

Moore Trees  
Arboricultural Services

ABN 90887347745

# Arborist development assessment report

977 Forest Road  
Lugarno NSW 2210

Lot 2 DP 405732  
31<sup>st</sup> March 2020



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Prepared for: Congregational Christian  
Church in Samoa – Parish of Sydney  
977 Forest Road  
Lugarno NSW 2210

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## Summary

This report has been compiled for Congregational Christian Church in Samoa – Parish of Sydney, 977 Forest Road, Lugarno NSW 2210. The report concerns a proposed Development Application for 977 Forest Road, Lugarno NSW 2210. This Arborist report refers to five (5) trees.

This report contains the following information required in George River 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.

No adjoining trees to the site will be affected by the works.

Based on the plans provided Trees 4 and 5 will be removed. Trees 1-3 will be retained and protected for the duration of the construction works. Based on the incursions calculated for Trees 1-3, larger roots may be found on Trees 2 and 3 with smaller roots expected to be found on Tree 1. Excavation vehicles should be made aware not to damage these roots. Trees 1-3 will have varying incursions to the TPZ areas however it should be considered this is not a total incursion of the TPZ as such and is only surface related (the paving surface) across the TPZ area which will be permeable to moisture and oxygen. The landscaping of the garden bed below these trees will also help with soil conditioning and improve tree health in the coming years. Overall, provided the recommendation in this report are implemented, the proposal will be an improvement on the existing situation of car parking directly over the TPZ areas of Trees 1-3.

# **Table of Contents**

	Page
1 INTRODUCTION	4
2 METHODOLOGY	6
3 RELEVANT BACKGROUND INFORMATION	8
4 RECOMMENDATIONS	12
5 TREE PROTECTION	13
6 IMAGES	15
 <b>Appendices</b>	
1 Tree Protection Plan	17
2 Tree Health and Condition Schedule	19
3 SULE methodology	22
4 TPZ and SRZ methodology	23
5 Tree structure information diagram	25
6 Explanatory notes	26
7 Bibliography	27
8 Curriculum Vitae	28

# 1 INTRODUCTION

- 1.1** This report has been conducted to assess the health and condition of five (5) trees located at 977 Forest Road, Lugarno NSW 2210. This report has been prepared for Congregational Christian Church in Samoa – Parish of Sydney, 977 Forest Road, Lugarno NSW 2210 as required for a Development Application with Hurstville City Council at this site.

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 Hurstville 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 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.

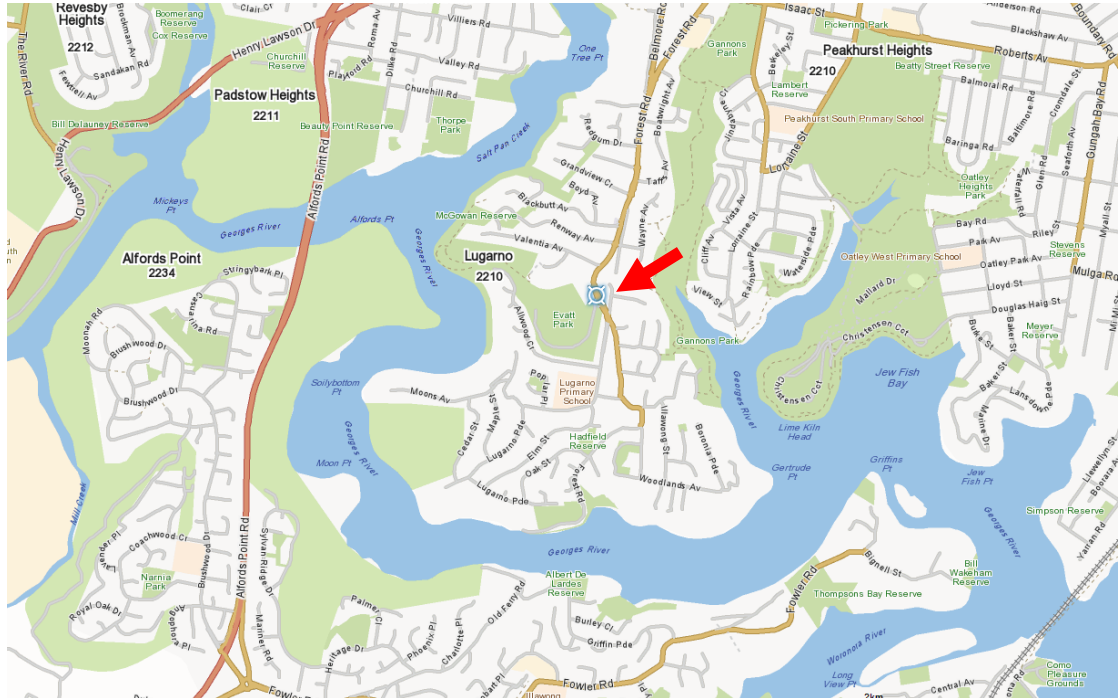
Also noted for the purpose of this report were:

