Moore Trees
Arboricultural Services

ABN 90887347745

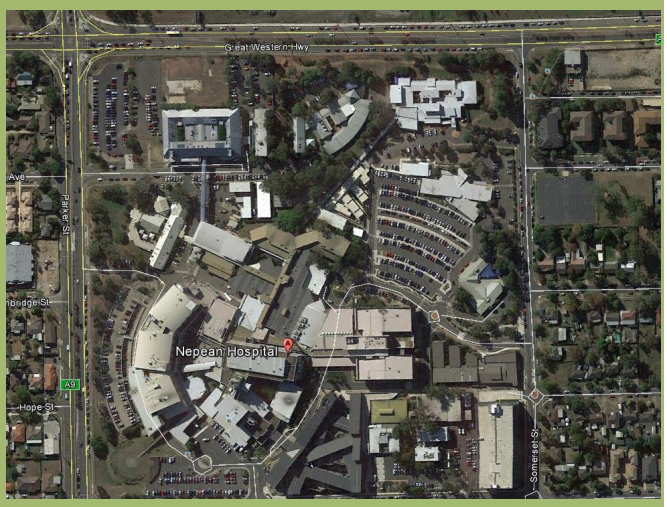
Arboricultural Development Assessment Report

Nepean Hospital and Integrated Ambulatory Services Redevelopment - SSDA

July 2018

FINAL

Updated 26th November 2018



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Prepared for: Health Infrastructure
C/O CBRE P/L
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Summary

Health Infrastructure c/o CBRE P/L, Level 21, 363 George Street, Sydney NSW 2000. The report concerns a proposed Development Application for Nepean Hospital Redevelopment, Stage 1 Building. This Arborist Report refers to two hundred and ninety-eight (298) individual and groups of trees. Not all of these trees are near the Stage 1 Building or are affected by the proposed works.

This report contains the following information required in Penrith City Council Development guidelines: -

1) All trees were assessed for Safe Useful Life Expectancy (SULE).
2) Genus and species of each tree.
3) Impact of the proposed development on each tree.
4) Impact of retaining tree on the proposed development.
5) The Tree Protection Zone (TPZ) for each tree to be retained.
6) Any branch or root pruning that may be required for trees.

Trees 150-152, 160, 164-195, 210-215, 319-342 and Trees 222, 223, 363, 365-368, 374, 375, 376, 378-391 are proposed to be removed for the construction of the Stage 1 Building. All other trees appear possible to retain.

The trees that are proposed to be retained will require tree protection measures to be installed prior to works occurring. A Tree Protection Plan, included in this report, shows the trees proposed to be removed. This plan is attached in Appendix 1. It is recommended that signage is used for tree protection areas. A sample tree protection sign has been included in Appendix 6.

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VERSION CONTROL

Date of Issue	Details
31 October 2017	Draft 1 issued
12 December 2017	Draft 2 issued
12 December 2017	Final version issued
10 April 2018	Final version 2 issued
July 2018	Updated for tree removals
15th August 2018	Updated for the road and entry area detail. Addition of Trees 363-391.
15th November 2018	Update for tree removals including 210-215 and 363
26th November 2018	Updated numbering plan

1 INTRODUCTION

1.1 This report has been conducted to assess the health and condition of two hundred and ninety-eight (298) individual and groups of trees located at Nepean Hospital. This report has been prepared for Health Infrastructure c/o CBRE P/L, Level 21, 363 George Street, Sydney NSW 2000 as required for a Development Application with Penrith City Council at this site. This report concerns the Stage 1 Building associated with the Hospital Redevelopment works (Diagram 3). Not all of these trees are near the Stage 1 Building or are affected by the proposed works.

The subject trees were assessed for their health and condition. Also included in this report are tree protection measures that will help retain and ensure that the long-term health of the trees to be retained are not adversely affected by the proposed development in the future.

As specified in the Penrith City Council Development Application guidelines the following data was collected for each tree:

1) A site plan locating all trees over three (3) metres in height, including all street trees.
2) All trees were assessed for Safe Useful Life Expectancy (SULE), health and amenity value.
3) Genus and species identification of each tree.
4) Impact of the proposed development on each tree.
5) The Tree Protection Zone (TPZ) for each tree to be retained.
6) Any branch or root pruning that may be required for trees.

Also noted for the purpose of this report were:

- Health and Vigour; using foliage colour and size, extension growth, presence of deadwood, dieback and epicormic growth throughout the tree.
- Structural condition using visible evidence of bulges, cracks, leans and previous pruning.
- The suitability of the tree taking into consideration the proposed development.
- Age rating; Over-mature (>80% life expectancy), Mature (20-80% life expectancy), Young, Sapling (<20% life expectancy).

1.2 **Documents and information provided:** At this stage I have not been provided any detailed designs for the proposed works. A site plan has been provided by CBRE. Titled *Proposed Site Plan*, Project Number S1607004.INH, drawing number, NHR-BVN-AR-K-DWG, AO-108 Issue A, dated 28/3/18.

1.3 **Location:** The proposed development site is located Kingswood NSW 2747, known as Nepean Hospital (Diagram 1). The proposed development site from herein will be referred to as "the Site".

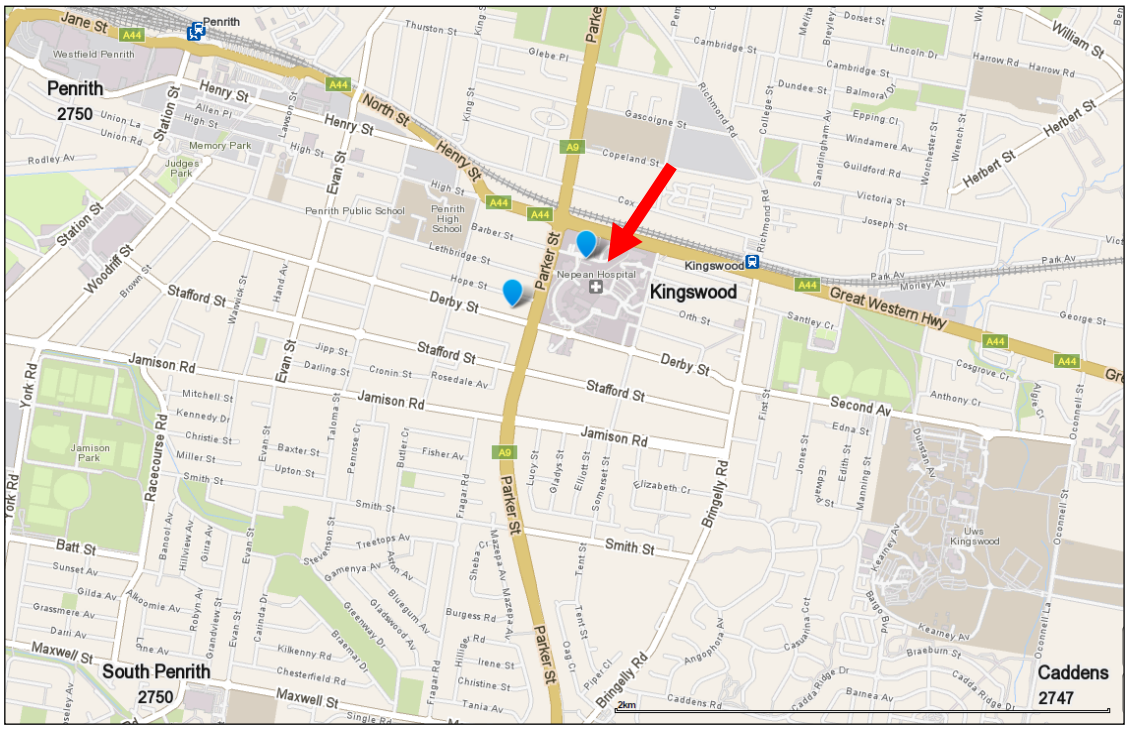


Diagram 1: Location of subject site, Nepean Hospital (Red arrow) (whereis.com.au, 2017)

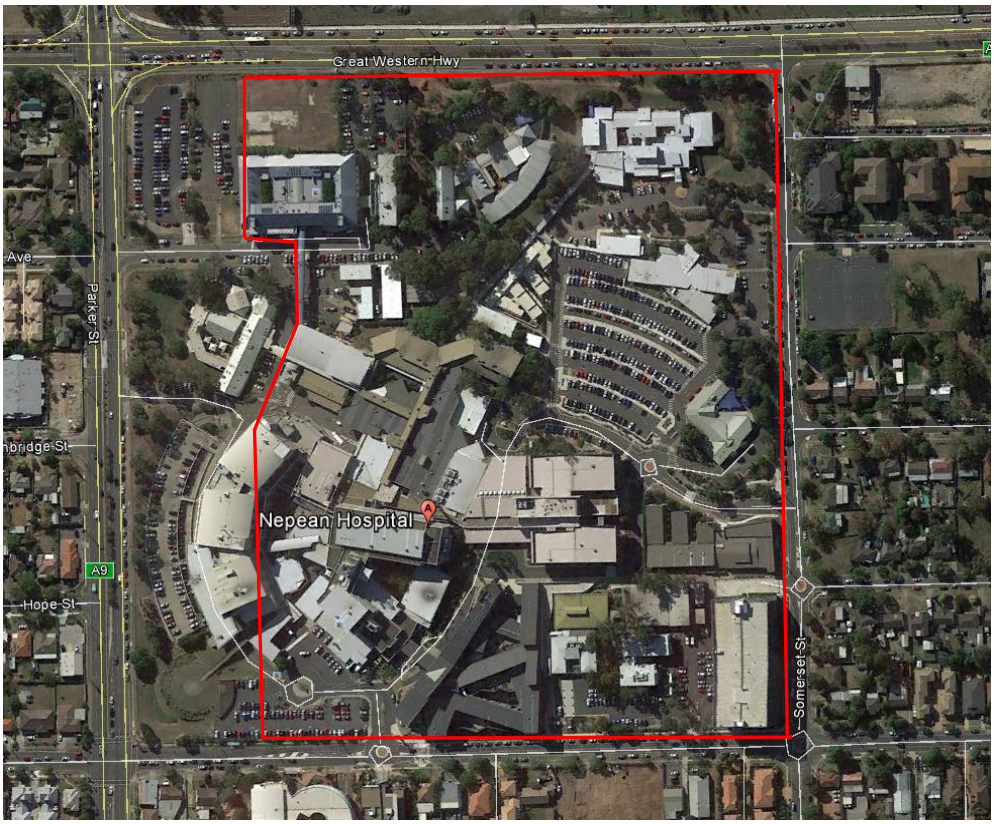


Diagram 2: Location of the study area (Google earth, 2017)

Diagram 3: Proposed location of the Stage 1 Building (Yellow).

2 METHODOLOGY

2.1 To record the health and condition of the trees, a Visual Tree Assessment (VTA) was undertaken on the subject trees on 19th April 2017 and 12th November 2018. This method of tree evaluation is adapted from Matheny and Clark, 1994 and is recognised by The International Society of Arboriculture. Individual tree assessments are listed in Appendix 2 of this report. All inspections were undertaken from the ground. No diagnostic devices were used on these trees.

2.2 **Height:** The heights and distances within this report have been measured with a Bosch DLE 50 laser measure.

2.3 **Tree Protection Zones (TPZ):** The Tree Protection Zone (TPZ) is the principal means of protecting trees on development sites. The TPZ is 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. TPZ's have been calculated for each tree to help determine construction impacts. The TPZ calculation is based on the Australian Standard *Protection of trees on development sites*, AS 4970, 2009. The calculated TPZ distances can be seen in the Tree Schedule (Appendix 2).

2.4 **Structural Root Zone (SRZ)**: The SRZ is a specified distance measured from the trunk that is set aside for the protection of tree roots, both structural and fibrous. The woody root growth and soil cohesion in this area are necessary to hold the tree upright. The TPZ and SRZ are measured as a radial measurement from the trunk. No roots should be severed within this area. A detailed methodology on the TPZ and SRZ calculations can be found in Appendix 4. It is possible that the current design may change. It is strongly recommended that the Architect applies the calculated TPZ and SRZ distances to their construction drawings and assess impacts should designs change. The Architect should notify Moore Trees during the design stage should any works fall within the TPZ and SRZ distances of the trees to be retained.

2.5 **SULE**: The subject trees were assessed for a Safe Useful Life Expectancy (SULE). The SULE rating for each tree can be seen the Tree Assessment Schedule (Appendix 2). A detailed explanation of SULE can be found in Appendix 3.

2.6 **Impact Assessment:** An impact assessment will eventually be conducted on the site trees. This will be conducted by assessing the site survey and plan (See 1.2) provided by CBRE Project Management. The plan provided was assessed for the following:

- Reduced Level (R.L.) at base of tree.
- Incursions into the Tree Protection Zone (TPZ).
- Assessment of the likely impact of the works.
- Location of sediment controls in relation to TPZ areas
- Canopy clearance for scaffolding Australian Standard (Scaffolding) 1576.1, 2010 and Scaffolding Code of Practice 2009-Safe work Australia.

