

Canopy Tree Experts Pty Ltd ABN 50 051 283 946 PO Box 4464 Kingston ACT 2604 P: 02 61611800 E: trees@canopygroup.com.au E: alan.mann@canopygroup.com.au Canopy Tree Experts is a member of th



Canopy Tree Experts is a member of the International Society of Arboriculture. Alan Mann is a member of Arboriculture Australia

20 December 2019

Ref: 5701

Preliminary Arboriculture Report¹ and Tree Management Plan 12 Somers Cres Forrest ACT 2603

Prepared for: Cate English

Prepared by:

TT Architecture PO Box 5282 Kingston ACT 2604 Hayley Crossing Diploma of Arboriculture Bachelor of Landscape Architecture Quantified Tree Risk Assessment (QTRA) Society of Arboriculture) www.isa-arbor.com

Brief:

Canopy Tree Experts have been engaged to carry out a Preliminary Arboricultural Report (**PAR**) and prepare a Tree Management Plan (**TMP**) for the trees on the above-mentioned site. We have combinded the two parts into one report.

General information

The ACT Tree Protection Act does not apply to this site as it is part of National Capital Authority(NCA) however for the purpose of this report we have indicated which trees would be" Regulated" as a guide to height and size.

Both **PAR** (Part A) and **TMP** (Part B) are to conform AS4970-2009 'Protection of trees on development sites' and take into consideration the ACT Government Tree Protection Act.

¹Preliminary Arboricultural Reports are designated in AS4979-2009 'Protection of trees on development sites' and include indicative Tree Protection Zones (TPZ) to guide development layout.

Part A

Preliminary Arboricultural Report (PAR) to be read in conjunction with tree location plan, schedule and Appendix 1 &2

Alan Mann of Canopy Tree Experts assessed 21 trees on the above-mentioned site its was a visual assessment only, no invasive diagnostic methods were used, photos were taken. Details of the trees species, size, canopy, condition, regulatory status and tree quality are provided in the tree schedule.

In summary;

- 4 Street Trees, Tree 1 is a very poor quality tree.
- 1 Regulated Tree on the site Tree 9 Arbutus unedo a poor quality tree.
- 7 Regulated trees on the neighbouring property.
- The remaining trees were assessed as either weeds species or under 12m in height.

There are 7 Cupressus sempervirens "Stricta" on the neighbouring property that will be maintained and protected during construction. The **TMP** to follow will outline tree protection measures for these trees..

The only regulated tree on the subject site is a poor-quality **Arbutus unedo** located under the powerlines. It is regulated because of multiple leaders IT is proposed that this tree will be removed subject to approval from the NCA.

The back boundary is lined with mostly cotoneaster pomaderris which is a listed weed species. It is proposed to clear this vegetation and replace with new planting.

Tree 12 is a regulated tree on the neighbouring property. Some protection measures are required as outlined in the the Tree Management Plan to follow.

All other trees are under 12m in height (non-regulated) or are weed species and will be removed as part of the redevelopment.

Please refer to the Tree Location Plan (Image 1) Tree Schedule and Tree photos and Appendix 1 & 2 for explanation terms and method.



1. Tree Location Plan -

© Canopy the Tree Experts 20/12/2019 2 of 16 F:\12 Somers Cres Forrest\2019 1218 5701 PAR TMP.docx

