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Canopy Tree Experts is a member of the International Society of Arboriculture.
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29 January 2020

Ref: 5833

Preliminary Arboricultural Report For Trees Near the Toilet Block at Regatta Point

Prepared for:

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Quantified Tree Risk Assessment (QTRA)
Registered Assessor No. 2845 www.qtra.co.uk
Tree Risk Assessment Qualification (TRAQ)

Assessment:

- **Date:** 28 January 2020
- **By:** Alan Mann

Tree location:

The trees' locations are indicated on this section of drawing LS01 Issue A Tree Protection Plan by Townsend and Associates dated Jan 2020

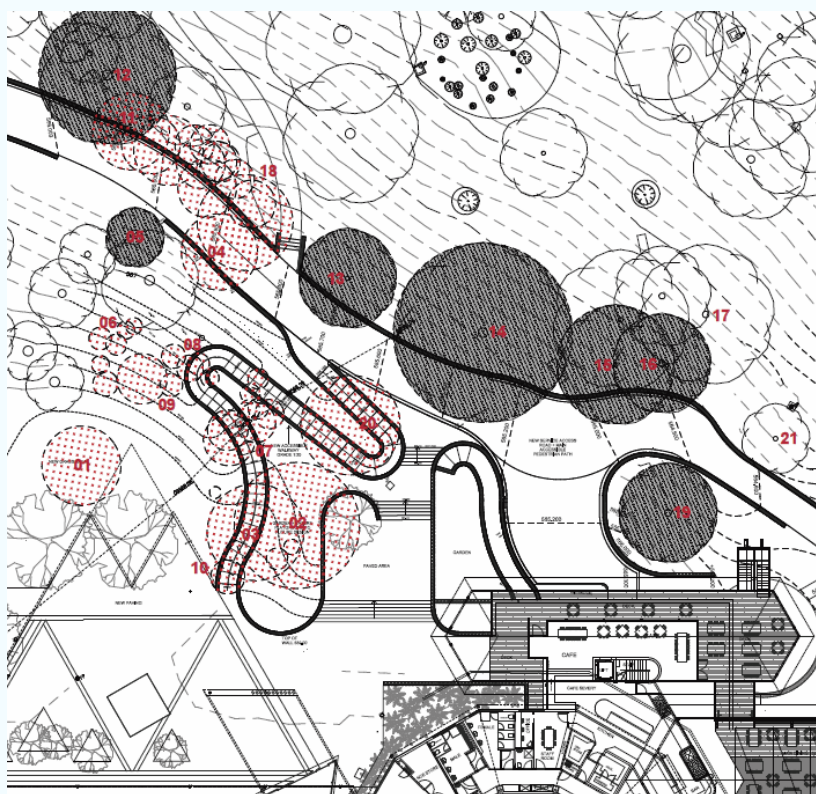


Figure 1 Aerial photo from www.actmap.gov.au

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Tree no.	Species	Height (m)	Directional Canopy Radii (m)				Tree Condition		Tree Quality Classification	General comments	Identification Comments	Pruning Comments	Circumference AS4970 (m)	Radius TPZ ⁴⁹⁷⁰ (m)	D10 ^{TPZ} (m)	Radius SRZ ⁴⁹⁷⁰ (m)
			North	East	South	West	Health	Structure								
1	Pinus sp.		4	5	5	4	Good	Fair	High	Bifurcated at 4.5m AGL,	Llisted as P. canariensis, however this tree is not consistent with the species description. This tree has 2 leaves per fascicle without a persistent sheath. Possibly 2 leaf variety of P. ponderosa Cone is consistent with this	Retain if possible	1.44	5.5	3.7	2.6
2	Pyrus calleryana		5	8	7	4	Good	Fair	Medium	Poor fork	P. calleryana consistent with - No bristles on leaves, calyx not persistent on fruit.	OK to remove – easy to replace	2.20	8.4	5.7	3.1
3	Pyrus calleryana		5	3	8	6	Good	Good	Medium		P. calleryana consistent with - No bristles on leaves, calyx not persistent on fruit.	OK to remove – easy to replace	1.80	6.9	4.7	2.8
4	Prunus lusitanica?		3	3	4	5	Good	Good	Medium		Mostly defoliated from hail – Prunus lusitanica may be correct	OK to remove – species a bit weedy, easy to replace	0.86	3.3	2.2	2.1
5	Cupressus sp.		4	6	5	2	Good	Good	High		Not sempervirens. Could be C. torulosa – sprays in single plane, but leaves blunter – not pointed	Pruning OK as it is mainly dead branches in the shade – Root protection measures required	3.80	14.5	9.9	3.9
6	Prunus lusitanica?									10 x Stunted and shrublike. Condition worsens as progress up the slope, some leaf-scorch. (Almost totally defoliated by hail at time of assessment)	Mostly defoliated from hail – Prunus lusitanica may be correct	Remove – easily replaced with better species choice or in better location		0.0	0.0	0.0
7	Pittosporum tenuifolium cv.										Shrubs - 4 x barely alive, 4 x dead, also 1 x Eriostemon var. in decline	Remove – easily replaced with better species choice or in better location		0.0	0.0	0.0
8	Prunus lusitanica?									8 x Stunted and shrublike. Condition poor, some leaf-scorch. (Almost totally defoliated by hail at time of assessment)	Mostly defoliated from hail – Prunus lusitanica may be correct	Remove – easily replaced with better species choice or in better location		0.0	0.0	0.0
9	Acacia sp.										Dead shrub			0.0	0.0	0.0
10	Pittosporum tenuifolium cv.		1	0	3	3	Fair	Foor	Low/poor		Shrub - lopped and regrowing	Remove – easily replaced with better species choice or in better location		0.0	0.0	0.0
11	Cupressus sp.		4	2	2	4	Fair	Fair	Medium	Foliage only at the top	Could be C. torulosa – sprays in single plane, but leaves blunter – not pointed	Removal OK as other nearby	1.75	6.7	4.5	2.8
