-dominant inclusions, minor. Structures within SRZ.	Mature	5-15	Moderate	Consider for Retention	6	2.5
52	<i>Lophostemon confertus</i> (Brush Box)	9	6	800	Fair	Fair	Congested branches. Crown density 50-75%. Small (<25mmø) & medium (25-75mmø) deadwood in moderate volumes. Pruned/lopped for powerline clearance. Structures within SRZ.	Mature	5-15	Moderate	Consider for Retention	10	3.0
53	<i>Lophostemon confertus</i> (Brush Box)	10	6	636	Good	No access to base. No rating.	Mechanical damage to exposed surface roots. Co-dominant inclusions, minor.	Mature	15-40	Moderate	Consider for Retention	8	2.7
54	<i>Lophostemon confertus</i> (Brush Box)	11	7	777	Good	Good	Mechanical damage to exposed surface roots. Limited crown clearance. Structures within SRZ.	Mature	15-40	High	Priority for Retention	9	3.0
55	<i>Lophostemon confertus</i> (Brush Box)	11	5	450	Good	Good	Partially suppressed. Pruned/lopped for powerline clearance. Limited crown clearance. Structures within SRZ.	Mature	5-15	Moderate	Consider for Retention	5	2.4
56	<i>Angophora costata</i> (Sydney Red Gum)	13	8	450	Good	Fair	Wound(s), early signs of decay. Trunk cavity(s), minor. Crown conflict with adjacent structures. Structures within SRZ.	Mature	15-40	Moderate	Consider for Retention	5	2.4
57	*	8	7	354	Good	Good	Partially suppressed. Co-dominant inclusions, minor.	Mature	5-15	Moderate	Consider for Retention	4	2.1
58	<i>Angophora costata</i> (Sydney Red Gum)	11	4	300	Good	Good	Crown density 75-95%. Partially suppressed.	Semi-mature	5-15	Low	Consider for Removal	4	2.0

Tree No.	Species	Height (m)	Radial Crown Spread (m)	DBH comb. (mm)	Health Rating	Structural Rating	Comments	Age Class	ULE (years)	L/Sign	Retention Value	Radial TPZ (m)	Radial SRZ (m)
59	<i>Ulmus parvifolia</i> (Chinese Weeping Elm)	14	10	625	Dormant. No rating.	Good	Crossing branches. Small (<25mmØ) epicormic growth in low volumes. Crown conflict with adjacent structures. Structures within SRZ. Storm damage.	Mature	15-40	High	Priority for Retention	8	2.7
60	<i>Ulmus parvifolia</i> (Chinese Weeping Elm)	12	8	450	Dormant. No rating.	Good		Mature	15-40	High	Priority for Retention	5	2.4
61	<i>Hymenosporum flavum</i> (Native Frangipani)	15	7	300	Good	Good	Crown conflict with adjacent structures. Structures within SRZ. Restricted soil volume.	Mature	5-15	Moderate	Consider for Retention	4	2.0
62	<i>Angophora costata</i> (Sydney Red Gum)	11	5	300	Good	Fair	Wound(s), early signs of decay. Trunk cavity(s), minor. Crown conflict with adjacent structures. Structures within SRZ.	Semi-mature	15-40	Moderate	Consider for Retention	4	2.0
63	<i>Angophora costata</i> (Sydney Red Gum)	11	5	300	Good	Good	Crown density 75-95%. Small (<25mmØ) & medium (25-75mmØ) deadwood in low volumes. Limited crown clearance. Structures within SRZ.	Semi-mature	15-40	Moderate	Consider for Retention	4	2.0
64	<i>Angophora costata</i> (Sydney Red Gum)	10	5	275	Fair	Good	Small (<25mmØ) & medium (25-75mmØ) deadwood in moderate volumes. Partially suppressed. Structures within SRZ.	Semi-mature	5-15	Moderate	Consider for Retention	3	1.9
65	<i>Angophora costata</i> (Sydney Red Gum)	12	7	475	Good	Good	Small (<25mmØ) & medium (25-75mmØ) deadwood in low volumes. Structures within SRZ.	Mature	15-40	High	Priority for Retention	6	2.4
66	<i>Angophora costata</i> (Sydney Red Gum)	10	6	450	Good	Good	Wound(s), early signs of decay. Trunk cavity(s), minor. Structures within SRZ. Phototrophic lean, moderate.	Mature	15-40	Moderate	Consider for Retention	5	2.4
67	<i>Angophora costata</i> (Sydney Red Gum)	10	6	300	Poor	Good	Crown density 50-75%. Small (<25mmØ) & medium (25-75mmØ) deadwood in moderate volumes. Small (<25mmØ) epicormic growth in moderate volumes. Limited crown clearance. Structures within SRZ. Phototrophic lean, slight.	Semi-mature	5-15	Low	Consider for Removal	4	2.0