2. Tree Schedule - Assessed by Alan Mann

Tree no.		Height (m)	Directional Canopy Radii (m)				Tree Condition		ection	tuality on			Circum AS4970	FPZ 4970		SRZ ⁴⁹⁷⁰	
	Species		North	East	South	West	Health	Structure	Tree Prote Status	Tree G Classificati	Comments	Arborist's Recommendation	1	2 3	Radius (m)	D10 ^{TFZ} (m)	Radius ((m)
1	Liquidambar styraciflua - Sweet Gum	13	7	5	5	5	Poor	Poor	Street tree	Poor	Has had top removed probably from die-back; Is currently dying back. Decomp. Granite all around and compacted.	Replace tree; May be appropriate to remove this tree to allow straight driveway and replace it further east	1.82		7.0	4.7	2.8
2	Liquidambar styraciflua - Sweet Gum	15	9	8	8	7	Fair	Good	Street tree	Medium	Some death of top branches		2.18		8.3	5.7	3.1
3	Liquidambar styraciflua - Sweet Gum	10	7	8	8	7	V. Poor	Poor	Street tree	Poor	Death of crown; damage to trunk; encircling roots	Replace tree	1.92		7.3	5.0	2.9
4	Liquidambar styraciflua - Sweet Gum	10	5	5	8	5	Poor	Fair	Street tree	Medium	Some die-back	Replace tree	1.42		5.4	3.7	2.6
5	Betula pendula - Silver Birch								Not regulated		Top die-back						
6	Cupressus sempervirens 'Stricta' Italian Cypress								Not regulated								
7	Fraxinus 'Raywood' - Claret Ash								Not regulated								
8	Acer negundo - Box Elder								Pest Plant (Weed)								
9	Arbutus unedo - Strawberry Tree	6	2	4	7	4	Good	Poor	Regulated tree	Poor	ls under power lines	Remove tree or trim to begin hedging	1.18	0.90	5.7	3.9	2.6
10	Fraxinus oxycarpa - Desert Ash								Not Regulated								
11	Acer buergerianum – Trident maple								Not Regulated								
12	TiliaCordata - Linden Tree	16	6	6	6	6	Good	Fair	Regulated tree	Medium	On neighbour's block, close to power lines	Unlikely to be affected by this development	1.05	0.80	5.0	3.4	2.5
13	Acer negundo - Box Elder								Pest Plant (Weed)		On neighbour's block; in decline	Unlikely to be affected by this development					
14	Cupressus sempervirens 'Stricta' Italian Cypress	12	1	1	1	1			Not Regulated		On neighbour's block; close to property boundary	Retain all;	0.72		2.8	1.9	1.9

© Canopy the Tree Experts 20/12/2019 3 of 16 F:\12 Somers Cres Forrest\2019 1218 5701 PAR TMP.docx

Tree no.	Species	Height (m)	Directional Canopy Radii (m)				Tree Condition		ction uality n			Circumference AS4970 (m)		PZ 4970		RZ ⁴⁹⁷⁰	
			North	East	South	West	Health	Structure	Tree Prote Status	Tree Q Classificatio	Comments	Arborist's Recommendation	1	2 3	Radius 1 (m)	D10 ^{mz} (m)	Radius S (m)
15	Cupressus sempervirens 'Stricta' Italian Cypress	16	1	1	1	1			Regulated tree		On neighbour's block; close to property boundary	Tree protection measures are to include irrigation.	1.09		4.2	2.8	2.3
16	Cupressus sempervirens 'Stricta' Italian Cypress	14	1	1	1	1			Regulated tree		On neighbour's block; close to property boundary	See species notes; This species copes with close	1.02		3.9	2.7	2.2
17	Cupressus sempervirens 'Stricta' Italian Cypress	15	1	1	1	1			Regulated tree		On neighbour's block; close to property boundary	excavation during development.	1.95		7.5	5.1	2.9
18	Cupressus sempervirens 'Stricta' Italian Cypress	15	1	1	1	1			Regulated tree		On neighbour's block; close to property boundary		1.11		4.2	2.9	2.3
19	Cupressus sempervirens 'Stricta' Italian Cypress	14	1	1	1	1			Regulated tree		On neighbour's block; close to property boundary		1.00		3.8	2.6	2.2
20	Cupressus sempervirens 'Stricta' Italian Cypress	16	1	1	1	1			Regulated tree		On neighbour's block; close to property boundary		1.37		5.2	3.6	2.5
21	Acer palmatum – Japanese Maple								Not Regulated								

3. Tree Photos - Taken by Alan Mann



Tree 1- Street Tree



Tree 5- Not Regulated Silver Birch



Tree 2- Street Tree

building



Tree 3- Street Tree very poor quality







Tree 4- Street Tree



Tree 9 Poor quality Regulated tree on boundary under powerlines is a Arbutus unedo - Strawberry Tree





oxycarpa and Acer buergerianum to be property tree protection measures are removed for the development,

Tree 10 & 11 Non regulated Fraxinus Tree 12 Regualted tree on neighoursing outlined in TPM



Tree 21 - Not Regulated Acer palmatum -Japanese Maple



Tree 20-14 -L to R Regulated trees on neighbours property Retain as a group. Refer to TMP for protection measures.