3 RELEVANT BACKGROUND INFORMATION

3.1 The site is located on the corner of Parker Street and Barber Avenue and is part of the Nepean Hospital complex. The study area (Diagram 2) contains multiple high-rise buildings and associated car parking areas. No formal planted plan was noted, and trees and shrubs appear to have been randomly planted throughout the area. Some of the areas are newly landscaped due to new buildings. Tree species consist of both native and exotic species. Due to some areas being densely planted these have been grouped together and not individually assessed.

3.2 **Environmental Significance**: A Tree Protection Order (TPO) applies to the whole of the Penrith Local Government Area and is part of the Penrith City Council Local Environmental Plan, 2010. This TPO protects all trees above three (3) metres in height. As Council is the consent authority regarding the site trees, Council may not agree with the views expressed in this report and condition that certain trees are to be retained. This may entail redesign or minor alterations of the project. In this instance, the Architect or Draftsperson should refer to the TPZ and SRZ measurements to enable adequate distances to be maintained between the tree and any proposed works.

3.3 **The Site Trees:** The site was inspected on 19th April 2017 and 12th November 2018. Each tree has been given a unique number for this site and can be viewed on the Tree Protection Plan (Plans 1 and 2, Appendix 1). This plan is based on a Google Earth image however this numbered plan will eventually be overlaid onto the site plans. Trees 1-64 are associated with the Western portion of the site and not part of this report. Trees 65-362 are the subject of this report. All site trees have been tagged to correspond with the Tree Protection Plan.

3.4 The site trees are located along path ways, between buildings, within courtyards and surrounding car park areas (Plate 1). The species present are diverse and include exotic and native specimens. All species found are listed in the Tree Schedule (Appendix 2).

Plate 1: Trees 70-72. P. Vezgoff.

3.5 For projects such as this, it is of more use to group trees into categories of retention value. The site trees have been grouped as below.

High Value Trees
These could be young newly planted trees that are growing very well or mature trees that form good specimen trees or provide excellent visual amenity to the site. Screening a building with space to grow (Plate 2).
65-77, 82-83, 140-149, 160-174, 175-184, 218-223, 310, 311.

Plate 2: Trees 154-158 an example of high value trees. P. Vezgoff.

Medium Value Trees
These could be trees growing as a group (Plate 5) that are not great individual specimens. Trees in poorer health or have a limited SULE ratings (Plate 3).
78-81, 84-87, 88-120, 122-124, 126-130, 150-159, 185-189, 192-195, 196-217, 224-231-240, 242, 269, 271-275, 277-288, 290, 291, 293, 295-306, 308, 309, 312-325, 330, 331, 333-342, 343-350, 352-391.

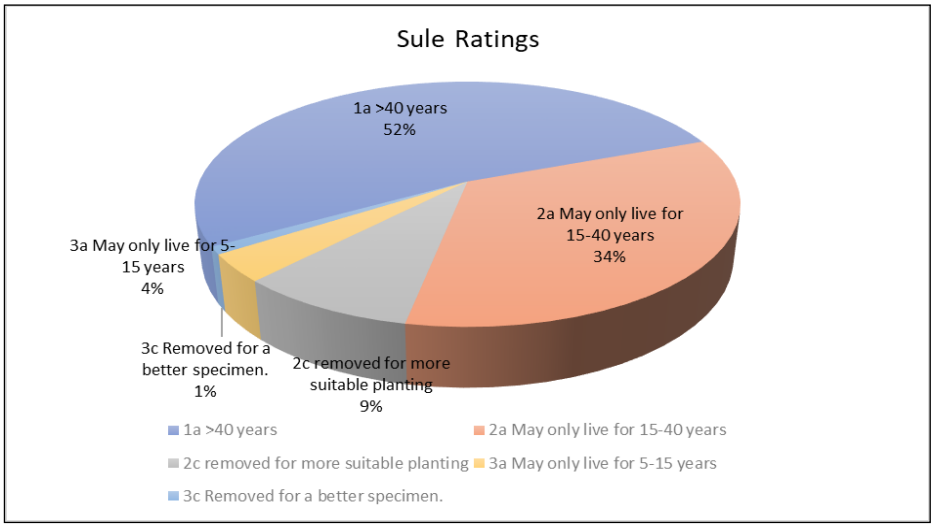
Plate 3: Tree group 279. P. Vezgoff.

Low Value Trees
Smaller underperforming trees. Trees with structural faults. Trees planted too close to buildings for future growth or trees that could be readily replaced (Plate 4).
121, 125, 131-133, 136, 190, 191, 208, 232, 241, 270, 276, 289, 292, 294, 307, 313, 311, 326-329, 332, 351

Plate 4: Trees 88-91 as low value trees. P. Vezgoff.

3.6 The majority of trees on site were found to be in good health and condition. The main trunks, first and second order branches are free of cracks, splits, or fruiting bodies. Old pruning wounds are showing good occlusion, a sign that a tree is photosynthesizing effectively. New extension growth was noted with leaf colour showing good vitality. The subject trees would be considered to have 95% live canopies. The basal area and woody root zones were free of any ground heaving, or lifting. A handful of trees had suffered from minor storm damage but, in general, the site trees have been well maintained.

3.7 **Safe Useful Life Expectancy:** SULE is a method of evaluating individual trees. The evaluation is a subjective assessment, not an absolute judgement, because the nature of trees and opinions on trees can vary greatly. SULE assessments are made only by those who are experienced and knowledgeable in tree management. SULE is generally accepted and used world-wide as a method of evaluating trees. Each category has a number of sub-categories. These sub-categories should always be recorded to help future users of the information appreciate the reason for each allocation decision. It is normal to have instances where trees will not fit neatly into a single SULE category. The assessment of the site trees can be seen in Graph 1. In general, the trees were mostly assessed as being in good health. SULE results show that 52% of the site's tree population has a life expectancy of greater than forty (40) years and 34% had a medium life expectancy. Trees that have a short life expectancy total 14%.



Graph 1: SULE ratings for the site.

3.8 Impacts: Trees 150-152, 160, 164-195, 210-215, 319-342 and Trees 222, 223, 363, 365-368, 374, 375, 376, 378-391 are proposed to be removed for the construction of the Stage 1 Building. All other trees appear possible to retain.

It should be remembered that larger trees will be less tolerant of construction disturbances and some larger trees, although outside the building footprint, will be affected by level changes and service trenching.

Trees 164-195 and 210-215 are impacted by road and building construction. As these trees have grown close to each other and trying to retain single specimens would be difficult.

Trees 210-212, 222, 223, 365-368, 374, 375, 376, 378-391 will be impacted by an entry road and parking areas from the western end of the site. Potentially with the connection of the communication services along Barber Avenue Trees 220 and 221 may be affected by these future works.

Trees 319-342, located in and around the child care centre, will all be required to be removed to allow for traffic parking and movements.

4 RECOMMENDATIONS

4.1 Moore Trees is currently the nominated Project Arborist to oversee the arboricultural related works for the project. The Project Arborist should be used for arboricultural certification services and also used as a point of contact should any questions arise during the project. As specified in AS 4970, 2009, a Project Arborist is a person with a minimum Australian Qualification Framework (AQF) level 5 Diploma of Arboriculture or Horticulture qualification.

4.2 Trees 150-152, 160, 164-195, 210-215, 319-342 and Trees 222, 223, 363, 365-368, 374, 375, 376, 378-391 are proposed to be removed for the construction of the Stage 1 Building. All other trees appear possible to retain.

4.3 Trees to be retained will require tree protection fencing as specified in Section 5.2 of this report. This fencing is shown as indicative locations in the Tree Protection Plan (Appendix 1). The specifications for a TPZ are in Section 5.4 of this report.

4.4 Trees 220 and 221 will require trunk protection as specified in Section 5.3 of this report. This trunk protection will be required due to the proximity of heavy equipment operating near these trees. It is important to protect the bark on trees. Bark is a very effective barrier that helps to protect trees from pest, disease and decay pathogens.

4.5 Works near the car drop off area will be near Trees 216 and 217 and 364 (Appendix 1, Plan 2). Although trees 216 and 217 have an incursion of fill over the TPZ, provided this is a porous fill that is permeable to oxygen and moisture exchange, these trees will tolerate these level changes. The removal of the concrete path near Tree 364 will require a spotter to ensure roots and the main stem of the tree are not damaged. A flat bucket attachment should be used on the excavator to minimise damage to woody surface roots.

5 TREE PROTECTION

5.1 Trees to be protected: Tree to be retained will be required to be fenced for protection. All fencing shall be installed as specified in Section 5.2 (Tree Protection – Implementation of Tree Protection Zone).

5.2 Implementation of Tree Protection Zone: All tree protection works must be carried out before the start of demolition or building work. It is recommended that chain mesh fencing with a minimum height of 1.8 metres be erected as shown in the Tree Protection Plan (Appendix 1). Specifications for this fencing are shown in Tree Protection Fencing Specifications (Appendix 5). Sediment fencing must be attached to the lower part of the tree Tree Protection Fencing.

5.3 Individual trunk protection: Trees 220 and 221 will require trunk protection. This is achieved by attaching lengths of timber (75mm x 50mm x 2000mm) fastened around the trunk. Geotextile fabric or carpet underlay shall be wrapped around the trunk prior to the timbers being attached. These timbers are to be fastened with hoop iron strapping and not attached directly into the bark of the tree. These timbers are only to be removed when all construction is complete.

5.4 Instructional videos: Alternatively, you can view the Moore Trees short instructional film on the link below.

Film #1, Trunk Protection
https://www.youtube.com/watch?v=ehcFre6bp74

Film #2, Tree Protection Fencing
https://www.youtube.com/watch?v=ffMabxLN9nU

5.5 The Tree Protection Zone (TPZ) and Structural Root Zone (SRZ): The TPZ is implemented to ensure the protection of the trunk and branches of the subject tree. The TPZ is based on the Diameter at Breast Height (DBH) of the tree. The SRZ is also a radial measurement from the trunk used to protect and restrict damage to the roots of the tree.

The Tree Protection Zone (TPZ) and Structural Root Zone (SRZ) have been measured from the centre of the trunk. TPZ distance are listed in the Tree Schedule (Appendix 2). The following activities must be avoided within the TPZ of any tree to be retained;

- Erecting site sheds or portable toilets.
- Trenching, ripping or cultivation of soil (with the exception of approved foundations and underground services).
- Soil level changes or fill material

- Storage of building materials.
- Disposal of waste materials, solid or liquid.

5.6 Tree Damage: If the retained trees are damaged a qualified Arborist should be contacted as soon as possible. The Arborist will recommend remedial action so as to reduce any long term adverse effect on the tree's health.

5.7 Signage: A sign must be attached to the tree protection fencing. A sample sign has been attached in Appendix 6. This sign may be copied and laminated then attached to any TPZ fencing.

5.8 Root Pruning: If excavations are required within a TPZ this excavation shall be done by hand to expose any roots. Any roots under fifty (50) millimetres in diameter may be pruned cleanly with a sharp saw. Tree root systems are essential for the health and stability of the tree. Severed roots shall be treated with Steriprune®, available at most large Hardware Stores.

5.9 Arborist Certification: It is recommended that the developer to supply the Principal Certifying Authority with certification three (3) times during the construction phase of the development in order to verify that retained trees have been correctly retained and protected as per the conditions of consent and Arborist's recommendations. The certification is to be conducted by a Qualified Consulting Arborist with AQF level 5 qualifications that has current membership with either Arboriculture Australia (AA) or Institute of Australian Consulting Arboriculturists (IACA). Arborist certification is recommended:

(1) Before the commencement of demolition or construction to confirm the application of mulch and fencing has been installed;

(2) At mid-point of the construction phase;

(3) At completion of the construction phase.

If you have any questions in relation to this report, please contact me.