- 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:** For this Arborist report I was given a site survey of the location, undertaken by JP Bates and Inwood Ref 13181-10 dated 22.10.12. The survey plan showed the building and existing trees on the site.

Plans by JMH Living Design were provided dated 31.3.2020 (Section 82-Review of determination), Sheets 01-11, Amendment A.

- 1.3 Location:** The proposed development site is located at 977 Forest Road, Lugarno NSW 2210, known as Lot 2 in DP 405732. The proposed development site from herein will be referred to as "the Site".



**Diagram 1:** Location of subject site, 977 Forest Road, Lugarno NSW 2210 (Red arrow) (whereis.com.au, 2012)

## 2 METHODOLOGY

- 2.1 To record the health and condition of the trees, an initial Visual Tree Assessment (VTA) was undertaken on the subject trees on 9 October 2012 and subsequent inspection on 18 September 2015 and the 16<sup>th</sup> March 2020. 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 This report is only concerned with trees on the site that come under the Tree management control for Georges River Council. Council has yet to merge its Development Control Plans however it has comprehensive tree management processes in place, including an over-arching Tree Management Policy and the relevant sections of Council's Development Control Plans (DCPs) accessed in Hurstville DCP No. 1 - Appendix 1 Section 9 - Preservation of Trees and Vegetation.

The development control for the site trees is that Council consent is required to undertake tree work including removing, pruning, cutting down, lopping, and ringbarking of any tree, if the tree is 3 metres or more in height, or has a circumference of 300mm or more, measured at a height of 450mm from the ground, or has a branch spread of three 3 metres or more.

- 2.3 **Height:** The heights and distances within this report have been measured with a Bosch DLE 50 laser measure.
- 2.4 **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. The TPZ calculation is based on the Australian Standard *Protection of trees on development sites*, AS 4970, 2009. The Tree Protection Zones are shown in the Tree Protection Plan (Appendix 1) along with the trees proposed to be retained.
- 2.5 **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. For the purpose of this report the SRZ is within the TPZ so no additional fencing will be required. 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.
- 2.6 **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.

**2.7 Impact Assessment:** An impact assessment was conducted on the site trees. This was conducted by assessing the site survey and plans provided by JMH Living Design. The plans provided were 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.