Part B

Tree Management Plan Is to be read in conjunction with Tree Protection Measures and Appendix 3 & 4 to follow



COPYRIGHT:

UNAUTHORISED USE OR REPRODUCTION IN WHOLE OR IN PART OF THESE DOCUMENTS WITHOUT WRITTEN PERMISSION MAY LEAD TO LEGAL ACTION.



December 19th 2019 scale: NTS sheet: A3 COLOUR drawn: Hayley Crossing job no: 5645

Tree Protection Measures- To be read in conjunction with Tree Management Plan (TMP) Approval

- 1. No demolition, excavation or construction work is to commence on this site until this Tree Management Plan has been approved by the National Capital Authority NCA
- 2. A colour, A3 size copy of the final version of all sheets of this Tree Management Plan is to be available to all workers on the site during the period of demolition, excavation, construction and landscaping.

Induction

3. As tree protection depends on compliance and supervision; All persons, engaged in excavation, demolition or construction on this site, are to receive an induction, which informs them of their responsibilities regarding protection of the regulated trees, prior to their commencement to work on the site.

Tree Protection Zones

4. The Tree Protection Zone (TPZ), for the Trees is a circle centred on its trunk and of radius listed in the schedule. This is the root protection portion as designated by the Australian Standard AS4970-2009 'Protection of trees on development sites'. It is shown outlined by green circle on the drawing.

Fences

- 5. Tree Protection Fences of 1.2m high parawebbing on steel posts are to be installed around the fenced section of TPZ, as indicated on the drawing.
- 6. The Verge Protection Fences for the Street Trees are to be a 1.8m high chain mesh on steel posts that are driven into the soil and installed as indicated on the Tree Management Plan with by a blue line type as indicated to the left
- The fences are to be installed prior to commencement of demolition, excavation and construction for this project and maintained in good order until construction is complete.
- The boundary fences will suffice where they correspond with the TPZ fences
- The fences may be removed at the end of the construction work for the installation of the landscape, however, the 9. Prohibited Activities (b-h) and Root Protection clauses still apply.

Signs

10. Signs, as depicted on Appendix 3, are to be installed as indicated on the drawing, prior to work commencing on site. Mulch

11. Install mulch to a depth of 75mm of wood chip and fines equivalent to 'Forest litter' prior to work commencing on this site. Irrigation

- 12. Prior to work commencing on site, an irrigation line with drippers is to be installed as shown on the drawing;
 - a. At least 8 weeks prior to any excavation within the RPZ of Tree 1, the irritation is to be used to supply 600 of water to the tree by slow drippers.
 - b. Every 4 weeks during the construction period the irrigation line is to be used to supply 600l of water to the tree by slow drippers.
 - c. This irrigation program may be changed on the advice of an AQF level 5 arborist. If there is a period of unusually wet or unusually dry weather an AQF level arborist is to inspect the tree and site and advise on changes to the irrigation program

Demolition

13. Demolition is not to commence until the above-mentioned tree protection fences, signs, irrigation, surface protection and mulch are in place.

Scaffold

- 14. If scaffold is to be erected adjacent to any protected trees, then no branches are to be cut, broken or removed: they are to be excluded from the space within the scaffold by either:
 - a. Having an arborist (AQF level 3) tie them back;
 - b. Or gently pushing them back and erecting a screen to prevent them entering the space

Prunina

15. No pruning of, or branch removal from the protected tree is permitted without consulting an AQF level 5 arborist about the need for pruning.

Design Conditions

- 16. New Driveway. Where the driveway is located beyond the existing building envelope(to be demolished) of Trees 14-20 the:
 - a. Construction is to be carried out without machinery entry into the fenced section of the TPZ,
 - Excavation is not to extend further than the driveway edge or into the fenced section of the TPZ. b.
 - Driveway is to be built to float over the existing ground level; And. C.
 - Root Protection Measures and Prohibited Activities still apply. d.

Canopy Protection

17. If any conflict with the canopies of the protected trees is likely to occur, then:

- a. preferably procedures are to be modified to avoid damage to branches, or;
- b. application for Tree Damaging Activity.