Paul Vezgoff
Consulting Arborist
Dip Arb (Dist), Arb III, Hort cert, AA, ISA

15th November 2018

www.mooretrees.com.au

Appendix 1

Plan 1 & 2

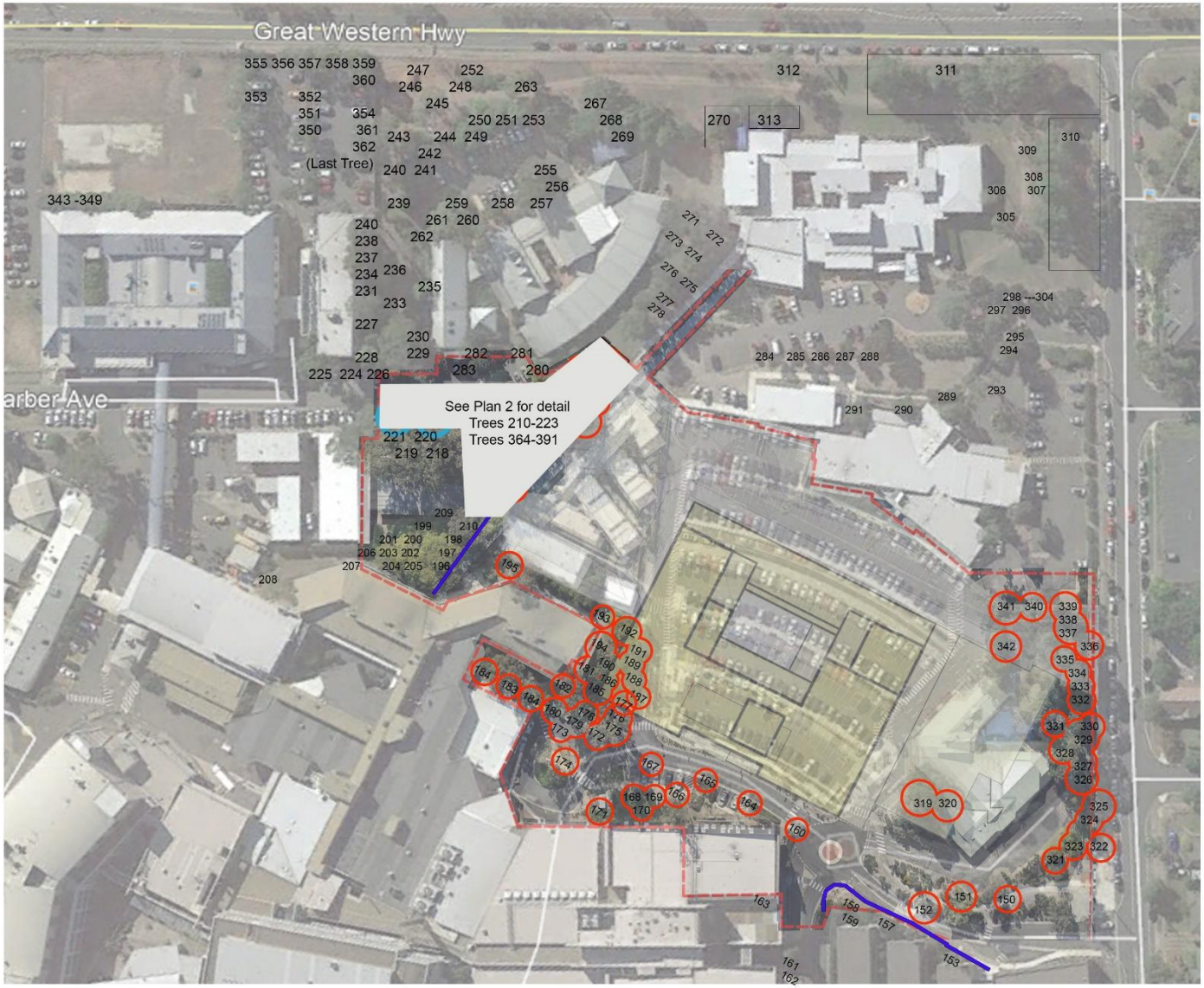
Tree Protection Plans

Tree protection plan

MOORE TREES

Moore Trees

Plan 1



Tree to be removed

Fence. Implementation of tree protection zone (TPZ). All tree protection works should be carried out before the start of demolition or building works. It is recommended that chain mesh fencing with a minimum height of 1.8 metres be erected

Trunk protection. Lengths of timber (75mm x 50mm x 2000) shall be fastened to the trunk or overhead branches that are greater than 80mm in diameter. These timbers are to be fastened with hoop iron strapping and not fixed directly onto the trunk of the tree.

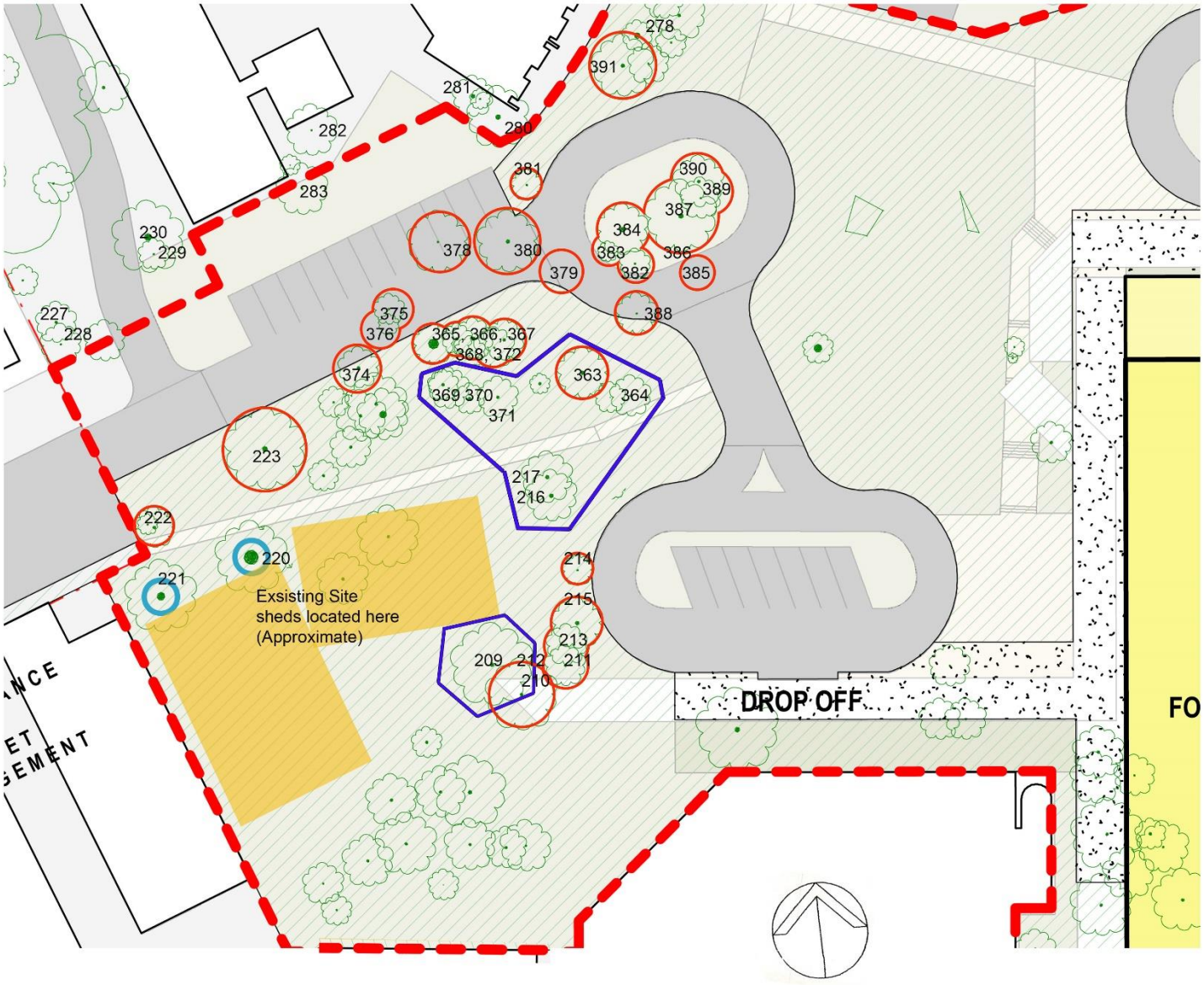
Noted to be removed via seperate planning approval process. Not included as part of SSDA application.

Date:	15.11.18
Drawn:	P.Vezgoff
Site Address:	Nepean Hospital Derby Street Kingswood NSW 2747

Tree protection plan

MOORE TREES

Moore Trees Plan 2



Note: Unnumbered trees are no longer present

Tree to be removed

Fence. Implementation of tree protection zone (TPZ). All tree protection works should be carried out before the start of demolition or building works. It is recommended that chain mesh fencing with a minimum height of 1.8 metres be erected

Trunk protection. Lengths of timber (75mm x 50mm x 2000) shall be fastened to the trunk or overhead branches that are greater than 80mm in diameter. These timbers are to be fastened with hoop iron strapping and not fixed directly onto the trunk of the tree.

Date:	26.11.18
Drawn:	P.Vezgoff
Site Address:	Nepean Hospital Derby Street Kingswood NSW 2747

Appendix 2

Tree health & condition assessment schedule

TREE HEALTH AND CONDITION ASSESSMENT SCHEDULE - *Nepean Hospital* – Stage 1 Building

Tree	Species	Height (m)	Spread (m)	DBH (mm)	Live canopy %	Defects	SULE	Condition	Age	Comments	TPZ (mm)
65	Jacaranda (Jacaranda mimosifolia)	7	7	400	95	Included codom stems	2a May only live for 15-40 years	Good	Mature		4800
66	River red gum (Eucalyptus camaldulensis)	5	3	100	90	No visual defects	2a May only live for 15-40 years	Good	Sapling		1200
67	River red gum (Eucalyptus camaldulensis)	5	3	100	90	No visual defects	2a May only live for 15-40 years	Good	Sapling		1200
68	River red gum (Eucalyptus camaldulensis)	5	3	100	90	No visual defects	2a May only live for 15-40 years	Good	Sapling		1200
69	River red gum (Eucalyptus camaldulensis)	3	2	50	90	No visual defects	2a May only live for 15-40 years	Good	Sapling		600
70	Spotted gum (Corymbia maculata)	10	4	150	90	No visual defects	1a >40 years	Good	Mature		1800
71	Spotted gum (Corymbia maculata)	8	4	150	90	No visual defects	1a >40 years	Good	Mature		1800
72	Spotted gum (Corymbia maculata)	8	4	150	90	No visual defects	1a >40 years	Good	Mature		1800
73	Melaleuca bracteata	6	4	150	80	No visual defects	2a May only live for 15-40 years	Good	Mature	X 13 trees	1800
74	Spotted gum (Corymbia maculata)	8	4	150	90	No visual defects	1a >40 years	Good	Mature		1800
75	Scribbly gum (Eucalyptus haemastoma)	4	3	100	80	No visual defects	3a May only live for 5-15 years	Poor	Mature		1200
76	Scribbly gum (Eucalyptus haemastoma)	4	3	150	90	No visual defects	2a May only live for 15-40 years	Good	Mature		1800
77	Scribbly gum (Eucalyptus haemastoma)	7	3	150	90	No visual defects	2a May only live for 15-40 years	Good	Mature		1800
78	Grey box (Eucalyptus moluccana)	18	15	700	80	Dead wood <50mm	2a May only live for 15-40 years	Good	Mature		8400
79	Coast grey box (Eucalyptus bosistoana)	15	10	350	80	Dead wood <50mm	2a May only live for 15-40 years	Good	Mature		4200
80	Grey box (Eucalyptus moluccana)	8	8	300	80	Dead wood <50mm	2a May only live for 15-40 years	Good	Mature	Supressed under tree79	3600

Tree	Species	Height (m)	Spread (m)	DBH (mm)	Live canopy %	Defects	SULE	Condition	Age	Comments	TPZ (mm)
81	Grey box (Eucalyptus moluccana)	18	10	400	80	Dead wood >50mm	2a May only live for 15-40 years	Good	Mature		4800
82	Grey box (Eucalyptus moluccana)	19	15	700	70	Dead wood <50mm	2a May only live for 15-40 years	Good	Mature		8400
83	Grey box (Eucalyptus moluccana)	20	20	1000	80	Included codom stems	2a May only live for 15-40 years	Good	Mature		12000
84	Broad leaved paperbark (Melaleuca quinquenervia)	4	4	100	80	No visual defects	2a May only live for 15-40 years	Good	Mature		1200
85	Grey box (Eucalyptus moluccana)	7	4	100	80	No visual defects	2c removed for more suitable planting	Good	Mature		1200
86	Grey box (Eucalyptus moluccana)	15	12	450	80	Included codom stems	2a May only live for 15-40 years	Good	Mature		5400
87	Tallowwood (Eucalyptus microcorys)	6	3	80	80	No visual defects	1a >40 years	Good	Sapling		960
88	Hymenosporum flavum	6	3	100	80	No visual defects	2a May only live for 15-40 years	Good	Mature		1200
89	Melaleuca decora	6	3	300	70	No visual defects	2a May only live for 15-40 years	Good	Mature		3600
90	Melaleuca decora	6	3	300	70	No visual defects	2a May only live for 15-40 years	Good	Mature		3600
91	Chinese tallow tree (Triadica sebifera)	7	5	250	70	No visual defects	2c removed for more suitable planting	Good	Mature		3000
92	Cocos palm (Syagrus romanzoffiana)	8	6	300	95	No visual defects	2c removed for more suitable planting	Good	Mature		3600
93	Cocos palm (Syagrus romanzoffiana)	8	6	300	95	No visual defects	2c removed for more suitable planting	Good	Mature		3600
94	Cocos palm (Syagrus romanzoffiana)	8	6	300	95	No visual defects	2c removed for more suitable planting	Good	Mature		3600
95	Cocos palm (Syagrus romanzoffiana)	8	6	300	95	No visual defects	2c removed for more suitable planting	Good	Mature		3600
96	Cocos palm (Syagrus romanzoffiana)	8	6	300	95	No visual defects	2c removed for more suitable planting	Good	Mature		3600