12	Cedrus atlantica		5	7	6	8	Fair	Good	High	Foliage thin (probably mostly from hail)	Short blue needles	Keep the trimming to minimum – may not require any as there are few low branches – Root protection measures required	1.90	7.3	4.9	2.9
13	Pinus sp.		5	5	5	5	Good	Good	High		Llisted as P. canariensis. However this tree is not consistent with the species description. This tree has 3 leaves per fascicle with a persistent sheath. Possibly P. ponderosa. Cone is consistent with this	Very limited pruning needed; should not affect the tree adversely – Root protection measures required	1.15	4.4	3.0	2.3
14	Robinia pseudoacacia		10	7	8	7	Good	Good	High	This specimen appears to be quite old	Listed as a weed species. Nearly defoliated at the time of assessment: probably hail but also appears to be some bats normally frequent the tree	Limited pruning should not affect the tree adversely – Root protection measures required	2.62	10.0	6.8	3.3

Tree no.	Species	Height (m)	Directional Canopy Radii (m)				Tree Condition		Tree Quality Classification	General comments	Identification Comments	Pruning Comments	Circumference AS4970 (m)	Radius TPZ ⁴⁹⁷⁰ (m)	D10 ^{TPZ} (m)	Radius SRZ ⁴⁹⁷⁰ (m)
			North	East	South	West	Health	Structure								
15	Podocarpus totara		5	6	4	4	Fair	Fair	Medium	These four trees shade one another and a quite bare of foliage where shaded. Tree is leaning but stable. Some decay in upper branches	Few botanical features to aid identification, but those present seem to match P. totara	Best foliage/ fullest canopy be over the path – trim very tentatively to avoid ugly result – Root protection measures required	1.41	5.4	3.7	2.6
16	Podocarpus totara		2	4	7	6	Fair	Fair	Medium	Splits in trunk and fungal fruiting bodies present but these don't seem to affect stability	Few botanical features to aid identification, but those present seem to match P. totara	Best foliage/ fullest canopy is on the north and west – do not trim except over path – Root protection measures required	2.24	8.6	5.8	3.1
17	Podocarpus totara		3	7	7	5	Fair	Fair	Medium	Decay in inner leader	Should be out of the construction zone	No Pruning required	1.23, 0.66, 0.46	5.6	3.8	2.6
18	Prunus lusitanica		4	3	6	3	Fair - poor	Fair	Poor	Southern trees Fair but progressively poorer condition towards north. 3 northern trees are dead	Not enough botanical features available but could be P. lusitanica. Measurement are for the largest of the 15 trees	Remove – easily replaced with better species	0.90, 0.50, 0.60	4.6	3.1	2.4
19	Cupressus arizonica		7	6	8	7	Good	Good	High	Cones are wartier than usual of the species. Has been hail damage to the bark of horizontal branches		Please do not trim it will spoil the beautiful canopy. Fence it during construction – Root protection measures required		0.0	0.0	
20	Robinia pseudoacacia		7	7	8	8	Good	Good	High	Weed species in Canberra but this is an old specimen. Tree suckers from the roots	Care required in removal as the severed roots will sucker profusely – usually best to poison before removal but the proximity of another (Tree 14) will make that unwise.	Pity to lose such a gnarly old specimen but Tree 14 is bigger	2.11	8.1	5.5	3.0
21	Quercus robur		5	5	5	5	Good	Good	High		Beautiful short form. Please do not trim it will spoil the beautiful canopy. Fence it during construction	Fence this tree during construction – Root protection measures required	1.07	4.1	2.8	2.3