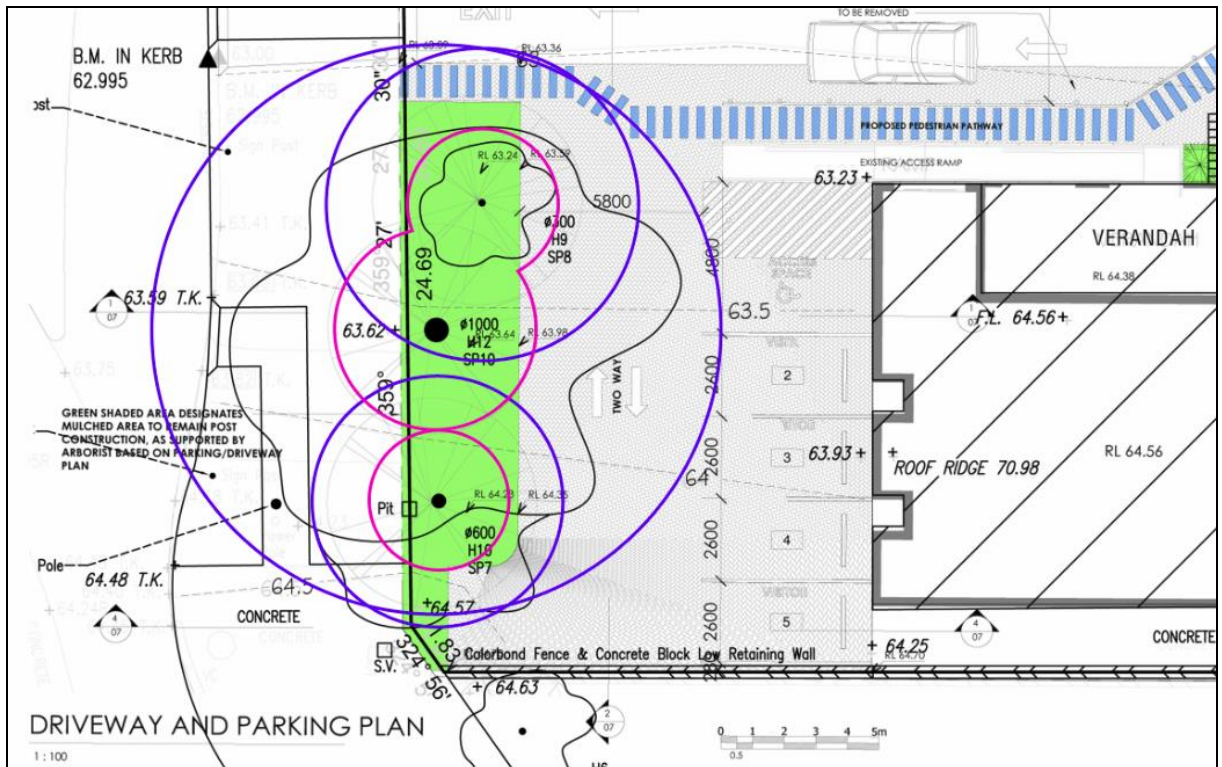
### 3 RELEVANT BACKGROUND INFORMATION

- 3.1** The site is currently operating as a Church and is located on undulating grounds. The extent of this report is only concerned with the Church grounds area and not the Church residence to the rear of the site. The proposed development entails the development of a childcare centre at the rear of the site, creating car parking areas in the front and rear section and widening of the existing driveway. A total of five (5) trees were assessed as part of this report.
- 3.2 Environmental Significance:** Tree Management controls apply to the whole of the Georges River Local Government Area and is part of Council's Development Control Plans. There are three (3) Tree Management Processes in place which are designed to protect as many trees as possible. By law, you will need to obtain a Tree Management Permit or Development Consent to remove or prune certain trees on private land. The NSW Government has recently introduced a new suite of Land Management and Biodiversity Conservation reforms which create a framework for the regulation of native vegetation and non-native vegetation clearing (including individual trees) in NSW. A component of the reforms is a new State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017 which applies to land in the Georges River local government area, and other urban areas, since 25 August 2017 (the SEPP).
- 3.3 Illegal tree removal:** Damaging or removing trees can result in heavy fines. Local Government does have the authority to issue on the spot fines known as penalty infringement notices (PINS) starting from \$1,500 or can elect to have a potential tree damaging incident addressed in the Local Court. Recent cases, for example, include two (2) mature trees removed for development (Sutherland Shire Council (SSC) v Palamara, 2008) costing \$4,500 in fines and \$5,000 in court costs. SSC v El-Hage, 2010 concerning illegal tree removal of a single tree costing \$31,500 in fines and \$5,000 in costs. Poisoning trees can also incur substantial fines (SSC v Hill) resulted in a single tree fine that totalled \$14,000 plus a \$10,000 bond for a replacement tree. All of the above cases resulted in a criminal conviction for the guilty parties