Tree	Species	Height (m)	Spread (m)	DBH (mm)	Live canopy %	Defects	SULE	Condition	Age	Comments	TPZ (mm)
97	Cocos palm (Syagrus romanzoffiana)	8	6	300	95	No visual defects	2c removed for more suitable planting	Good	Mature		3600
98	Cocos palm (Syagrus romanzoffiana)	8	6	300	95	No visual defects	2c removed for more suitable planting	Good	Mature		3600
99	Weeping bottle brush (Callistemon viminalis)	5	5	100	80	No visual defects	2c removed for more suitable planting	Good	Mature		1200
100	Grey box (Eucalyptus moluccana)	15	12	400	80	No visual defects	2a May only live for 15-40 years	Good	Mature		4800
101	Grey box (Eucalyptus moluccana)	15	10	350	80	Included codom stems	2a May only live for 15-40 years	Good	Mature		4200
102	Melaleuca styphelioides	2	2	100	40	No visual defects	3c Removed for a better specimen.	Good	Mature	Top broken off	1200
103	Melaleuca styphelioides	8	4	150	90	Included codom stems	2a May only live for 15-40 years	Good	Mature		1800
104	Melaleuca styphelioides	8	4	150	90	Included codom stems	2a May only live for 15-40 years	Good	Mature		1800
105	Melaleuca styphelioides	8	4	150	90	Included codom stems	2a May only live for 15-40 years	Good	Mature		1800
106	Grey box (Eucalyptus moluccana)	8	6	200	80	No visual defects	2a May only live for 15-40 years	Good	Mature		2400
107	Grey box (Eucalyptus moluccana)	10	6	200	80	No visual defects	2a May only live for 15-40 years	Good	Mature		2400
108	Hoop pine (Araucaria cunninghamii)	12	6	250	80	No visual defects	1a >40 years	Good	Mature		3000
109	Willow Bottle brush (Callistemon salignus)	6	4	100	80	Included codom stems	2a May only live for 15-40 years	Good	Mature		1200
110	Hoop pine (Araucaria cunninghamii)	12	6	250	80	No visual defects	1a >40 years	Good	Mature		3000
111	Willow Bottle brush (Callistemon salignus)	5	2	100	70	No visual defects	2a May only live for 15-40 years	Good	Mature	X7 trees	1200
112	White cedar (Melia azedarach)	5	5	100	70	No visual defects	2c removed for more suitable planting	Good	Mature		1200
113	Red ironbark (Eucalyptus sideroxylon)	6	3	150	90	No visual defects	1a >40 years	Good	Mature		1800
114	White cedar (Melia azedarach)	8	5	300	70	No visual defects	2a May only live for 15-40 years	Good	Mature		3600

Tree	Species	Height (m)	Spread (m)	DBH (mm)	Live canopy %	Defects	SULE	Condition	Age	Comments	TPZ (mm)
115	Weeping bottle brush (Callistemon viminalis)	5	4	150	80	No visual defects	2a May only live for 15-40 years	Good	Mature		1800
116	Red ironbark (Eucalyptus sideroxylon)	6	3	150	90	Stem wounds	2a May only live for 15-40 years	Good	Mature		1800
117	White cedar (Melia azedarach)	8	8	350	70	No visual defects	2c removed for more suitable planting	Good	Mature		4200
118	Red ironbark (Eucalyptus sideroxylon)	12	5	300	90	No Value	1a >40 years	Good	Mature		3600
119	White cedar (Melia azedarach)	8	8	350	70	Included codom stems	2c removed for more suitable planting	Good	Mature		4200
120	Red ironbark (Eucalyptus sideroxylon)	12	5	300	90	Stem wounds on upper branches	2a May only live for 15-40 years	Good	Mature	Dangerous over building	3600
121	Chinese tallow tree (Triadica sebifera)	6	4	150	80	No visual defects	2c removed for more suitable planting	Good	Mature		1800
122	Lemon-scented gum tree (Corymbia citriodora)	10	5	150	90	No visual defects	1a >40 years	Good	Mature	Group of 8	1800
123	Melaleuca bracteata	8	4	150	80	Included codom stems	2a May only live for 15-40 years	Good	Mature	Group of 4	1800
124	Melaleuca bracteata	8	4	150	80	Included codom stems	2a May only live for 15-40 years	Good	Mature	Group of 4	1800
125	Forest red gum (Eucalyptus tereticornis)	20	6	350	70	No visual defects	3a May only live for 5-15 years	Poor	Mature		4200
126	Grey box (Eucalyptus moluccana)	8	6	100	80	No visual defects	1a >40 years	Good	Mature		1200
127	Grey box (Eucalyptus moluccana)	6	2	100	80	No visual defects	1a >40 years	Good	Mature		1200
128	Argyle apple (Eucalyptus cineria)	6	6	300	80	No visual defects	2a May only live for 15-40 years	Good	Mature	Pruned from wires	3600
129	Grey box (Eucalyptus moluccana)	15	7	350	80	No visual defects	1a >40 years	Good	Mature		4200
130	Grey box (Eucalyptus moluccana)	12	7	350	80	No visual defects	1a >40 years	Good	Mature		4200
131	Grey box (Eucalyptus moluccana)	15	7	350	80	No visual defects	1a >40 years	Good	Mature		4200
132	Grey box (Eucalyptus moluccana)	7	5	150	70	No visual defects	1a >40 years	Good	Mature	Pruned to clear wires	1800
133	Grey box (Eucalyptus moluccana)	7	2	80	80	No visual defects	1a >40 years	Good	Mature	Pruned to clear wires	960

Tree	Species	Height (m)	Spread (m)	DBH (mm)	Live canopy %	Defects	SULE	Condition	Age	Comments	TPZ (mm)
134	Grey box (Eucalyptus moluccana)	12	7	350	80	No visual defects	1a >40 years	Good	Mature	Has had reduction pruning	4200
135	Grey box (Eucalyptus moluccana)	15	5	350	80	Included codom stems	1a >40 years	Good	Mature		4200
136	White cedar (Melia azedarach)	6	5	250	70	No Value	2c removed for more suitable planting	Good	Mature		3000
137	River she oak (Casuarina cunninghamiana)	6	3	150	90	No visual defects	1a >40 years	Good	Mature		1800
138	River she oak (Casuarina cunninghamiana)	15	4	350	90	No visual defects	1a >40 years	Good	Mature		4200
139	River she oak (Casuarina cunninghamiana)	6	5	100	80	No visual defects	1a >40 years	Good	Mature		1200
140	Grey box (Eucalyptus moluccana)	6	3	100	90	No visual defects	1a >40 years	Good	Mature		1200
141	Grey box (Eucalyptus moluccana)	6	3	100	90	Included codom stems	1a >40 years	Good	Mature		1200
142	Grey box (Eucalyptus moluccana)	6	3	100	90	No visual defects	1a >40 years	Good	Mature		1200
143	Grey box (Eucalyptus moluccana)	6	3	100	90	Included codom stems	1a >40 years	Good	Mature		1200
144	Grey box (Eucalyptus moluccana)	6	3	100	90	No visual defects	1a >40 years	Good	Mature	Has had top pruned out	1200
145	Grey box (Eucalyptus moluccana)	6	3	100	90	No visual defects	1a >40 years	Good	Mature	Has had top pruned out	1200
146	Grey box (Eucalyptus moluccana)	6	3	100	90	No visual defects	1a >40 years	Good	Mature	Has had top pruned out	1200
147	Grey box (Eucalyptus moluccana)	6	3	100	90	No visual defects	1a >40 years	Good	Mature	Has had top pruned out	1200
148	Grey box (Eucalyptus moluccana)	6	3	100	90	No visual defects	1a >40 years	Good	Mature	Has had top pruned out	1200
149	Grey box (Eucalyptus moluccana)	6	3	100	90	No visual defects	1a >40 years	Good	Mature	Has had top pruned out	1200
150	Chinese elm (Ulmus parvifolia)	7	8	300	90	Stem wounds on upper branches	1a >40 years	Good	Mature		3600
151	Chinese elm (Ulmus parvifolia)	7	8	300	90	No Value	1a >40 years	Good	Mature		3600
152	Tallowwood (Eucalyptus microcorys)	12	12	450	80	Dead wood <50mm	1a >40 years	Good	Mature		5400
153	Spotted gum (Corymbia maculata)	15	5	250	80	Included codom stems	1a >40 years	Good	Mature		3000

Tree	Species	Height (m)	Spread (m)	DBH (mm)	Live canopy %	Defects	SULE	Condition	Age	Comments	TPZ (mm)
154	Spotted gum (Corymbia maculata)	12	5	250	80	No Value	1a >40 years	Good	Mature		3000
155	Spotted gum (Corymbia maculata)	12	3	150	80	No Value	1a >40 years	Good	Mature		1800
156	Spotted gum (Corymbia maculata)	12	3	150	80	No Value	1a >40 years	Good	Mature		1800
157	Spotted gum (Corymbia maculata)	12	3	200	80	Included codom stems	1a >40 years	Good	Mature		2400
158	Spotted gum (Corymbia maculata)	5	3	50	80	No visual defects	1a >40 years	Good	Sapling		600
159	Spotted gum (Corymbia maculata)	12	3	200	80	No Value	1a >40 years	Good	Mature		2400
160	Spotted gum (Corymbia maculata)	115	4	200	80	No Value	1a >40 years	Good	Mature		2400
161	Tallowwood (Eucalyptus microcorys)	12	12	450	80	Included codom stems	1a >40 years	Good	Mature		5400
162	Tallowwood (Eucalyptus microcorys)	12	12	450	80	No Value	1a >40 years	Good	Mature		5400
163	Cabbage tree palm (Livistona australis)	6	3	300	90	No visual defects	1a >40 years	Good	Mature	10x	3600
164	Grey box (Eucalyptus moluccana)	7	3	100	80	No visual defects	1a >40 years	Good	Mature		1200
165	Grey box (Eucalyptus moluccana)	7	3	100	80	No visual defects	1a >40 years	Good	Mature		1200
166	Grey box (Eucalyptus moluccana)	20	6	600	80	Stem wounds	2a May only live for 15-40 years	Good	Mature		7200
167	Spotted gum (Corymbia maculata)	15	7	300	80	Included codom stems	2a May only live for 15-40 years	Good	Mature		3600
168	Forest red gum (Eucalyptus tereticornis)	5	3	50	90	No visual defects	1a >40 years	Good	Mature		600
169	Forest red gum (Eucalyptus tereticornis)	5	3	50	90	No visual defects	1a >40 years	Good	Mature		600
170	Forest red gum (Eucalyptus tereticornis)	5	3	50	90	No visual defects	1a >40 years	Good	Mature		600
171	Forest red gum (Eucalyptus tereticornis)	5	3	50	90	No visual defects	1a >40 years	Good	Mature		600
172	Spotted gum (Corymbia maculata)	10	5	160	90	No visual defects	1a >40 years	Good	Mature		1920
173	Spotted gum (Corymbia maculata)	10	10	350	90	No visual defects	1a >40 years	Good	Mature		4200
174	Iron bark (Eucalyptus crebra)	10	4	200	0	No visual defects	1a >40 years	Good	Mature		2400

Tree	Species	Height (m)	Spread (m)	DBH (mm)	Live canopy %	Defects	SULE	Condition	Age	Comments	TPZ (mm)
175	Jacaranda (Jacaranda mimosifolia)	5	5	200	90	No visual defects	2a May only live for 15-40 years	Good	Mature		2400
176	Grey box (Eucalyptus moluccana)	20	15	500	80	Dead wood >50mm	1a >40 years	Good	Mature		6000
177	Grey box (Eucalyptus moluccana)	20	15	600	80	Included codom stems	1a >40 years	Good	Mature		7200
178	Spotted gum (Corymbia maculata)	12	6	200	80	No visual defects	2a May only live for 15-40 years	Good	Mature		2400
179	Grey box (Eucalyptus moluccana)	18	12	500	80	No visual defects	2a May only live for 15-40 years	Good	Mature		6000
180	Spotted gum (Corymbia maculata)	12	5	250	80	No visual defects	1a >40 years	Good	Mature		3000
181	Flooded Gum (Eucalyptus grandis)	18	6	400	80	Stem wounds on upper branches	2a May only live for 15-40 years	Good	Mature		4800
182	Melaleuca decora	4	3	150	80	No visual defects	2a May only live for 15-40 years	Good	Mature		1800
183	Spotted gum (Corymbia maculata)	15	10	400	80	No visual defects	1a >40 years	Good	Mature		4800
184	Spotted gum (Corymbia maculata)	20	10	600	80	No visual defects	1a >40 years	Good	Mature		7200
185	White cedar (Melia azedarach)	10	10	300	80	No visual defects	2a May only live for 15-40 years	Good	Mature		3600
186	White cedar (Melia azedarach)	10	10	300	80	No visual defects	2c removed for more suitable planting	Good	Mature		3600
187	White cedar (Melia azedarach)	10	10	300	80	No visual defects	2c removed for more suitable planting	Good	Mature		3600
188	White cedar (Melia azedarach)	10	10	300	80	No visual defects	2c removed for more suitable planting	Good	Mature		3600
189	Illawarra flame tree (Brachychiton acerifolius)	10	4	300	90	No visual defects	1a >40 years	Good	Mature		3600
190	Hymenosporum flavum	5	3	100	80	No visual defects	2c removed for more suitable planting	Good	Mature		1200