Services Connections

- 18. No excavation for service connections, such as lines for water, gas, electricity, sewer and storm water, is to be carried out within the **TPZ**, except as follows.
- 19. For the installation of underground services that are unavoidably to be connected to mains within the TPZ: a. A target excavation is to be made where the connection or tie to the main is to be located;
 - b. The target excavation is to be:
 - i. Either dug by hand or hydro-excavation, and;
 - ii. Of the minimum cross-sectional area possible;
 - jet at low pressure);
 - c. The installation of the new line is to be by directional boring,
 - i. Boring from outside the TPZ to the target excavation and,
 - ii. Boring at least 600mm below existing ground level.

Landscaping

- 20. The Tree Protection Fences may be removed at the end of the construction work for the installation of the landscape however Prohibited Activities (b-h) and Root Protection clauses still apply;
- 21. No hard surfaces are to be installed in the TPZ unless outlined in these Tree Protection Measures.;
- 22. Planting within the RPZ is to be carried out without damage to roots > 30mm diameter.

Prohibited Activities

- 23. The following activities are prohibited within the TPZ during the period of demolition, excavation and construction:
 - a. Entry onto or across unprotected surfaces;
 - b. Plan.
 - c. Erection of **site sheds** or structures:
 - Changes in **around surface level**: no scalping or fill except as detailed above; d.
 - Movement or parking of **vehicles** or **machinery**: e.
 - Storage of building materials or soil fill;
 - **Cleaning** or washing of equipment; g.
 - **Spillage** or disposal of materials or waste. h.

Root Protection

- 24. If any roots of Tree 1 are likely to be cut within the RPZ by any excavation, then:
 - remaining roots of the tree;
 - 2 hours of the roots initially being cut:
 - method).
 - d. Back-filling is to be carried out as soon as possible.

Monitorina

25. The project manager is to seek the advice of an AQF Level 5 arborist if any of the regulated trees appears to be in decline, or has thinning canopy, large branch failures, insect infestation or accidental mechanical damage, or if concerns are raised about the trees' health or viability.

Compliance

26. Once this Tree Management Plan has been approved, failure to comply with the measures outlined, may incur an on the spot fines

Alterations and Additions

27. Once this Tree Management Plan has been approved, any alterations or additions to it, are to be formulated by an AQF level 5 arborist and approved by the Conservator and or Urban Treescapes

an AQF level 5 arborist is to be consulted about the need for pruning. This may result in the need for a further iii. No roots of greater than 30mm diameter are to be cut or damaged, (Note that normal operation of hydroexcavation usually damages roots by blowing off the bark: the operation must be modified by use of a fan Excavation for any purpose including service installation, except as allowed elsewhere in this Tree Management a. Excavation is to be carried out in a manner that will prevent tearing, shattering, splitting and displacement of the b. The final trimming of the roots still attached to the tree is to be by clean cuts carried out with sharp hand tools within c. The faces of the excavations on the tree side of the excavations, within the **RPZ** are to be kept moist until any backfilling is completed (Draping the faces with a thick textile which is kept moist with micro sprays is the recommended

Appendix 1 – For PAR

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. 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.

4. 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.

5. 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.

6. Structure

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

Very Good (VG), Good (G), Fair (F), Poor (P), \circ r 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.

7. Tree Protection Status

The legal status of each of the trees is given as one of the following:

Not Regulated -no protection required, can be retained or removed.

Park Tree-protected by legislation other than the Tree Protection Act 2005. To be protected by the LMPP (Landscape Management and Protection Plan), or

© Canopy the Tree Experts 20/12/2019 9 of 16 F:\12 Somers Cres Forrest\2019 1218 5701 PAR TMP.docx otherwise negotiated with Urban treescapes section of TCCS.

Pest Plant - is a weed: no protection required, may be removed without permit (or retained: -depending on level of classification).

Regulated Tree -a tree that, due to its size, is classified as a 'Regulated Tree' under 'The Tree Protection Act 2005' and therefore a permit would be required to:

- Remove the tree;
 - Prune the tree, except where the pruning is done by a qualified arborist and is done to the 'Australian Standard for Pruning of Amenity Trees' AS 4373;
 - Carry out ground works within 2m of the 'drip line' of the tree.