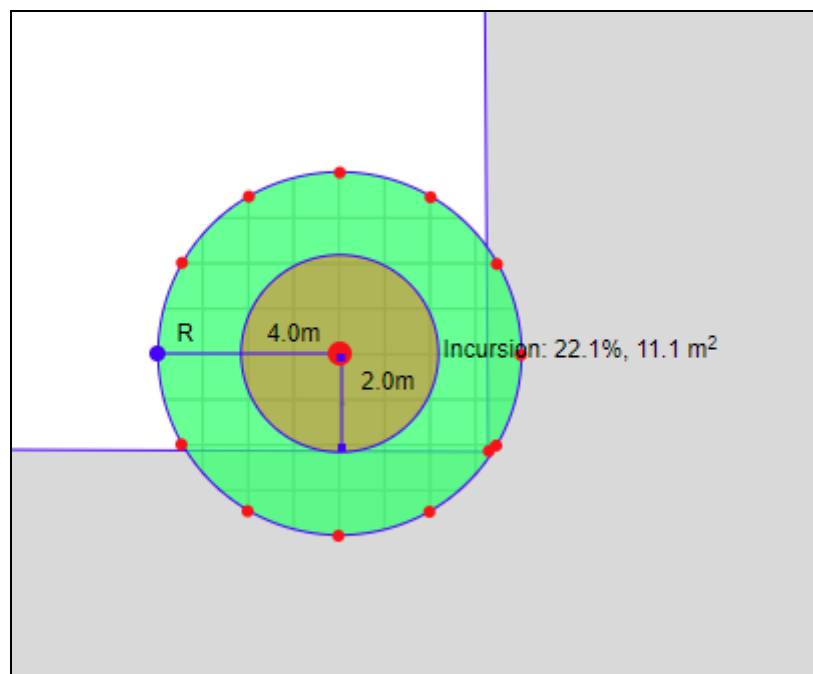


- 3.4 The Site Trees:** The site was inspected on 9th October 2012, the 18th September 2015 and the 16<sup>th</sup> March 2020. Each tree has been given a unique number for this site and can be viewed on the Tree Protection Plan (Appendix 1). This plan is based on the plan provided by Lyndall Wynne, undertaken by J.P. Bates and Inwood Ref 13181-10 dated 22.10.12.
- 3.5** The site trees consist of all native tree examples in varying conditions. Trees 1-3 are growing on the site frontage and provide good visual amenity to the site (Plate 1). Tree 1 is a mature Grey gum (*Eucalyptus punctata*) growing at 5.4 metres from the southern boundary fence. Tree 2 is a mature Blackbutt (*Eucalyptus pilularis*) and is the largest tree on site. Both Trees 1 and 2 are in excellent health and condition and are good specimens to retain on site. Tree 3, a semi mature, Willow gum (*Eucalyptus scoparia*) is suppressed due to the proximity of Tree 2. Tree 3 has suffered extensive damage to the roots that are located near the surface (Plate 2). The tree is unlikely to recover from this damage and will most likely go into a slow decline in the oncoming years. An existing driveway is located to the north of Tree 3 and this is proposed to be widened. A new driveway entry is proposed to be located to the south of tree 1. (Plate 1).
- 3.6** Trees 4 and 5 are located near the rear section of the site (Plate 4). Tree 4 is a mature Willow gum (*Eucalyptus scoparia*) that is in poor condition. This area of the site is proposed to be used for car parking and as such will have extensive work occur to the levels and drainage. As a result it is unlikely that Tree 4 will tolerate these works and incursions into the TPZ and as such will be removed.
- 3.7 Trees outside the site:** There are no trees outside the site that will be affected by the proposed development. Trees along the northern boundary fence all have good clearance over the driveway.
- 3.8 Exempt trees:** Georges River Council lists several species of trees as being exempt from the provisions of the TPO. Tree 5 is a Silky Oak (*Grevillea robusta*). This species is listed on the exempt species list and does not require Council consent for removal.
- 3.9 Impacts:** Based on the plans provided only Trees 4 and 5 will be removed. The TPZ and SRZ distances have been applied to the design drawings as shown in Diagram 2. Based on these calculations the percentage of incursion has been calculated for trees 1, 2 and 3. Diagrams 3, 4 and 5 show these calculations. Tree 1 incursions total 22.1%. Tree 2 incursions total 26.8%. Tree 3 incursions total 28.2%.
- 3.10** Based on the incursions calculated for Trees 1-3, larger roots may be found on Trees 2 and 3 with smaller roots expected to be found on Tree 1. Excavation vehicles should be made aware not to damage these roots. Trees 1-3 will have varying incursions to the TPZ areas however it should be considered this is not a total incursion of the TPZ as such and is only surface related (the paving surface) across the TPZ area which will be permeable to moisture and oxygen. The landscaping of the garden bed below these trees will also help with soil conditioning and improve tree health in the coming years. Overall, provided the recommendations in this report are implemented, the