Tree	Species	Height (m)	Spread (m)	DBH (mm)	Live canopy %	Defects	SULE	Condition	Age	Comments	TPZ (mm)
191	Chinese pistachio	8	8	150	80	No visual defects	2c removed for more suitable planting	Good	Mature		1800
192	Jacaranda (Jacaranda mimosifolia)	6	6	250	80	No visual defects	2a May only live for 15-40 years	Good	Mature		3000
193	Jacaranda (Jacaranda mimosifolia)	10	10	300	80	No visual defects	2a May only live for 15-40 years	Good	Mature		3600
194	White cedar (Melia azedarach)	10	10	300	80	No visual defects	2a May only live for 15-40 years	Good	Mature		3600
195	Spotted gum (Corymbia maculata)	20	15	500	80	No visual defects	1a >40 years	Good	Mature		6000
196	Brushbox (Lophostemon confertus)	12	8	250	70	No visual defects	1a >40 years	Good	Mature		3000
197	Willow Bottle brush (Callistemon salignus)	10	6	200	80	Included codom stems	2a May only live for 15-40 years	Good	Mature		2400
198	Jacaranda (Jacaranda mimosifolia)	12	12	600	80	No visual defects	2a May only live for 15-40 years	Good	Mature		7200
199	Jacaranda (Jacaranda mimosifolia)	7	6	80	0	Included codom stems	2a May only live for 15-40 years	Good	Mature		960
200	Jacaranda (Jacaranda mimosifolia)	12	10	250	80	No visual defects	2a May only live for 15-40 years	Good	Mature		3000
201	Jacaranda (Jacaranda mimosifolia)	12	10	250	80	No visual defects	2a May only live for 15-40 years	Good	Mature		3000
202	Jacaranda (Jacaranda mimosifolia)	12	10	400	80	No visual defects	2a May only live for 15-40 years	Good	Mature		4800
203	Jacaranda (Jacaranda mimosifolia)	12	10	400	80	No visual defects	2a May only live for 15-40 years	Good	Mature		4800
204	Hymenosporum flavum	8	4	100	80	No visual defects	2a May only live for 15-40 years	Good	Mature		1200
205	Jacaranda (Jacaranda mimosifolia)	12	12	400	80	No visual defects	2a May only live for 15-40 years	Good	Mature		4800
206	Jacaranda (Jacaranda mimosifolia)	8	5	100	80	No visual defects	2a May only live for 15-40 years	Good	Mature		1200

Tree	Species	Height (m)	Spread (m)	DBH (mm)	Live canopy %	Defects	SULE	Condition	Age	Comments	TPZ (mm)
207	Willow Bottle brush (Callistemon salignus)	8	6	300	40	Dead wood >50mm	3a May only live for 5-15 years	Poor	Mature		3600
208	Spotted gum (Corymbia maculata)	12	10	450	60	No visual defects	2a May only live for 15-40 years	Good	Mature		5400
209	Forest red gum (Eucalyptus tereticornis)	18	15	700	60	Included codom stems	2a May only live for 15-40 years	Good	Mature		8400
210	Tallowwood (Eucalyptus microcorys)	18	10	0	70	No visual defects	2a May only live for 15-40 years	Good	Mature		0
211	Jacaranda (Jacaranda mimosifolia)	10	4	200	80	No visual defects	2a May only live for 15-40 years	Good	Mature		2400
212	Jacaranda (Jacaranda mimosifolia)	10	4	200	80	No visual defects	2a May only live for 15-40 years	Good	Mature		2400
213	Jacaranda (Jacaranda mimosifolia)	10	4	200	80	No visual defects	2a May only live for 15-40 years	Good	Mature		2400
214	Grey box (Eucalyptus moluccana)	12	6	200	80	No visual defects	1a >40 years	Good	Mature		2400
215	Jacaranda (Jacaranda mimosifolia)	10	4	200	80	No visual defects	2a May only live for 15-40 years	Good	Mature		2400
216	Grey box (Eucalyptus moluccana)	12	12	350	80	Stem wounds	1a >40 years	Good	Mature		4200
217	Grey box (Eucalyptus moluccana)	18	12	500	80	Stem wounds	1a >40 years	Good	Mature		6000
218	Jacaranda (Jacaranda mimosifolia)	12	10	300	80	No visual defects	1a >40 years	Good	Mature		3600
219	Jacaranda (Jacaranda mimosifolia)	12	10	300	80	No visual defects	1a >40 years	Good	Mature		3600
220	Grey box (Eucalyptus moluccana)	20	20	800	70	Dead wood >50mm	1a >40 years	Good	Mature		9600
221	Grey box (Eucalyptus moluccana)	20	600	800	70	No Value	1a >40 years	Good	Mature		9600
222	Lemon-scented gum tree (Corymbia citriodora)	12	10	400	80	No visual defects	2a May only live for 15-40 years	Good	Mature		4800
223	Tallowwood (Eucalyptus microcorys)	15	15	600	80	No visual defects	1a >40 years	Good	Mature		7200

Tree	Species	Height (m)	Spread (m)	DBH (mm)	Live canopy %	Defects	SULE	Condition	Age	Comments	TPZ (mm)
224	Silky oak (Grevillea robusta)	15	8	400	50	Dead wood >50mm	2a May only live for 15-40 years	Good	Mature		4800
225	Tallowwood (Eucalyptus microcorys)	18	10	700	80	Included codom stems	2a May only live for 15-40 years	Good	Mature		8400
226	Tallowwood (Eucalyptus microcorys)	10	4	150	80	No Value	2a May only live for 15-40 years	Good	Sapling		1800
227	Spotted gum (Corymbia maculata)	15	6	250	80	No visual defects	1a >40 years	Good	Mature		3000
228	Jacaranda (Jacaranda mimosifolia)	6	4	100	80	No visual defects	1a >40 years	Good	Mature		1200
229	White cedar (Melia azedarach)	5	5	100	70	Foliar pest	2a May only live for 15-40 years	Good	Mature		1200
230	Grey box (Eucalyptus moluccana)	18	12	600	80	No visual defects	1a >40 years	Good	Mature		7200
231	Silky oak (Grevillea robusta)	8	5	100	80	No Value	1a >40 years	Good	Mature		1200
232	Spotted gum (Corymbia maculata)	10	5	150	70	Included codom stems	2a May only live for 15-40 years	Good	Sapling		1800
233	Hymenosporum flavum	10	4	100	80	No visual defects	2c removed for more suitable planting	Good	Mature		1200
234	Grey box (Eucalyptus moluccana)	15	12	400	70	No visual defects	2a May only live for 15-40 years	Good	Mature	Broken branches in canopy	4800
235	Jacaranda (Jacaranda mimosifolia)	10	6	300	80	No visual defects	2a May only live for 15-40 years	Good	Mature		3600
236	Hymenosporum flavum	5	3	100	80	No visual defects	2c removed for more suitable planting	Good	Mature		1200
237	Grey box (Eucalyptus moluccana)	15	12	500	70	No visual defects	1a >40 years	Good	Mature	Broken branches in canopy	6000
238	Grey box (Eucalyptus moluccana)	15	12	500	70	No visual defects	1a >40 years	Good	Mature	Broken branches in canopy	6000
239	No Value	6	6	150	0	No visual defects	1a >40 years	Good	Mature		1800
240	Spotted gum (Corymbia maculata)	10	5	100	70	Included codom stems	1a >40 years	Good	Sapling		1200

Tree	Species	Height (m)	Spread (m)	DBH (mm)	Live canopy %	Defects	SULE	Condition	Age	Comments	TPZ (mm)
241	Chinese tallow tree (Triadica sebifera)	5	5	80	0	No visual defects	2c removed for more suitable planting	Good	Sapling		960
242	Red ironbark (Eucalyptus sideroxylon)	6	6	150	70	No visual defects	2a May only live for 15-40 years	Good	Sapling		1800
243	Grey box (Eucalyptus moluccana)	18	20	800	70	Included codom stems	1a >40 years	Good	Mature		9600
244	Allocasuarina littoralis x5	5	3	100	80	No visual defects	2a May only live for 15-40 years	Good	Mature		1200
245	Red ironbark (Eucalyptus sideroxylon)	6	6	150	70	No visual defects	2a May only live for 15-40 years	Good	Sapling		1800
246	Lemon-scented gum tree (Corymbia citriodora)	12	10	250	80	No visual defects	2a May only live for 15-40 years	Good	Mature		3000
247	Lemon-scented gum tree (Corymbia citriodora)	12	10	250	80	No visual defects	2a May only live for 15-40 years	Good	Mature		3000
248	Jacaranda (Jacaranda mimosifolia)	6	6	100	89	No visual defects	2a May only live for 15-40 years	Good	Mature		1200
249	Tallowwood (Eucalyptus microcorys)	7	4	100	80	No visual defects	2a May only live for 15-40 years	Good	Mature	3x coppice regrowth	1200
250	Lemon-scented gum tree (Corymbia citriodora)	10	4	150	80	No visual defects	1a >40 years	Good	Sapling		1800
251	Tallowwood (Eucalyptus microcorys)	7	4	100	80	No visual defects	2a May only live for 15-40 years	Good	Mature	3x coppice regrowth	1200
252	Grey box (Eucalyptus moluccana)	12	22	450	70	No Value	1a >40 years	Good	Mature		5400
253	Lemon-scented gum tree (Corymbia citriodora)	12	8	150	70	No visual defects	2a May only live for 15-40 years	Good	Mature	Coppice regrowth	1800
254	Lemon-scented gum tree (Corymbia citriodora)	12	8	300	70	No visual defects	1a >40 years	Good	Mature	Coppice regrowth	3600
255	Grey gum (Eucalyptus punctata)	12	12	400	70	No visual defects	1a >40 years	Good	Mature		4800
256	Red cedar (Toona ciliata)	12	8	600	0	Included codom stems	1a >40 years	Good	Mature		7200
256	Grey box (Eucalyptus moluccana)	15	13	500	80	No visual defects	1a >40 years	Good	Mature		6000
259	Red cedar (Toona ciliata)	5	6	200	0	No Value	1a >40 years	Good	Mature		2400

Tree	Species	Height (m)	Spread (m)	DBH (mm)	Live canopy %	Defects	SULE	Condition	Age	Comments	TPZ (mm)
260	Forest red gum (Eucalyptus tereticornis)	15	10	400	70	Included codom stems	1a >40 years	Good	Mature		4800
261	Lemon-scented gum tree (Corymbia citriodora)	15	10	500	70	No visual defects	1a >40 years	Good	Mature		6000
262	Melaleuca styphelioides	8	4	200	90	No visual defects	1a >40 years	Good	Mature		2400
263	Grey box (Eucalyptus moluccana)	15	15	600	80	No visual defects	1a >40 years	Good	Mature		7200
264	Tallowwood (Eucalyptus microcorys)	10	7	300	70	No visual defects	1a >40 years	Good	Mature		3600
265	Tallowwood (Eucalyptus microcorys)	12	7	450	80	No visual defects	1a >40 years	Good	Mature		5400
266	Tallowwood (Eucalyptus microcorys)	10	7	300	80	No visual defects	1a >40 years	Good	Mature		3600
267	Tallowwood (Eucalyptus microcorys)	12	12	450	80	No visual defects	1a >40 years	Good	Mature		5400
268	Tallowwood (Eucalyptus microcorys)	12	8	450	80	No visual defects	1a >40 years	Good	Mature		5400
269	White cedar (Melia azedarach)	6	5	100	70	No visual defects	1a >40 years	Good	Mature		1200
270	Melaleuca styphelioides	6	3	100	80	No visual defects	1a >40 years	Good	Mature	X11 trees	1200
271	Grey gum (Eucalyptus punctata)	15	12	500	7080	No visual defects	1a >40 years	Good	Mature		6000
272	Grey gum (Eucalyptus punctata)	15	10	400	70	No visual defects	1a >40 years	Good	Mature		4800
273	Grey gum (Eucalyptus punctata)	15	10	400	70	No visual defects	1a >40 years	Good	Mature		4800
274	Grey gum (Eucalyptus punctata)	10	8	400	70	No visual defects	1a >40 years	Good	Mature		4800
275	English oak (Quercus robur)	6	6	100	80	Foliar pest	1a >40 years	Good	Mature		1200
276	Silky oak (Grevillea robusta)			0	0	No visual defects	2c removed for more suitable planting	Good	Mature	Mixed species plaques at base	0
277	Mixed species plaques at base			0	0	No visual defects	2a May only live for 15-40 years	Good	Mature	Mixed species plaques at base	0
278	Mixed species plaques at base			0	0	No visual defects	2a May only live for 15-40 years	Good	Mature	Mixed species plaques at base	0
279	Mixed species plaques at base			0	0	No visual defects	2a May only live for 15-40 years	Good	Mature	Mixed species, Melia eucalyptus,allocasuarina ,callistemon	0