Appendix 1

Explanations of Terms Used in the Tree Assessments

This Assessment form has been developed to conform to the requirements of 'Notifiable Instrument NI2007-422', and; The AS4970-2009 'Protection of trees on development sites'

1. **Tree Number**

This is a unique sequential identification number allocated to each tree located on the block, overhanging the block or on the verge. The numbers are allocated in Figure 1.

2. **Species**

The binomial species name is given

3. **Trunk Circumference** ^{ACT}

The trunk circumference at 1.0 m above natural ground level, as specified in the Tree Protection Act 2005 is one measure that determines if a tree is regulated. All trunks are measured if there are more than 1 trunk at that height and circumferences added together. **Trunk Circumference** ^{ACT} is not routinely measured where the tree is clearly regulated or not regulated. The measurement has been made where necessary to determine if the tree is regulated but has not been recorded in this table to avoid confusion with Trunk Circumference⁴⁹⁷⁰.

4. **Height**

The tree height was estimated except where the height was determined to be near 12m in which case it was measured using a clinometer from a measured offset. Heights of between 11 and 12 metres are recorded as 11 metres.

5. **Directional Canopy Radii**

Canopy radii were measured at 90° intervals starting at north by stepping. Where it is indicated that a more accurate radius may be important, it was measured by tape measure.

The four radial canopy diameters are shown (in meters) in the 'table. Where measurement of these would require entry onto neighbouring blocks or access was difficult, the measurements have been estimated. If required, the broadest canopy diameter is also measured to determine if a tree is regulated.

6. **Health**

Is an indication of the tree's health and vigour. It has been judged against the following range:

Very Good (VG), Good (G), Fair (F), Poor (P), or Very Poor (VP)

General comments on the tree's health and vigour, and specific comments on evidence of **insect** infestation or **disease** presence in the tree are included in the **Comments Column** if significant.

7. **Structure**

The structural integrity of the tree has been judged against the following range:

Very Good (VG), Good (G), Fair (F), Poor (P), or Very Poor (VP)

General comments on the tree's structure and specific comments on evidence of **Root Zone Disturbance** and **Structural Damage** to the tree are included in the **Comments Column** if significant.

8. **Tree Quality Classification**

These classifications are based on the guidelines in the 'Draft Guidelines for the Preparation of Tree Management Reports for Development on unleased Territory Land 2004 Draft'.

Poor – A poor quality tree is of poor form, structure or health or is likely to represent a significant safety hazard.

Low - A tree that does not have significant amenity value. (the classification Low Quality has been added (by Canopy Tree Experts) to this classification to indicate a tree that has no formal reason for removal other than is lack of significance in the landscape. Some of these trees may have potential to become significant, in which case this is indicated in the comments column.

Medium - A medium quality tree is one of reasonable form, structure and health and is not likely to represent a significant safety hazard.

High - A high quality tree is one that is of good form and condition and without structural defect. It should not represent a significant hazard.