Tree No.	Species	Height (m)	Radial Crown Spread (m)	DBH comb. (mm)	Health Rating	Structural Rating	Comments	Age Class	ULE (years)	L/Sign	Retention Value	Radial TPZ (m)	Radial SRZ (m)
68	<i>Brachyciton acerifolius</i> (Illawarra Flame Tree)	9	5	400	Good	Good	Crown conflict with adjacent structures. Structures within SRZ.	Mature	5-15	Moderate	Consider for Retention	5	2.3
69	<i>Angophora costata</i> (Sydney Red Gum)	10	6	475	Good	Good	Crown conflict with adjacent structures. Structures within SRZ.	Mature	5-15	Low	Consider for Removal	6	2.4
70	<i>Angophora costata</i> (Sydney Red Gum)	5	3	100	Good	Good	Partially suppressed. Structures within SRZ.	Young	5-15	Low	Consider for Removal	2	1.5
71	<i>Angophora costata</i> (Sydney Red Gum)	8	5	275	Good	Good	Large (>75mmØ) epicormic growth in low volumes. Crown conflict with adjacent structures. Structures within SRZ.	Semi-mature	5-15	Moderate	Consider for Retention	3	1.9
72	<i>Angophora costata</i> (Sydney Red Gum)	5	3	100	Good	Fair	Trunk cavity(s), major. Structures within SRZ.	Young	5-15	Low	Consider for Removal	2	1.5
73	<i>Angophora costata</i> (Sydney Red Gum)	5	4	225	Good	Fair	Crown density 50-75%. Structures within SRZ.	Young	5-15	Low	Consider for Removal	3	1.8
74	<i>Angophora costata</i> (Sydney Red Gum)	5	3	75	Fair	No access to base. No rating.	Crown density 50-75%. Structures within SRZ.	Young	5-15	Low	Consider for Removal	2	1.5
75	REMOVED												
76	REMOVED												

Tree No.	Species	Height (m)	Radial Crown Spread (m)	DBH comb. (mm)	Health Rating	Structural Rating	Comments	Age Class	ULE (years)	L/Sign	Retention Value	Radial TPZ (m)	Radial SRZ (m)
77	REMOVED												
78	REMOVED												
79	<i>Callistemon viminalis</i> (Weeping Bottlebrush)	3	3	71	Good	Fair	Group of 2 trees. Co-dominant inclusions, major. Structures within SRZ.	Semi-mature	5-15	Low	Consider for Removal	2	2.0
80	<i>Cupaniopsis anacardioides</i> (Tuckeroo)	7	6	275	Good	Fair	Crown density 75-95%. Pruned/lopped for powerline clearance. Wound(s), advanced stages of decay. Trunk cavity(s), major. Crown conflict with adjacent structures. Structures within SRZ.	Mature	5-15	Low	Consider for Removal	3	3.3
81	<i>Angophora costata</i> (Sydney Red Gum)	10	6	354	Good	Good	Trunk conflict with adjacent structures. Structures within SRZ.	Semi-mature	5-15	Moderate	Consider for Retention	4	4.2
82	<i>Angophora costata</i> (Sydney Red Gum)	8	5	275	Fair	Good	Crown density 75-95%. Small (<25mmØ) deadwood in moderate volumes. Limited crown clearance.	Semi-mature	5-15	Moderate	Consider for Retention	3	3.3
83	<i>Angophora costata</i> (Sydney Red Gum)	10	6	375	Good	Good	Small (<25mmØ) & medium (25-75mmØ) deadwood in low volumes. Limited crown clearance. Structures within SRZ.	Semi-mature	5-15	Moderate	Consider for Retention	5	4.5
107	REMOVED												
100 NS	<i>Eucalyptus nicholii</i> (Small Leaf Peppermint)	10	6	400*								5	2.3