Tree	Species	Height (m)	Spread (m)	DBH (mm)	Live canopy %	Defects	SULE	Condition	Age	Comments	TPZ (mm)
280	Mixed species	12	12	200	0	Included codom stems	2a May only live for 15-40 years	Good	Mature	Mixed species, Melia eucalyptus,allocasuarina ,callistemon	2400
281	Melaleuca (Melaleuca linariifolia)	10	5	150	70	Included codom stems	2a May only live for 15-40 years	Good	Mature		1800
282	Magenta lilly pilly (Syzigium paniculatum)	12	6	300	90	No visual defects	1a >40 years	Good	Mature		3600
283	Magenta lilly pilly (Syzigium paniculatum)	12	6	300	90	Included codom stems	1a >40 years	Good	Mature		3600
284	Fraxinus raywood	6	4	100	70	No visual defects	1a >40 years	Good	Mature		1200
285	Fraxinus raywood	7	6	200	80	No visual defects	1a >40 years	Good	Mature		2400
286	Fraxinus raywood	7	6	200	80	No visual defects	1a >40 years	Good	Mature		2400
287	Fraxinus raywood	7	6	200	80	No visual defects	1a >40 years	Good	Mature		2400
288	Fraxinus raywood	10	10	400	80	No visual defects	1a >40 years	Good	Mature		4800
289	Chinese tallow tree (Triadica sebifera)	7	6	250	0	No visual defects	2c removed for more suitable planting	Good	Mature		3000
290	Jacaranda (Jacaranda mimosifolia)	8	8	400	80	No visual defects	2a May only live for 15-40 years	Good	Mature		4800
291	Jacaranda (Jacaranda mimosifolia)	8	8	400	80	No visual defects	2a May only live for 15-40 years	Good	Mature		4800
292	Chinese tallow tree (Triadica sebifera)	7	6	250	0	No visual defects	2c removed for more suitable planting	Good	Mature		3000
293	Grey box (Eucalyptus moluccana)	10	5	300	80	No visual defects	1a >40 years	Good	Mature		3600
294	Grey box (Eucalyptus moluccana)	15	15	300800	60	No visual defects	3a May only live for 5-15 years	Good	Mature	Has had canopy reduction pruning	3609600
295	Swamp she oak (Casuarina glauca)	10	8	500	0	No visual defects	1a >40 years	Good	Mature		6000
296	Sydney blue gum (Eucalyptus saligna)	10	8	300	80	No visual defects	1a >40 years	Good	Mature		3600
297	Sydney blue gum (Eucalyptus saligna)	15	10	400	80	No visual defects	1a >40 years	Good	Mature		4800
298	Fraxinus raywood	7	6	200	80	No visual defects	1a >40 years	Good	Mature		2400
299	Fraxinus raywood	7	6	200	80	No visual defects	1a >40 years	Good	Mature		2400

Tree	Species	Height (m)	Spread (m)	DBH (mm)	Live canopy %	Defects	SULE	Condition	Age	Comments	TPZ (mm)
300	Fraxinus raywood	7	6	200	80	No visual defects	1a >40 years	Good	Mature		2400
301	Fraxinus raywood	7	6	200	80	No visual defects	1a >40 years	Good	Mature		2400
302	Fraxinus raywood	7	6	200	80	No visual defects	1a >40 years	Good	Mature		2400
303	Fraxinus raywood	7	6	200	80	No visual defects	1a >40 years	Good	Mature		2400
304	Fraxinus raywood	7	6	200	80	No visual defects	1a >40 years	Good	Mature		2400
305	Scribbly gum (Eucalyptus haemastoma)	10	8	350	80	Stem wounds	1a >40 years	Good	Mature		4200
306	Forest red gum (Eucalyptus tereticornis)	12	8	350	70	Stem wounds	2a May only live for 15-40 years	Good	Mature		4200
307	Sydney blue gum (Eucalyptus saligna)	8	5	200	60	No visual defects	3a May only live for 5-15 years	Poor	Mature		2400
308	Forest red gum (Eucalyptus tereticornis)	12	8	350	70	Stem wounds	2a May only live for 15-40 years	Good	Mature		4200
309	Forest red gum (Eucalyptus tereticornis)	12	7	400	70	No visual defects	2a May only live for 15-40 years	Good	Mature		4800
310	Mixed species group			0	0	No visual defects	2a May only live for 15-40 years	Good	Mature		0
311	Mixed species group			0	0	No visual defects	2a May only live for 15-40 years	Good	Mature		0
312	Grey box (Eucalyptus moluccana)	16	12	400	80	No visual defects	1a >40 years	Good	Mature		4800
313	Mixed group of m armillaris and styphelloides			0	0	No visual defects	2a May only live for 15-40 years	Good	Mature	Mixed group of m armillaris and styphelloides	0
314	Grey box (Eucalyptus moluccana)	12	10	400	80	Included codom stems	1a >40 years	Good	Mature		4800
315	Chinese tallow tree (Triadica sebifera)	10	6	300	80	No visual defects	1a >40 years	Good	Mature		3600
316	Grey box (Eucalyptus moluccana)	18	10	400	80	No Value	1a >40 years	Good	Mature		4800
317	Grey box (Eucalyptus moluccana)	12	10	400	80	Included codom stems	1a >40 years	Good	Mature		4800
318	Broad leaved paperbark (Melaleuca quinquenervia)	10	8	300	80	No visual defects	1a >40 years	Good	Mature		3600

Tree	Species	Height (m)	Spread (m)	DBH (mm)	Live canopy %	Defects	SULE	Condition	Age	Comments	TPZ (mm)
319	Tallowwood (Eucalyptus microcorys)	12	6	400	80	Included codom stems	1a >40 years	Good	Mature		4800
320	Tallowwood (Eucalyptus microcorys)	12	6	400	80	Included codom stems	1a >40 years	Good	Mature		4800
321	Jacaranda (Jacaranda mimosifolia)	8	8	150	80	No visual defects	1a >40 years	Good	Mature		1800
322	Jacaranda (Jacaranda mimosifolia)	4	4	150	80	No visual defects	1a >40 years	Good	Mature		1800
323	Jacaranda (Jacaranda mimosifolia)	5	5	150	80	No visual defects	1a >40 years	Good	Mature		1800
324	Golden ash	6	6	300	80	No visual defects	1a >40 years	Good	Mature	Golden ash	3600
325	Fraxinus raywood	6	6	300	80	No visual defects	1a >40 years	Good	Mature	Fraxinus raywood	3600
326	Sydney blue gum (Eucalyptus saligna)	20	15	800	0	No visual defects	3a May only live for 5-15 years	Poor	Mature		9600
326	Sydney blue gum (Eucalyptus saligna)	20	15	800	0	No visual defects	3a May only live for 5-15 years	Poor	Mature		9600
327	River red gum (Eucalyptus camaldulensis)	15	8	300	0	No visual defects	3a May only live for 5-15 years	Poor	Mature		3600
328	Sydney blue gum (Eucalyptus saligna)	15	8	350	0	Stem wounds	3a May only live for 5-15 years	Poor	Mature		4200
329	Sydney blue gum (Eucalyptus saligna)	15	8	350	0	No Value	3a May only live for 5-15 years	Poor	Mature		4200
330	Liquidambar (Liquidambar styraciflua)	12	8	150	89	Included codom stems	1a >40 years	Good	Mature		1800
331	Tallowwood (Eucalyptus microcorys)	15	15	600	80	No visual defects	1a >40 years	Good	Mature		7200
332	Grey box (Eucalyptus moluccana)	15	10	500	80	No visual defects	1a >40 years	Good	Mature		6000
332	Chinese elm (Ulmus parvifolia)	6	7	300	70	Included codom stems	2a May only live for 15-40 years	Good	Mature		3600
333	Forest red gum (Eucalyptus tereticornis)	15	10	400	80	No visual defects	1a >40 years	Good	Mature		4800
335	Claret ash	10	8	400	70	No visual defects	2a May only live for 15-40 years	Good	Mature		4800
336	Illawarra flame tree (Brachychiton acerifolius)	8	6	300	90	No visual defects	1a >40 years	Good	Mature		3600

Tree	Species	Height (m)	Spread (m)	DBH (mm)	Live canopy %	Defects	SULE	Condition	Age	Comments	TPZ (mm)
337	Grey box (Eucalyptus moluccana)	15	10	400	80	No visual defects	1a >40 years	Good	Mature		4800
338	Spotted gum (Corymbia maculata)	15	10	400	0	No visual defects	1a >40 years	Good	Mature		4800
339	Tallowwood (Eucalyptus microcorys)	15	8	300	80	No visual defects	1a >40 years	Good	Mature		3600
340	Chinese elm (Ulmus parvifolia)	12	10	400	80	No visual defects	1a >40 years	Good	Mature		4800
341	Spotted gum (Corymbia maculata)	12	6	400	80	No visual defects	1a >40 years	Good	Mature		4800
342	Broad leaved paperbark (Melaleuca quinquenervia)	10	8	300	80	No visual defects	1a >40 years	Good	Mature		3600
343	Brushbox (Lophostemon confertus)	16	3.5	250	95	No visual defects	2a May only live for 15-40 years	Good	Mature	Part of a row of six	3000
344	Jacaranda (Jacaranda mimosifolia)	6	2	100	95	No visual defects	2a May only live for 15-40 years	Good	Mature	Part of a row of six	1200
345	Brushbox (Lophostemon confertus)	16	3.5	250	95	No visual defects	2a May only live for 15-40 years	Good	Mature	Part of a row of six	3000
346	Brushbox (Lophostemon confertus)	16	3.5	250	95	No visual defects	2a May only live for 15-40 years	Good	Mature	Part of a row of six	3000
347	Brushbox (Lophostemon confertus)	16	3.5	250	95	No visual defects	2a May only live for 15-40 years	Good	Mature	Part of a row of six	3000
348	Brushbox (Lophostemon confertus)	16	3.5	250	95	No visual defects	2a May only live for 15-40 years	Good	Mature	Part of a row of six	3000
349	Brushbox (Lophostemon confertus)	16	3.5	250	95	No visual defects	2a May only live for 15-40 years	Good	Mature	Part of a row of six	3000
350	Spotted gum (Corymbia maculata)	18	3.5	300	95	No visual defects	1a >40 years	Good	Mature	Car park planting	3600
351	Spotted gum (Corymbia maculata)	18	3.5	300	95	Storm damage	3c Removed for a better specimen.	Poor	Mature	Car park planting	3600
352	Spotted gum (Corymbia maculata)	18	3.5	300	95	No visual defects	1a >40 years	Good	Mature	Car park planting	3600
353	Spotted gum (Corymbia maculata)	18	3.5	300	95	No visual defects	1a >40 years	Good	Mature	Car park planting	3600
354	Spotted gum (Corymbia maculata)	18	3.5	180	95	No visual defects	1a >40 years	Good	Mature	Car park planting	2160
355	Spotted gum (Corymbia maculata)	18	3.5	250	95	No visual defects	1a >40 years	Good	Mature	Car park planting	3000
356	Spotted gum (Corymbia maculata)	18	3.5	250	95	No visual defects	1a >40 years	Good	Mature	Car park planting	3000
357	Spotted gum (Corymbia maculata)	18	3.5	250	95	No visual defects	1a >40 years	Good	Mature	Car park planting	3000