Exceptional- A tree may be considered exceptional on the basis that it is an important part of the landscape due to factors such as prominence of location, contribution to the surrounding landscape and its general appearance. An exceptional tree should be free of any defects that cannot be addressed by remedial treatment. A tree may also be assessed as being exceptional for its **botanic/scientific, cultural** and **natural heritage** values. Trees with significant **botanic/scientific, cultural** and **natural heritage** values may not be ruled out of the exceptional classification due to health, structure or safety concerns.

9. Comments

Any comments that are relevant are recorded in this column especially those related to health and structure and value.

10. Circumference⁴⁹⁷⁰

Trunk Circumference for the calculation of the Tree Protection Zone as per Australian Standard AS4970-2009 (TPZ⁴⁹⁷⁰) is the trunk circumference at 1.4m above ground level. It is expressed in metres and lists the individual trunk circumferences, if there are more than 1 trunk at that height. These are used to calculate the DBH and subsequently the **Radius TPZ⁴⁹⁷⁰**. Where there is more than one trunk at 1.4 m AGL then the DBH is calculated by the formula presented in AS4970-2009. (Branches, c.f. trunks, are not included).

11. Radius TPZ⁴⁹⁷⁰

The radius of the Root Protection Zone component of the Tree Protection Zone as calculated from the trunk diameter at 1.4m AGL as recommended by the AS4970-2009. Note the final TPZ⁴⁹⁷⁰ may need to be extended to include crown protection.

12. D10^{TPZ}

This is a construct of Canopy Tree Experts. It is the distance from the centre of the trunk to a straight-line excavation past the trunk that would excise 10% of the area of the TPZ⁴⁹⁷⁰. This measurement has no regulatory standing. It is only an indication how much root loss may occur with the such an excavation but should be interpreted in conjunction with on-site observations as to where active absorptive roots are likely to be, species knowledge and water availability. It is presented here as one example of how a 10% loss of TPZ⁴⁹⁷⁰ area could occur.

13. Radius SRZ⁴⁹⁷⁰

The figure given here is an approximation of the Structural Root Zone diameter as proposed in AS4970-2009. It is approximate as it is calculated from the circumference at 1.4m AGL + 20%, instead of the measurement at the root buttress. It is an indication only of the size of root ball required for tree stability

Accurate calculation of the SRZ may be required if a major encroachment into the TPZ⁴⁹⁷⁰ is envisaged.

Appendix 2– Method and Limits

Method

The inspection of the trees was limited to a visual examination from ground level without the use of boring or testing devices.

The VTA method¹ was used. Defects were identified and evaluated along with the tree's response to those defects, the tree's health and tree's vigour to produce an understanding of the tree's soundness.

The tree was not measured except for its trunk circumference. Other measurements were estimated

Limits

Site Specific

I had full access to the most trees, except for Trees 11, 12 & 18 which were temporarily fenced off. The trunk circumferences were estimated for these trees.

Identification and in some cases tree condition was difficult to ascertain as most trees had been severely affected by hail in the preceding week

I was not able to carry out a full assessment of Tree 1 because it was located on the neighbouring property, however every effort was made to examine the tree from this block.

Covers only those trees listed

The information in this report covers only those trees listed and reflects the condition of those trees at the time of the inspection.

Natural variability of trees and their environment

Canopy Tree Experts' arborists conscientiously apply their knowledge in assessing trees and recommending treatments with the aim of achieving the best outcomes for their clients' trees. However, given the natural variability of trees, the arborist may not be able to detect every possible way a tree, or part of a tree, may fail above or below ground. The arborist may not be able to predict when a tree may fail, but the arborist will be able to identify most problems, and the risk of failure will be reduced by having your trees inspected and carrying out of the arborist's recommendations.

Further studies amt be required

No **heritage, ecological or habitat assessments** were carried out for this site by Canopy Tree Expert's arborists or their agents.

No assessment of the **benefits** of these trees was made.

Reinspection

If removal of the tree is not carried out regular yearly reinspection recommended, unless noticeable changes occur before that time, in which case immediate inspection is recommended.

¹ VTA Method (Visual Tree Assessment) as presented in *The body language of trees* 1994 Mattheck, Claus & Breloer, Helge, The Stationery office, Norwich, UK pp.118-120.