A Tree Management Plan that is formulated according to the 'Notifiable Instrument NI2007-422:Tree Protection (Guidelines for Tree Management Plans) Determination 2007' is designed to act as an application for the Tree Damaging Activities associated with this development.

Registered Tree-a tree that has been nominated to the 'Significant Tree' Register. It may have more rigorousprotection measures than a regulated tree (refer to its listing on the Tree Register.

Remnant – a regulated tree that is also a remnant eucalypt. For a Remnant, the Approval Criteria 1 (1) (d) (Inappropriate location) & (e) (substantially affecting solar access) in Disallowable Instrument Tree Protection (Approval Criteria) Determination (No.2) DI2006-60 do not apply. Remnant eucalypt is not defined in the DI2006-60. In this assessment, it is taken as a eucalypt that was likely to be present at the time of initial subdivision of the land on which it stands.

Schedule 2 – a regulated tree that is of a species listed in Schedule 2 of Disallowable Instrument Tree Protection (Approval Criteria) Determination (No.2) DI2006-60. Schedule 2 lists problematic tree species for which the conservator may give approval for removal, if on a block of less than 1200m²

Street Tree-protected by legislation other than the Tree Protection Act 2005. To be protected by the Landscape Management and Protection Plan (LMPP).

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 inmetres 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 <u>indication</u> 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 method² 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.

Where indications suggest that 'sounding' would be worthwhile the trunk was 'sounded' with a mallet.

Limits

Site Specific

There were no regulated trees located on the neighbouring properties that required would impact on design or construction on these blocks.

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.

Verbal Advice

Caution should be taken in interpreting advice given verbally asunderstanding and recollection may be unreliable.

Further studies that may 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.

Tree Risk Assessment

Although the arborist is qualified and authorised to assess risk by both the QTRA and TRAQ methods of assessment, neither method was carried out for this report. However, the training for these authorisations will have influenced the way in which the assessor views the risk associated with trees. A QTRA assessment can be carried out if requested. (www.atra.co.uk, www.isaarbor.com)

© Canopy the Tree Experts 20/12/2019 10 of 16 F:\12 Somers Cres Forrest\2019 1218 5701 PAR TMP.docx

²VTA Method (Visual Tree Assessment) as presented in The body language of trees1994 Mattheck, Claus & Breloer, Helge, The Stationery office, Norwich, UK pp.118-120.

Appendix 3- Signage for TMP



BUILDING WORK ON THIS SITE IS WITHIN

TREE PROTECTION ZONES

AS DESIGNATED IN THE TREE PROTECTION ACT 2005

ALL PERSONNEL MUST FAMILIARISE THEMSELVES WITH THE

TREE MANAGEMENT PLAN

AS PREPARED BY CANOPY TREE EXPERTS. BEFORE COMMENCING WORK ON THIS

SITE AND MUST COMPLY WITH ALL TREE PROTECTION MEASURES

FAILURE TO OBSERVE THESE REQUIREMENTS MAY INCUR FINES OR PROSECUTION UNDER THE TREE PROTECTION ACT 2005

FOR FURTHER INFORMATION CONTACT: CANOPY TREE EXPERTS 6161 1800 trees@canopygroup.com.au



TREE PROTECTION ZONE

AS DESIGNATED IN THE TREE PROTECTION ACT 2005

THE TREE PROTECTION MEASURES THAT ARE LISTED IN THE

Tree Management Plan

AS PREPARED BY CANOPY TREE EXPERTS (AQF LEVEL 5 ARBORISTS) THIS PLAN AND MUST BE COMPLIED WITH.

ENTRY IS PROHIBITED

UNLESS APPROVED IN THE TREE MANAGEMENT PLAN AND THEN ONLY IF THE TREE PROTECTION MEASURES ARE ADHERED TO.