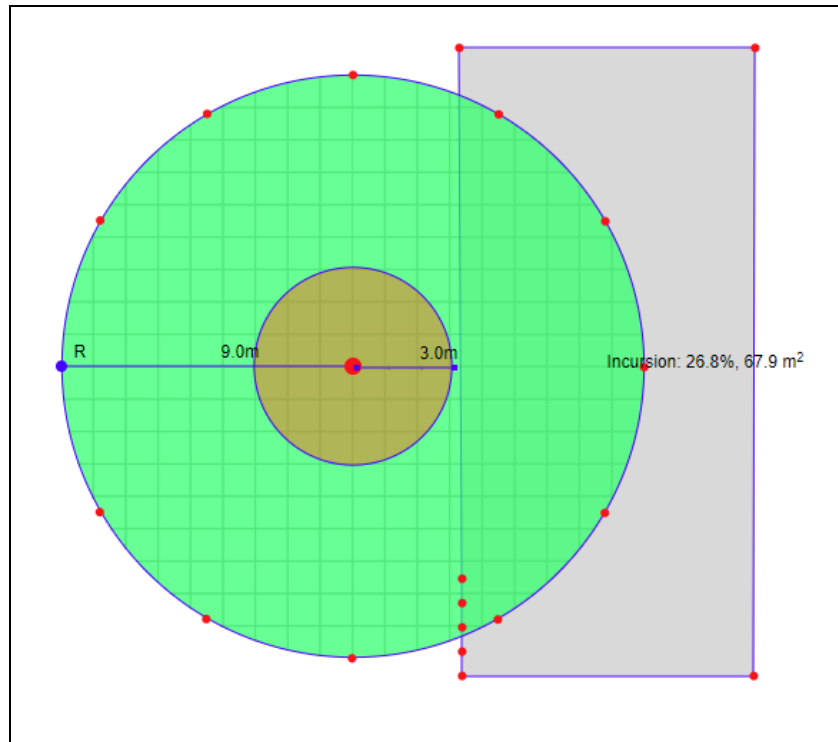
proposal will be an improvement on the existing situation of car parking directly over the TPZ areas of Trees 1-3.



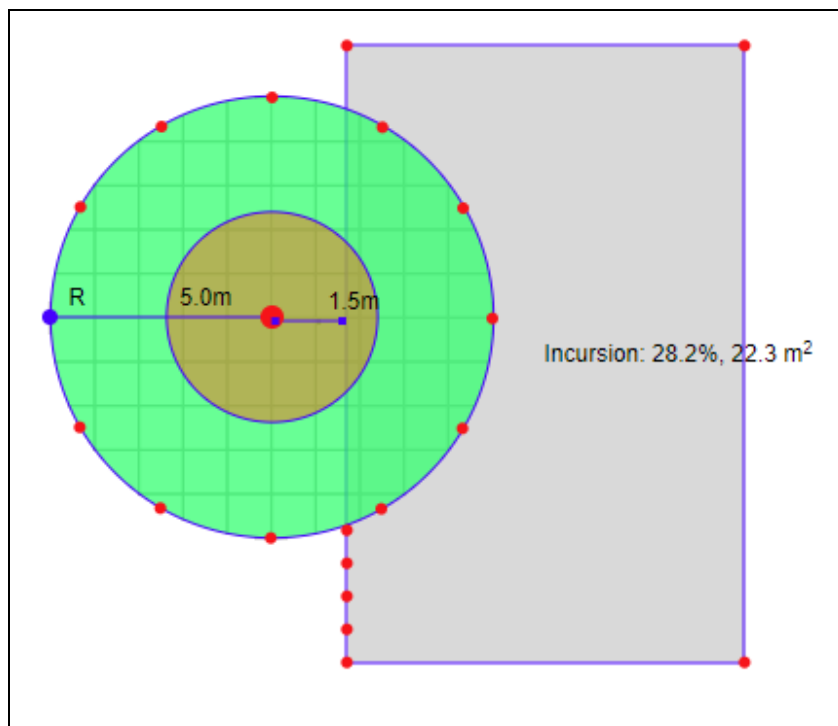
**Diagram 2:** Image showing the TPZ (Blue circle) and SRZ (Purple) distances for Trees 1,2 and 3 overlaid onto the proposed plans.