Tree No.	Species	Height (m)	Radial Crown Spread (m)	DBH comb. (mm)	Health Rating	Structural Rating	Comments	Age Class	ULE (years)	L/Sign	Retention Value	Radial TPZ (m)	Radial SRZ (m)
101 NS	<i>Eucalyptus saligna</i> (Sydney Blue Gum)	13	8	475*								6	2.4
102 NS	<i>Mangifera indica</i> (Mango)	7	4	700*								8	2.8
103 NS	<i>Eucalyptus botryoides</i> (Bangalay)	13	8	550*								7	2.6
104 NS	<i>Angophora costata</i> (Sydney Red Gum)	12	9	548*								7	2.6
105 NS	<i>Conymbia</i> sp. (Eucalypt)	7	6	300*								4	2.0
106 NS	<i>Ficus benjamina</i> (Weeping Fig)	4	2	300	Good	Fair	Co-dominant inclusions, major.	Young	5-15	Low	Consider for Removal	4	2.0
84 NS	<i>Jacaranda mimosifolia</i> (Jacaranda)	7	6	350*								4	2.1
85 NS	<i>Cupressus sempervirens</i> (Italian Cypress)	8	4	375								5	2.2

Tree No.	Species	Height (m)	Radial Crown Spread (m)	DBH comb. (mm)	Health Rating	Structural Rating	Comments	Age Class	ULE (years)	L/Sign	Retention Value	Radial TPZ (m)	Radial SRZ (m)
86 NS	<i>Angophora costata</i> (Sydney Red Gum)	10	6	475	Poor	Poor	Crown density 25-50%. Small (<25mmØ), medium (25-75mmØ) & large (>75mmØ) deadwood in high volumes. Crown consists mainly of epicormic growth. Pruned/lopped for powerline clearance. Wound(s), advanced stages of decay. Trunk cavity(s), major.	Late Mature	<5	Low	Priority for Removal	6	2.4
87 NS	<i>Callistemon viminalis</i> (Weeping Bottlebrush)	9	6	475								6	2.4
88 NS	<i>Jacaranda mimosifolia</i> (Jacaranda)	12	9	875								11	3.1
89 NS	<i>Lophostemon confertus</i> (Brush Box)	7	6	475	Fair	Fair	Crown density 50-75%. Small (<25mmØ) & medium (25-75mmØ) deadwood in moderate volumes. Small (<25mmØ) epicormic growth in moderate volumes. Pruned/lopped for powerline clearance. Structures within SRZ.	Mature	5-15	Low	Consider for Removal	6	2.4
90 NS	<i>Tristaniaopsis laurina</i> (Water Gum)	3 to 6	4	50 to 175	Fair	Fair	Group of approximately 14 trees.	Young	5-15	Low	Priority for Removal	2	1.6
91 NS	<i>Schefflera actinophylla</i> (Queensland Umbrella Tree)	7	4	350*								4	2.1
92 NS	<i>Glochidion ferdinandi</i> (Cheese Tree)	12	8	900*								11	3.2
93 NS	<i>Glochidion ferdinandi</i> (Cheese Tree)	12	8	900*								11	3.2

Tree No.	Species	Height (m)	Radial Crown Spread (m)	DBH comb. (mm)	Health Rating	Structural Rating	Comments	Age Class	ULE (years)	L/Sign	Retention Value	Radial TPZ (m)	Radial SRZ (m)
94 NS	<i>Liquidamber styraciflua</i> (Liquidambar)	14	9	850*								10	3.1
95 NS	<i>Eucalyptus scoparia</i> (Willow Gum)	10	7	475*								6	2.4
96 NS	<i>Tristaniaopsis laurina</i> (Water Gum)	3 to 6	4	175	Fair	Good	Group of approximately 8 trees.	Young	<5	Low	Priority for Removal	2	1.6
97 NS	<i>Gmelina dalrympleana</i> (Grey Teak)	8	7	400*								5	2.3
98 NS	<i>Brachychiton acerifolius</i> (Illawarra Flame Tree)	7	4	400*								5	2.3
99 NS	<i>Eucalyptus nicholii</i> (Small Leaf Peppermint)	12	6	800*								10	3.0
108	<i>Angophora costata</i> (Sydney Red Gum)	10	6	450	Good	Good	Small (<25mmØ) & medium (25-75mmØ) deadwood in low volumes. Limited crown clearance. Structures within SRZ.	Semi-mature	5-15	Moderate	Consider for Retention	5	2.4
109	<i>Syzygium paniculatum</i> (Brush Cherry)	5	3	75	Good	Good	Group of 13 trees.	Semi-mature	5-15	Moderate	Consider for Retention	2	1.5
110	<i>Callistemon viminalis</i> (Weeping Bottlebrush)	3	3	71	Good	Fair	Group of 5 trees. Co-dominant inclusions, major. Structures within SRZ.	Semi-mature	5-15	Low	Consider for Removal	2	1.5