THE FOLLOWING ACTIVITIES ARE PROHIBITED IN THIS AREA:

- Entry into fenced area or across unprotected surfaces
- Excavation for any purpose including footings and service installations–unless specified in the Tree Management Plan
- Movement of vehicles or machinery across, or parking on, unprotected soil surfaces
- Storage of building materials or soil fill
- Modification of ground level by scalping, excavation, paving or fill
- Cleaning or washing of equipment
- Spillage or disposal of materials or waste
- Pruning or branch removal
- Any other Tree Damaging Activity

FAILURE TO OBSERVE THESE REQUIREMENTS MAY INCUR FINES OR PROSECUTION UNDER THE TREE PROTECTION ACT 2005

For further information contact: CANOPY TREE EXPERTS 61 61 1800 trees@canopygroup.com.au

Appendix 4 – Species notes By Alan Mann for TMP



Canopy Tree Experts Pty Ltd ABN 50 051 283 946 PO Box 4464 Kingston ACT 2604 P: 02 61611800 E: trees@canopygroup.com.au E:alan.mann@canopygroup.com.au





Canopy Tree Experts is a member of the International Society of Arboriculture. Alan Mann is a member of Arboriculture Australia

SPECIES NOTES: Cupressus sempervirens 'Stricta' (Pencil Pine , Italian Cypress)

FROM REFERENCES

According to**Pryor and Banks**³this species 'isnative to the Mediterranean region...natural stands occur in northern Africa, through Algeria to the middle east.... It is widely planted in Canberra and it thrives, making an excellent tree...' Here (in Canberra) it regenerates spontaneously...'

Rowell ⁴states that 'It has been grown extensively in Italy since very early times' Rowell list it as suitable for Melbourne, Hobart, Sydney, Adelaide, Mountains, Perth, Brisbane and inland (everywhere except the tropics)

Spencer⁵ says the name 'Stricta' effectively encompasses a range of narrow columnar forms of the species (It is not strictly a specific cultivar name)

Alan Mann's⁶ personal observations in Canberra are:

- The species sometimes succumbs to Sieridium (Cypress) Canker with branches or trees dying.
- It makes a favoured home for Brush-tailed Possums.
- The tree is seen to survive quite close excavation on development sites: excavation well within the Tree Protection Zone calculated by the A\$4970-2009.

³Pryor LD and BanksJ C G (page 86) Trees and Shrubs in Canberra, 1991, Little Hills Press, Crows Nest NSW

⁴Rowell R (page 55) OrnamentalConifers for Australian Gardens 1996 NSW University Press, Kensington

⁵Spencer R, Volume 1 - Horticulture Flora of South Eastern Australia, Ferns, Conifers and Their Allies, 1995, University of NSW Press, Sydney

⁶Alan MannConsulting Arborist (22 years) Diploma of Arboriculture with Distinction, Bachelor of Agricultural Science, Certificate of Horticulture, ,Quantified Tree Risk Assessment (QTRA) Registered Assessor No. 2845 <u>www.qtra.co.uk</u>, Tree Risk Assessment Qualification (TRAQ) Qualified Assessor No. 230557, Member of International Society of Arboriculture

First Case Study – 16 Wakefield Avenue Braddon







Figure 3 August 2006 Excavation beside the trees that are indicated in Figure 1



Figure 2. 2004 <u>www.actmapi.act.gov.au</u> image of corner of Wakefield Ave. and Dooring Street



Figure 4 August 2006 Excavation beside the tree that is indicated in Figure 2



Figure 5 2019<u>www.actmapi.act.gov.au</u> image of corner of Block 15 Section 7, Braddon



Figure 6. 2019 <u>www.actmapi.act.gov.au</u> image of corner of Wakefield Ave. and Dooring Street





Figure 7 2018 Google street view of Trees 17 - 20

Figure 8 Google street view of Tree 67

Second Case Study – 39 National Circuit



Figure 9.Aerial image from 2009 www.actmapi.act.gov.au



Figure 10. Aerial image from2012 <u>www.actmapi.act.gov.au</u> A knockdown re-build was carried out with deep excavation for driveway adjacent to 6 C. sempervirens



Figure 11 20180918 at least 7 years after excavation approximately 1m from trunks. Trunk diameters from 190mm – 650mm (By AS4970-2009 their TPZ would be 2.3 – 7.8m radius)



Figure 12 20191029 the driveway to the basement at 39 National Cct. Deep excavation and retaining wall installation approx. 1m from the row of C. sempevirens