**Diagram 3:** Tree 1 incursions totalling 22.1%. There are no incursions to the SRZ area.



**Diagram 4:** Tree 2 incursions totalling 26.8%. There are no incursions to the SRZ area.



**Diagram 5:** Tree 3 incursions totalling 28.2%.

## 4 RECOMMENDATIONS

- 4.1** A Project Arborist should be appointed 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. At this time Moore Trees has been appointed as the Project Arborist for this project.
- 4.2** Based on the plans provided Trees 4 and 5 will be removed. Trees 1-3 will be retained and protected for the duration of the construction works.
- 4.3** Compensatory planting for the removal of Trees 4 and 5 is recommended. The following species are medium sized trees suitable for a constrained car park area. The replacement species could be selected from either Red cedar (*Toona ciliata*), Illawarra Flame tree (*Brachychiton acerifolius*), Ivory Curl Flower (*Buckinghamia celsissima*), Grey Myrtle (*Backhousia myrtifolia*), Lemon-scented Backhousia (*Backhousia citriodora*) and Tallowwood (*Eucalyptus microcorys*). This list is not extensive however it does provide a start.
- 4.4** **Trees 1-3** will require tree protection fencing as specified in Section 5.2 of this report. This fencing will be located at the indicative locations shown in the Tree Protection Plan (Appendix 1). The specifications for a TPZ are in Section 5.3 of this report.
- 4.5** A flat bucket excavator is to be used for the removal of hard surfaces and excavations below Trees 1-3. Any roots damaged that are smaller than fifty (50) millimetres in diameter to be cleanly cut with a pruning saw. Any roots with a diameter of greater than fifty (50) millimetres to be assessed by the project Arborist with minimum 48 hours' notice.
- 4.6** The root zones of **Trees 1-3** will require protection from compaction. Compaction of the root zone reduces oxygen and moisture exchange of the roots. This will lead to premature death of the tree. To reduce compaction of the root zone mulch is recommended to be spread around the base of these trees to the extent of the TPZ fencing.

## 5 TREE PROTECTION

- 5.1 Trees to be protected:** Trees 1-3 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). Indicative locations of the fencing are shown in the Tree Protection Plan (Appendix 1).
- 5.2 Implementation of Tree Protection Zone:** All tree protection works should 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 erected as shown in the Tree Protection Plan (Appendix 1).
- 5.3 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 and SRZ distances are all listed in the Tree Schedule (Appendix 2, and Table 1 below). The following activities shall be avoided within the TPZ and SRZ of Trees 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 (pier and beam or suspended slab construction are acceptable).
- Storage of building materials.
- Disposal of waste materials, solid or liquid.

- 5.4 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.
- 5.5 Signage:** It is recommended that signage is attached to the tree protection fencing areas at every fourth panel. A sample sign has been attached in Appendix 6. This sign may be copied and laminated then attached to any TPZ fencing area.

Tree	TPZ (m)	SRZ (m)
1	4m	2.5m
2	9m	3.5m
3	5m	2.5m
4	5m	2.5m
5	3.5m	2.3m

**Table 1:** TPZ and SRZ distances

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

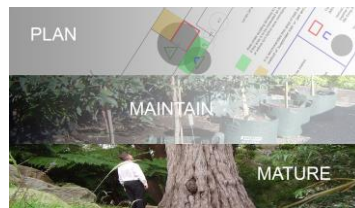


**Paul Vezgoff**

Consulting Arborist

Dip Arb (Dist), Arb III, Hort cert, AA, ISA

31<sup>st</sup> March 2020



[www.mooretrees.com.au](http://www.mooretrees.com.au)



## 6 IMAGES



**Plate 1:** From left Trees 1-3. P. Vezgoff.



**Plate 2:** Image showing the shattered roots from Tree 3. P. Vezgoff.



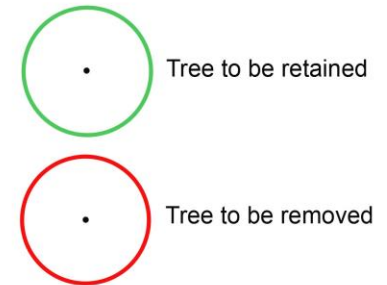




## **Appendix 1**

### **Plan 1**

# **Tree Protection Plan**



**Mulching.** Area recommended for mulching. Prior to any demolition or construction work mulch shall be applied to a depth of 100mm to this area for the duration of the construction period. Once construction is complete the mulch shall be reduced to a depth of no greater than 70mm.