Tree No.	Species	Height (m)	Radial Crown Spread (m)	DBH comb. (mm)	Health Rating	Structural Rating	Comments	Age Class	ULE (years)	L/Sign	Retention Value	Radial TPZ (m)	Radial SRZ (m)
111	<i>Syzygium paniculatum</i> (Brush Cherry)	6	4	261	Good	Fair	Co-dominant inclusions, major. Crown conflict with adjacent structures. Structures within SRZ.	Mature	5-15	Low	Consider for Removal	3	1.9
112	<i>Syzygium paniculatum</i> (Brush Cherry)	6	4	261	Good	Fair	Group of 8 trees. Co-dominant inclusions, major. Crown conflict with adjacent structures. Structures within SRZ.	Mature	5-15	Low	Consider for Removal	3	1.9
113	<i>Angophora costata</i> (Sydney Red Gum)	10	5	275	Good	Fair	Wound(s), early signs of decay. Trunk cavity(s), major. Structures within SRZ.	Semi-mature	5-15	Low	Consider for Removal	3	1.9
114	<i>Elaeocarpus reticulatus</i> (Blueberry Ash)	4	2	50	Good	No access to base. Not rating.	Group of 3 trees.	Semi-mature	5-15	Low	Consider for Removal	2	1.5
115	<i>Ulmus parvifolia</i> (Chinese Weeping Elm)	5	4	200	Dormant. No rating.	Good	Heavily suppressed. Limited crown clearance. Structures within SRZ.	Young	5-15	Low	Consider for Removal	2	1.7

Appendix 4: Plates



Plate 1: Looking south along Eurimbla Avenue.

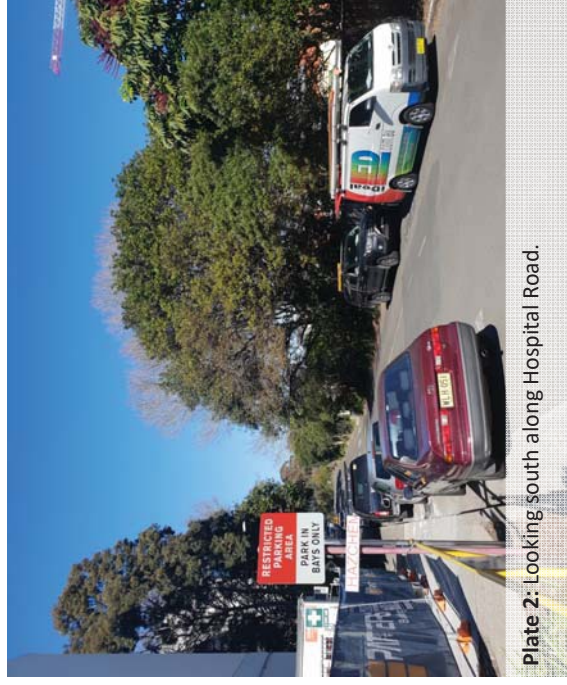


Plate 2: Looking south along Hospital Road.



Plate 3: Looking east along Magill Street.



Plate 4: Looking south along Botany Street.



Plate 5: Looking north along Botany Street. Showing Tree 15 and pruning form resulting from powerline clearance.

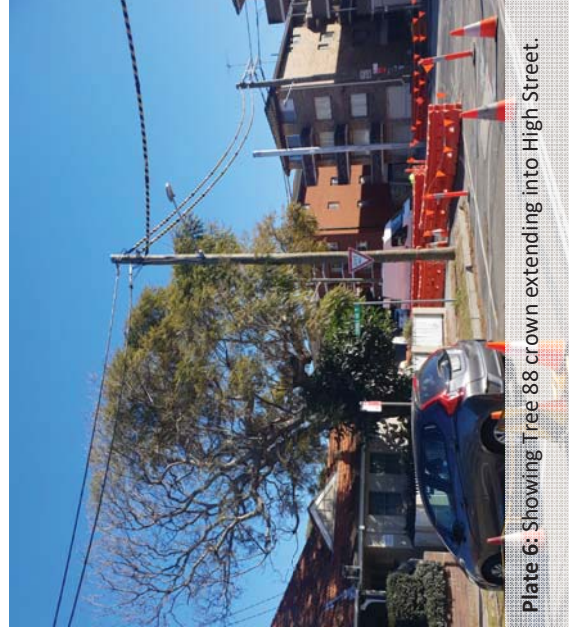


Plate 6: Showing Tree 88 crown extending into High Street.