Tree	Species	Height (m)	Spread (m)	DBH (mm)	Live canopy %	Defects	SULE	Condition	Age	Comments	TPZ (mm)
358	Spotted gum (Corymbia maculata)	18	3.5	350	95	No visual defects	1a >40 years	Good	Mature	Car park planting	4200
359	Spotted gum (Corymbia maculata)	18	3.5	250	95	No visual defects	1a >40 years	Good	Mature	Car park planting	3000
360	Spotted gum (Corymbia maculata)	18	3.5	250	95	No visual defects	1a >40 years	Good	Mature	Car park planting	3000
361	Spotted gum (Corymbia maculata)	8	2.5	120	95	No visual defects	1a >40 years	Good	Mature	Car park planting	1440
362	Spotted gum (Corymbia maculata)	8	2.5	120	95	No visual defects	1a >40 years	Good	Mature	Car park planting	1440
363	Red ironbark (Eucalyptus sideroxylon)	8	2	0.25	60	No visual defects	4a Dead, dying or declining.	Poor	Mature	Drought affected	3
364	Grey box (Eucalyptus moluccana)	13	6	0.4	90	No visual defects	1a >40 years	Fair	Mature		4.8
365	Grey box (Eucalyptus moluccana)	11	4	0.35	70	No visual defects	1a >40 years	Fair	Mature		4.2
366	Grey box (Eucalyptus moluccana)	14	6	0.5	80	No visual defects	1a >40 years	Fair	Mature		6
367	Grey box (Eucalyptus moluccana)	11	4	0.35	70	No visual defects	1a >40 years	Fair	Mature		4.2
368	White cedar (Melia azedarach)	12	4	0.2	90	Included codom stems	2c removed for more suitable planting	Fair	Mature	Multi stemmed specimen	2.4
369	Spotted gum (Corymbia maculata)	9	1	0.12	90	No visual defects	2c removed for more suitable planting	Fair	Sapling		1.4
370	White cedar (Melia azedarach)	9	3	0.25	90	No visual defects	2c removed for more suitable planting	Fair	Mature	Multi stemmed specimen	3
371	White cedar (Melia azedarach)	9	3	0.25	90	No visual defects	2c removed for more suitable planting	Fair	Mature		3
372	Grey box (Eucalyptus moluccana)	9	4	0.25	70	No visual defects	1a >40 years	Fair	Mature		3
373	White cedar (Melia azedarach)	9	3	0.25	90	No visual defects	2c removed for more suitable planting	Fair	Mature		3
374	Acmena smithii	8	2.5	0.2	90	No visual defects	2c removed for more suitable planting	Fair	Mature		2.4
375	Acmena smithii	6	2	0.12	90	No visual defects	2c removed for more suitable planting	Fair	Mature		1.4
376	Acmena smithii	7	2.5	0.2	90	No visual defects	2c removed for more suitable planting	Fair	Mature		2.4
377	Willow Bottle brush (Callistemon salignus)	9	4.5	0.25	90	No visual defects	2c removed for more suitable planting	Good	Mature		3

Tree	Species	Height (m)	Spread (m)	DBH (mm)	Live canopy %	Defects	SULE	Condition	Age	Comments	TPZ (mm)
378	Willow Bottle brush (Callistemon salignus)	9	4.5	0.25	90	No visual defects	2c removed for more suitable planting	Good	Mature		3
379	Red ironbark (Eucalyptus sideroxylon)	8	2	0.25	60	No visual defects	2a May only live for 15-40 years	Fair	Mature	Drought affected	3
380	Forest red gum (Eucalyptus tereticornis)	14	6	0.48	90	No visual defects	2c removed for more suitable planting	Good	Mature		5.8
381	Willow Bottle brush (Callistemon salignus)	9	4.5	0.25	90	No visual defects	2c removed for more suitable planting	Good	Mature		3
382	Tallowwood (Eucalyptus microcorys)	13	5	0.45	0	No visual defects	4a Dead, dying or declining.	Dead	Overmature		5.4
383	Forest Oak (Allocasurina torulosa)	6	1.5	0.15	80	No visual defects	2c removed for more suitable planting	Fair	Mature		1.8
384	Grey box (Eucalyptus moluccana)	17	6	0.7	80	No visual defects	1a >40 years	Good	Mature		8.4
385	Melaleuca decora	4	2	0.2	80	No visual defects	4a Dead, dying or declining.	Poor	Mature		2.4
386	Forest Oak (Allocasurina torulosa)	6	1.5	0.15	80	No visual defects	2c removed for more suitable planting	Fair	Mature		1.8
387	Forest red gum (Eucalyptus tereticornis)	19	7	0.7	90	No visual defects	1a >40 years	Good	Mature	Co dom stems	8.4
388	White cedar (Melia azedarach)	8	2.5	0.25	90	No visual defects	2c removed for more suitable planting	Good	Mature		3
389	White cedar (Melia azedarach)	8	2.5	0.25	90	No visual defects	2c removed for more suitable planting	Good	Mature		3
390	White cedar (Melia azedarach)	8	2.5	0.25	90	No visual defects	2c removed for more suitable planting	Good	Mature		3
391	Tallowwood (Eucalyptus microcorys)	12	4.5	0.3	90	No visual defects	1a >40 years	Good	Mature		3.6

KEY

Tree No: Relates to the number allocated to each tree for the Tree Protection Plan.

Height: Height of the tree to the nearest metre.

Spread: The average spread of the canopy measured from the trunk.

DBH: Diameter at breast height. An industry standard for measuring trees at 1.4 metres above ground level, this measurement is used to help calculate Tree Protection Zones.

Live Crown Ratio: Percentage of foliage cover for a particular species.

Age Class:	Young:	Recently planted tree	Semi-mature:< 20% of life expectancy
	Mature:	20-90% of life expectancy	Over-mature:>90% of life expectancy

SULE: See SULE methodology in the Appendix 3

Tree Protection Zone (TPZ): The minimum area set aside for the protection of the trees trunk, canopy and root system throughout the construction process. Breaches of the TPZ will be specified in the recommendations section of the report.

Structural Root Zone (SRZ): The SRZ is a specified distance measured from the trunk that is set aside for the protection of the trees roots both structural and fibrous.

Appendix 3

SULE categories (after Barrell, 2001)[1]

SULE Category	Description
Long	*Trees that appeared to be retainable at the time of assessment for more than 40 years with an acceptable level of risk.*
1a	Structurally sound trees located in positions that can accommodate for future growth
1b	Trees that could be made suitable for retention in the long term by remedial tree care.
1c	Trees of special significance that would warrant extraordinary efforts to secure their long-term retention.
Medium	*Trees that appeared to be retainable at the time of assessment for 15-40 years with an acceptable level of risk.*
2a	Trees that may only live for 15-40 years
2b	Trees that could live for more than 40 years but may be removed for safety or nuisance reasons
2c	Trees that could live for more than 40 years but may be removed to prevent interference with more suitable individuals or to provide for new planting.
2d	Trees that could be made suitable for retention in the medium term by remedial tree care.
Short	*Trees that appeared to be retainable at the time of assessment for 5-15 years with an acceptable level of risk.*
3a	Trees that may only live for another 5-15 years
3b	Trees that could live for more than 15 years but may be removed for safety or nuisance reasons.
3c	Trees that could live for more than 15 years but may be removed to prevent interference with more suitable individuals or to provide for a new planting.
3d	Trees that require substantial remedial tree care and are only suitable for retention in the short term.
Remove	*Trees that should be removed within the next five years.*
4a	Dead, dying, suppressed or declining trees because of disease or inhospitable conditions.
4b	Dangerous trees because of instability or loss of adjacent trees
4c	Dangerous trees because of structural defects including cavities, decay, included bark, wounds, or poor form.
4d	Damaged trees that are clearly not safe to retain.
4e	Trees that could live for more than 5 years but may be removed to prevent interference with more suitable individuals or to provide for a new planting.
4f	Trees that are damaging or may cause damage to existing structures within 5 years.
4g	Trees that will become dangerous after removal of other trees for the reasons given in (a) to (f).
4h	Trees in categories (a) to (g) that have a high wildlife habitat value and, with appropriate treatment, could be retained subject to regular review.
Small	*Small or young trees that can be reliably moved or replaced.*
5a	Small trees less than 5m in height.
5b	Young trees less than 15 years old but over 5m in height.
5c	Formal hedges and trees intended for regular pruning to artificially control growth.

updated 01/04/01)

1 (Barrell, J. (2001) "SULE: Its use and status into the new millennium" in *Management of mature trees*, Proceedings of the 4th NAAA Tree Management Seminar, NAAA, Sydney.

Appendix 4

TPZ and SRZ methodology

Determining the Tree Protection Zone (TPZ)

The radium of the TPZ is calculated for each tree by multiplying its DBH x 12.

TPZ = DBH x 12

Where

DBH = trunk diameter measured at 1.4 metres above ground

Radius is measured from the centre of the stem at ground level.

A TPZ should not be less than 2 metres no greater than 15 metres (except where crown protection is required.). Some instances may require variations to the TPZ.

The TPZ of palms, other monocots, cycads, and tree ferns should not be less than 1 metre outside the crown projection.

Determining the Structural Root Zone (SRZ)

The SRZ is the area required for tree stability. A larger area is required to maintain a viable tree.

The SRZ only needs to be calculated when major encroachment into a 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 rocks and footings. An indicative SRZ radius can be determined from the trunk diameter measured immediately above the root buttress using the following formula or Figure 1. Root investigation may provide more information on the extent of these roots.

SRZ radius = $(D \times 50)^{0.42} \times 0.64$

Where

D = trunk diameter, in m, measured above the root buttress

NOTE: The SRZ for trees with trunk diameters less than 0.15m will be 1.5m (see Figure 1).

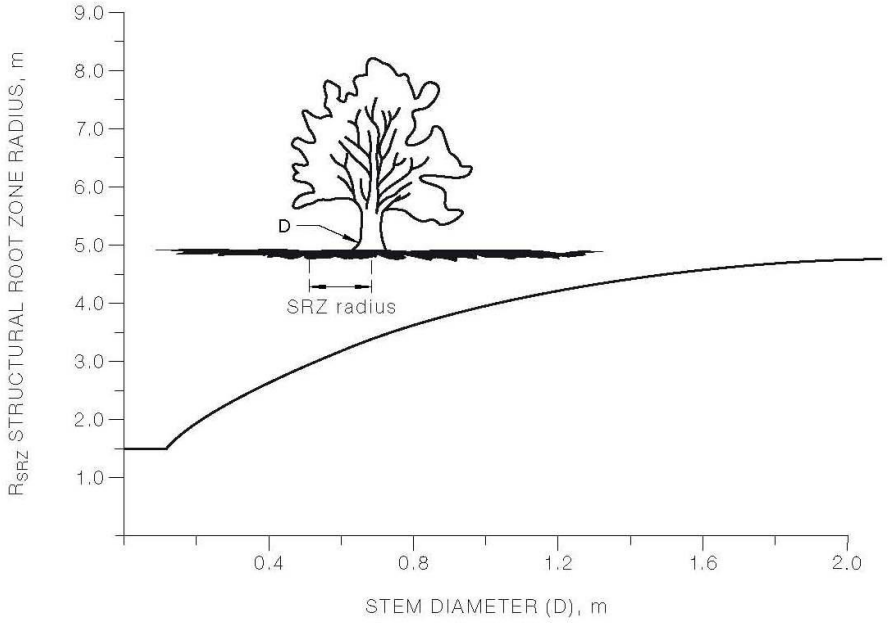


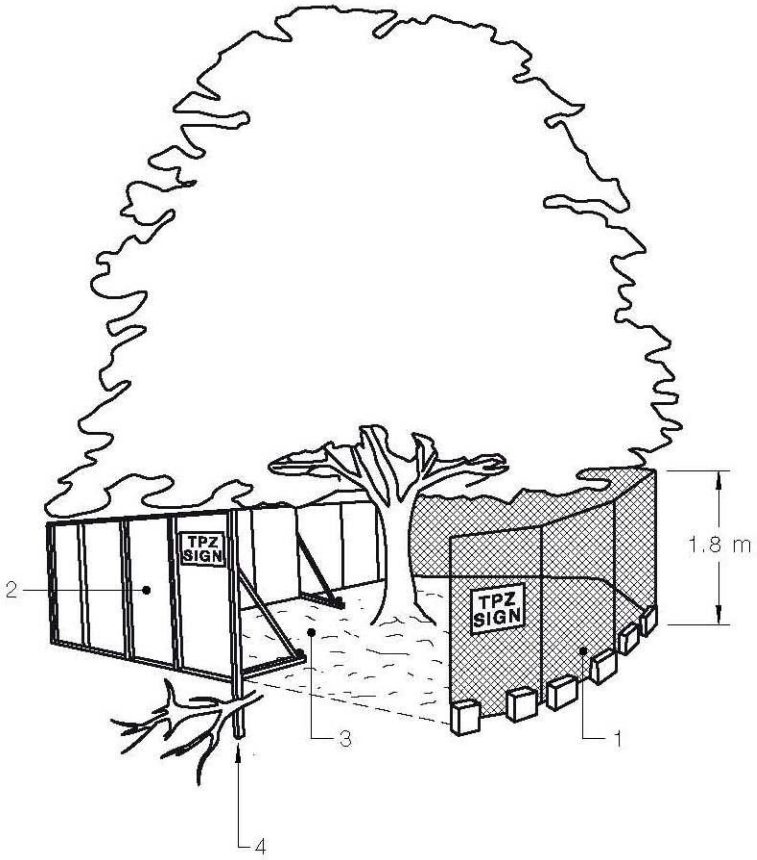
FIGURE 1 - STRUCTURAL ROOT ZONE

Notes:

1 R_{SRZ} is the structural root zone radius.
2 *D* is the stem diameter measured immediately above root buttress.
3 The SRZ for trees less than o.15 metres diameter is 1.5 metres.
4 The SRZ formula and graph do not apply to palms, other monocots, cycads, and tree ferns.
5 This does not apply to trees with an asymmetrical root plate.