Date: 31.03.2020  
Drawn: P.Vezgoff  
Site Address: 977 Forest Road  
Lugarno NSW 2210

Site Address: 677 Forest Road  
Lugarno NSW 2210

## Appendix 2

# **Tree health & condition** **assessment schedule**

TREE HEALTH AND CONDITION ASSESSMENT SCHEDULE – 977 Forest Road, Lugarno NSW 2210

Tree	Species	Height (m)	Spread (m)	DBH (mm)	Live canopy %	Defects	SULE	Condition	Age	Comments	TPZ (m)	SRZ (m)
1	Grey gum (Eucalyptus punctata)	15	6	350	95	No visual defects	1a <40 years	Good	Mature	Minor disturbance at base	4m	2.5m
2	Blackbutt (Eucalyptus pilularis)	21	12	820	95	No visual defects	1a <40 years	Good	Mature	Disturbance around root crown	9m	3.5m
3	Willow gum (Eucalyptus scoparia)	13	5.5	380	95	Stem wounds	2a May only live for 15-40 years	Good	Mature	Woody surface roots shattered. Damage to trunk. Service at base	5m	2.5m
4	Willow gum (Eucalyptus scoparia)	15	6.5	400	95	No visual defects	1a <40 years	Good	Mature	Woody surface roots. Damage to trunk.	5m	2.5m
5	Silky oak (Grevillea robusta)	15	5	300	95	No visual defects	1a <40 years	Good	Mature	3 m canopy clearance.	3.5m	2.3m

**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.

<b>Age Class:</b> 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 tree’s roots both structural and fibrous.

## Appendix 3

### **SULE categories (after Barrell, 2001)<sup>1</sup>**

<b>SULE Category</b>	<b>Description</b>
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.
4b	Dangerous trees because of instability or loss of adjacent trees
4c	Dangerous trees because of structural defects
4d	Damaged trees 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.
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.

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

## Appendix 4

# **TPZ and SRZ methodology**

### **Determining the Tree Protection Zone (TPZ)**

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

$$\text{TPZ} = \text{DBH} \times 12$$

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.

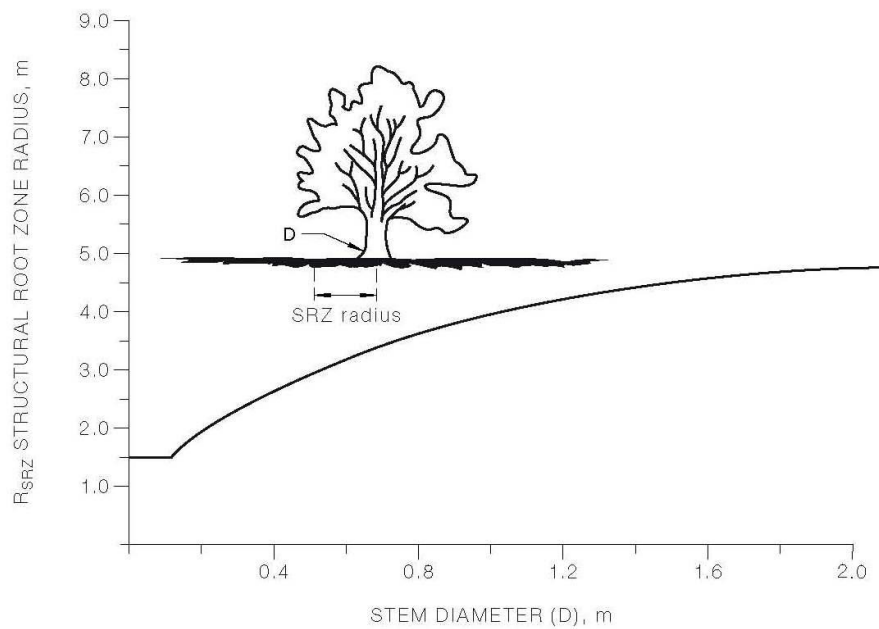
There are many factors that affect the size of the SRZ (e.g. tree height, crown area, soil type, soil moisture). The SRZ may also be influenced by natural or built structures, such as rocks and footings. An indicative SRZ radius can be determined from the trunk diameter measured immediately above the root buttress using the following formula or Figure 1. Root investigation may provide more information on the extent of these roots.

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

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).



The curve can be expressed by the following formula:  
 $R_{SRZ} = (D \times 50)^{0.42} \times 0.64$

**FIGURE 1 - STRUCTURAL ROOT ZONE**

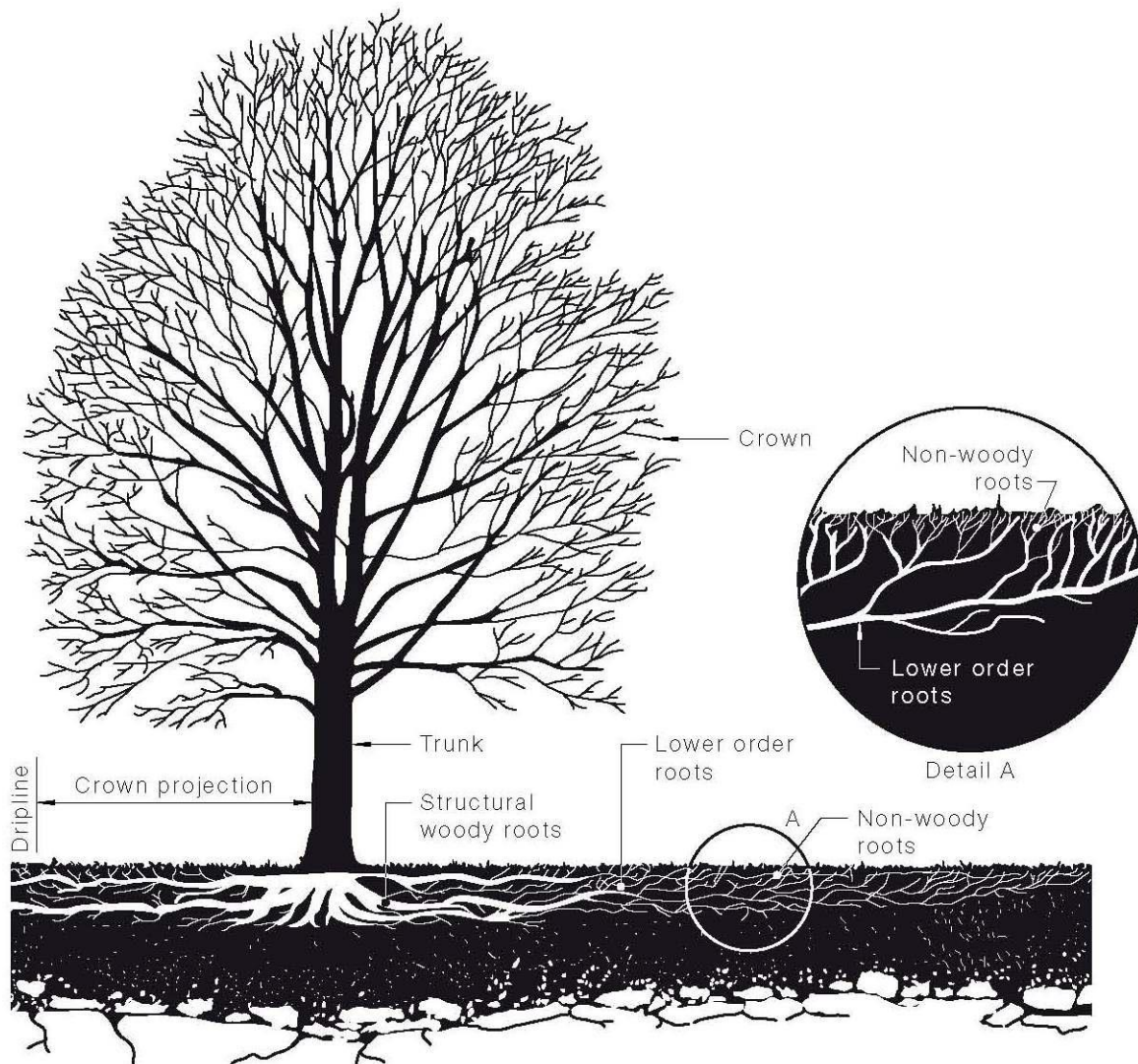
*Notes:*

- 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 0.15 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 structure information diagram



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

## Appendix 6

### 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 7

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Schwarze, F.W.M.R, Engels, J. Mattheck. C (2000) *Fungal strategies of wood decay in trees*

Springer-Verlag Berlin Heidelberg

Germany

Standards Australia, 2007, *Pruning of amenity trees* AS 4373, 2007

Standards Australia Ltd

Sydney

Standards Australia, 2009. *Protection of trees on development sites*, AS 4970, 2009

Standards Australia Ltd

Sydney

# 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

#### **TEAM LEADER**

September 2000 – January 2003

#### **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 (Brisbane 2008)
- Tree related hazards: recognition and assessment by Dr David Lonsdale (Brisbane 2008)
- Tree risk management: requirements for a defensible system by Dr David Lonsdale (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).