Appendix 5

Tree protection fencing specifications



LEGEND:

1 Chain wire mesh panels with shade cloth (if required) attached, held in place with concrete feet.
2 Alternative plywood or wooden paling fence panels. This fencing material also prevents building materials or soil entering the TPZ.
3 Mulch installation across surface of TPZ (at the discretion of the project arborist). No excavation, construction activity, grade changes, surface treatment or storage of materials of any kind is permitted within the TPZ.
4 Bracing is permissible within the TPZ. Installation of supports should avoid damaging roots.

Figure 1: Protective fencing as specified in AS 4970, 2009.

Appendix 6

Tree protection sign

sign sample

Moore Trees
Tree Consultancy
0411 712 887

Tree Protection Zone

Fence not to be moved without approval from Arborist

Within this fence there is to be

NO

Storage of materials

Trenching or excavation

Washing of tools or equipment

Appendix 7

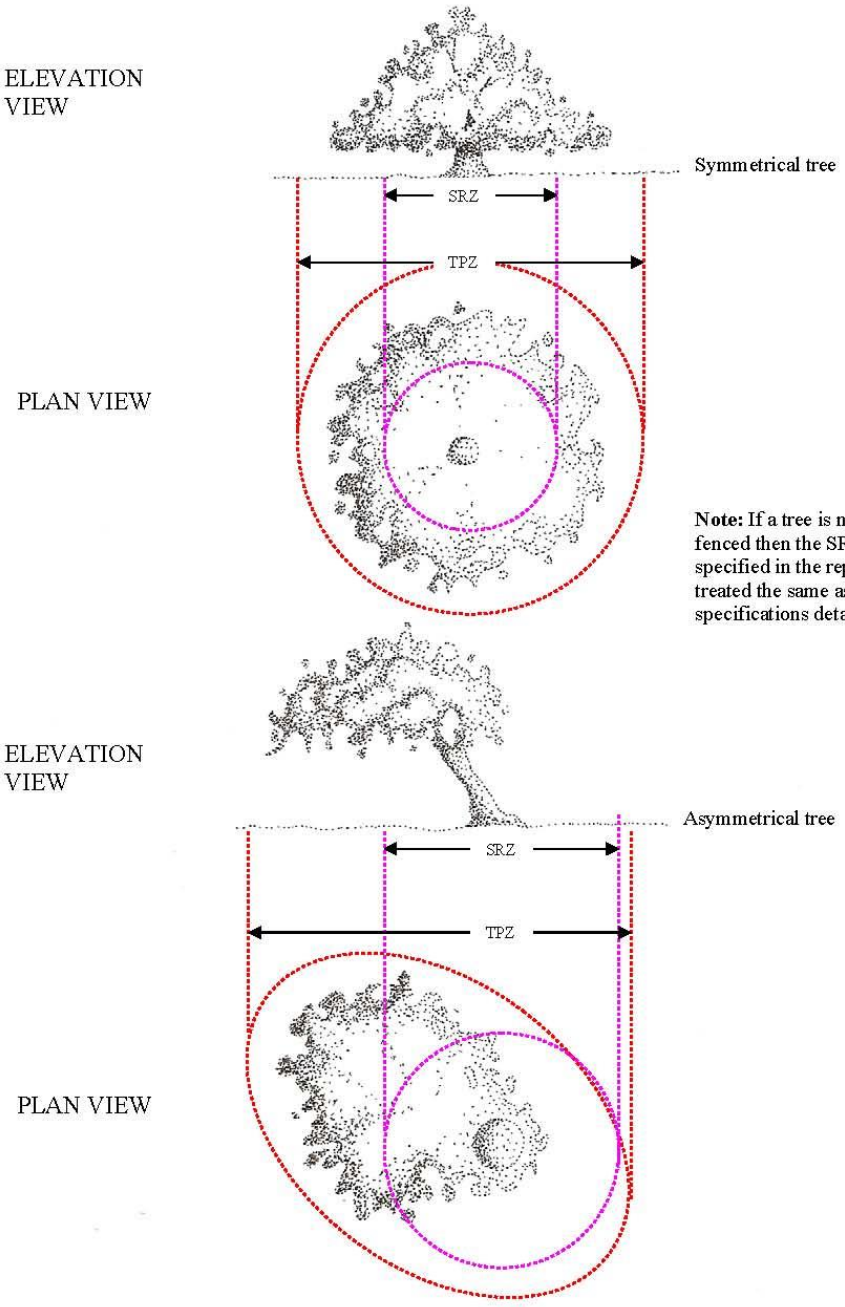


Figure 1: Indicative Tree Protection Zone (TPZ) and Root Protection Zone (SRZ)
Drawn: P. Vezgoff ©

Appendix 8

Tree structure information diagram

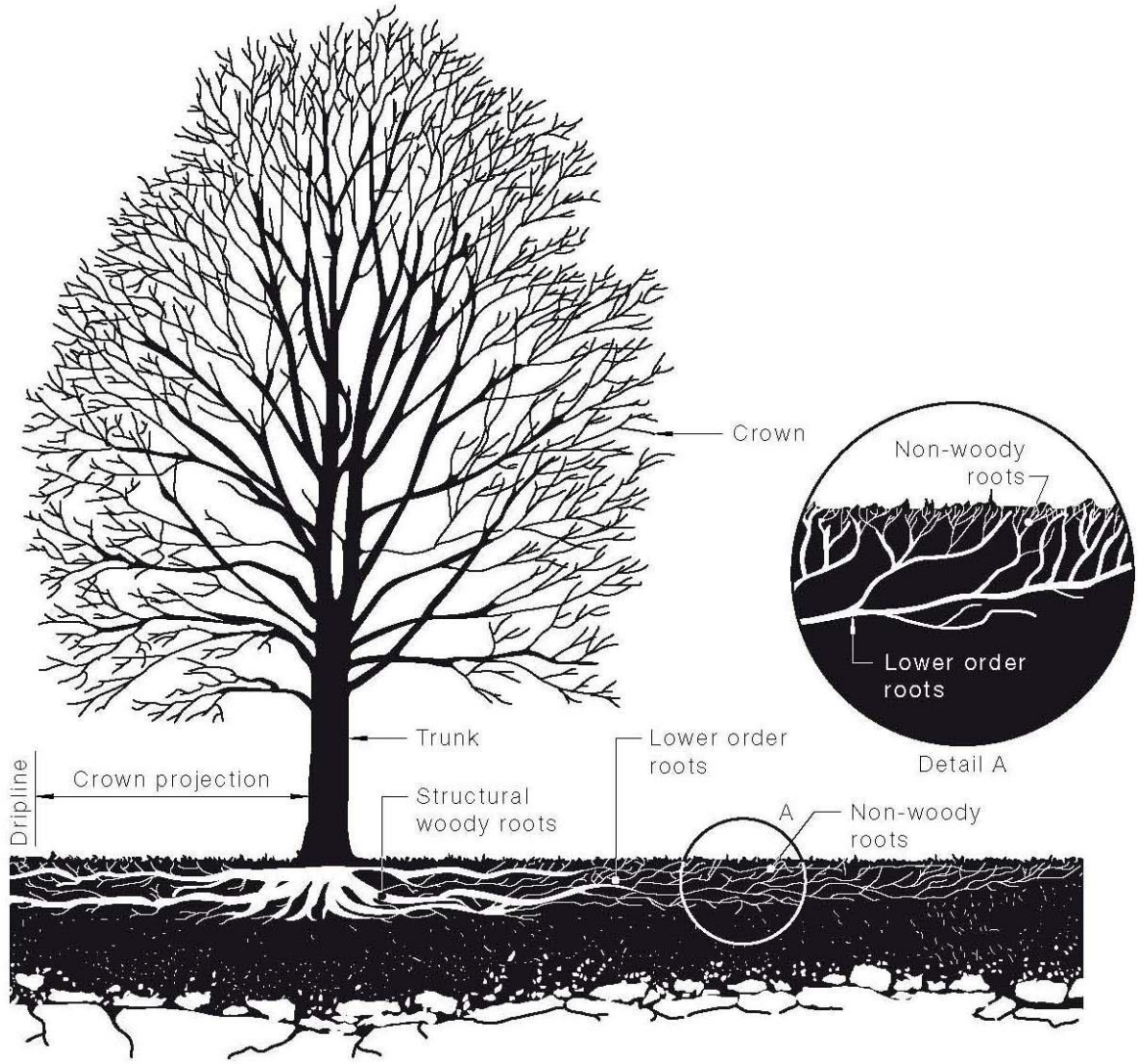


Figure 2: Structure of a tree in a normal growing environment (AS 4970, 2009.).

Appendix 9

Explanatory Notes

- **Mathematical abbreviations:** > = Greater than; < = Less than.

- **Measurements/estimates:** All dimensions are estimates unless otherwise indicated. Less reliable estimated dimensions are indicated with a '?'.

- **Species:** The species identification is based on visual observations and the common English name of what the tree appeared to be is listed first, with the botanical name after in brackets. In some instances, it may be difficult to quickly and accurately identify a particular tree without further detailed investigations. Where there is some doubt of the precise species of tree, it is indicated with a '?' after the name in order to avoid delay in the production of the report. The botanical name is followed by the abbreviation sp if only the genus is known. The species listed for groups and hedges represent the main component and there may be other minor species not listed.

- **Height:** Height is estimated to the nearest metre.

- **Spread:** The maximum crown spread is visually estimated to the nearest metre from the centre of the trunk to the tips of the live lateral branches.

- **Diameter:** These figures relate to 1.4m above ground level and are recorded in centimetres. If appropriate, diameter is measure with a diameter tape. 'M' indicates trees or shrubs with multiple stems.

- **Estimated Age:** Age is estimated from visual indicators and it should only be taken as a provisional guide. Age estimates often need to be modified based on further information such as historical records or local knowledge.

- **Distance to Structures:** This is estimated to the nearest metre and intended as an indication rather than a precise measurement.

Appendix 10

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Curriculum Vitae

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EDUCATION and QUALIFICATIONS

- 2007 – Diploma of Arboriculture (AQF Cert V) Ryde TAFE. (Distinction)
- 1997 – Completed Certificate in Crane and Plant Electrical Safety
- 1996 – Attained Tree Surgeon Certificate (AQF Cert II) at Ryde TAFE
- 1990 – Completed two-month intensive course on garden design at the Inchbald School of Design, London, United Kingdom
- 1990 – Completed patio, window box and balcony garden design course at Brighton College of Technology, United Kingdom
- 1989 – Awarded the Big Brother Movement Award for Horticulture (a grant by Lady Peggy Pagan to enable horticulture training in the United Kingdom)
- 1989 – Attained Certificate of Horticulture (AQF Cert IV) at Wollongong TAFE

INDUSTRY EXPERIENCE

Moore Trees Arboricultural Services **January 2006 to date**

Tree Consultancy and tree ultrasound. Tree hazard and risk assessment, Arborist development application reports
Tree management plans.

Woollahra Municipal Council **Oct 1995 to February 2008**

ARBORICULTURE TECHNICAL OFFICER
August 2005 – February 2008
Tree asset management, programmed inspection, inventory and condition surveys of council trees, hazard and risk appraisal, Tree root damage investigation and reporting, assessment of impacts of capital works projects on council trees.
ACTING COORDINATOR OF TREES MAINTENANCE
June – July 2005, 2006
Responsible for all duties concerning park and street trees. Prioritising work duties, delegation of work and staff supervision.
TEAM LEADER
January 2003 – June 2005
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HORTICULTURALIST
October 1995 – September 2000

Northern Landscape Services **July to Oct 1995**

Tradesman for Landscape Construction business

Paul Vezgoff Garden Maintenance (London, UK) **Sept 1991 to April 1995**

CONFERENCES AND WORKSHOPS ATTENDED

- International Society of Arboriculture Conference (Canberra May 2017)
- QTRA Conference, Sydney Australia (November 2016)
- TRAQ Conference, Auckland NZ (October 2013)
- International Society of Arboriculture Conference (Brisbane 2008)
- Tree related hazards: recognition and assessment by Dr David Londsdale (Brisbane 2008)
- Tree risk management: requirements for a defensible system by Dr David Londsdale (Brisbane 2008)
- Tree dynamics and wind forces by Ken James (Brisbane 2008)
- Wood decay and fungal strategies by Dr F.W.M.R. Schwarze (Brisbane 2008)
- Tree Disputes in the Land & Environment Court – The Law Society (Sydney 2007)
- Barrell Tree Care Workshop- Trees on construction sites (Sydney 2005).
- Tree Logic Seminar- Urban tree risk management (Sydney 2005)
- Tree Pathology and Wood Decay Seminar presented by Dr F.W.M.R. Schwarze (Sydney 2004)
- Inaugural National Arborist Association of Australia (NAAA) tree management workshop- Assessing hazardous trees and their Safe Useful Life Expectancy (SULE) (Sydney 1997).