Tree Management Plan



(Visual display of perimeter fencing for illustrative purposes)

Client:	iL Capitano investments c/o Allen Jack + Cottier Architects	
Site Address:	Lots: 7-11 Castlereagh St, and 77-79 Bathurst st, Liverpool	
Trees in	9	
question:		
Information	18005 ARBORIST REPORT INFO . ZIP	
provided:	18003 ANBORIST REPORT INFO . ZIF	
Consulting Arborist:	Chris Carne BSc, Dip Arb, BR2	
Date of report:	13 March 2019 (Version 1)	
File:	C:\Users\CARNAGE\Documents\Tree Technics\CLients\ajc\memoriaave\iL capitano TMP 20181123.docx	





Contents

1	BACKGROUND	.3
1.1	Role of the Site Arborist	.4
1.2.	Protected trees	. 4
1.2	exploratory root investigation Error! Bookmark not define	d.
1.3	general activities to be restricted in the Tree Protection Zone	
2	TREE MANAGEMENT PLAN (TMP)	
2.1.	STAGE 1 – PRE - LANDSCAPE WORKS	.6
2.1.1.	Site Induction Meeting	
2.1.2.	Tree Pruning / Vegetation Clearance in the TPZ	.6
2.1.3.	240V Power within TPA	.6
2.1.4.	Machinery Location / Movement	.6
	Tree Protection Fencing / Ground Protection and Mulching	
	Tree Protection Signage	
	Root Pruning	
2.1.8.	Infrastructure Removal within the Tree Protection Zone	.7
	Demolition works	
2.1.10		
2.2.	STAGE 2 – PRE-CONSTRUCTION	
2.2.1.	Site Induction meeting	.8
2.2.2.	Storage of Materials	.8
2.2.3.	Utility Service Location and Installation	.8
	Maintenance of the Tree Protection Area	
2.2.5.	Project Arborist Stage 2 Certification	.8
2.3.	STAGE 3 – CONSTRUCTION PHASE	.9
2.3.1.	Maintenance of the Tree Protection Area	.9
	Project Arborist Stage 3 Certification	
	STAGE 4 – BUILDING AND LANSCAPE WORK COMPLETION	
2.4.1.	Landscape Construction and Maintenance within the TPZ	. 9
	Project Arborist Stage 4 Certification	
	STAGE 5 – FINAL CERTIFICATION	
	Project Arborist Stage 5 Certification	
3.	TREE PROTECTION PLAN: Tree Protection Zones	
4.	TREE MANAGEMENT PLAN CERTIFICATION TEMPLATE	
5.	REFERENCE DOCUMENTS	
6.	QUALIFICATIONS AND EXPERIENCE OF CONSULTANT	
7.	APPENDICES	
7.1	Tree Protection Fencing / Trunk, Branch and Ground Protection	
7.2	Tree Protection Signage	
	Explanation of Terms	
7 4	Terms and conditions	21

1 BACKGROUND

The tree management plan (TMP) has been prepared for iL Capitano Investments in response to a proposal of an approved Planning Permit from Liverpool Council. This TMP is prepared for II Capitano and must not be used by any other parties other an those involved with the project on site known as the II Capitano Memorial Ave Development. This Tree Management Plan (TMP) has been developed to protect the 15 trees located within and adjacent to the grounds at Lots: 7-11 Castlereagh St, and 77-79 Bathurst st, Liverpool In preparation of the TMP, a site inspection was undertaken on Thursday 21st October, 2018. Details of the existing conditions surrounding he trees and the overall condition of the trees was undertaken during the inspection. This report does not make comment on the overall condition of the trees and / or their suitability for retention. This plan only provides tree protection distances and recommendations to ensure that the trees are maintained and protected appropriately during any future landscape constructions on site.

This TMP is based on the Australian Standard AS4970: 2009 – *Protection of Trees on Development Sites.* The TMP must be followed in chronological order to ensure long term protection of the subject trees on site.

CONTRACTORS! PREVENTION IS BETTER THAN CURE!



1.1 Role of the Site Arborist

The role of the Site manager (syn Project Manager) is as follows

- 1.1.1 Maintain the Tree Protection Zone(s) within this project.
- 1.1.2 Connect and remain in open communication with the project manager and all construction contractors
- 1.1.3 Monitor the trees health
- 1.1.4 Assist with changes in the field as the project develops, with regards to on site nuances.
- 1.1.5 Identify appropriate and inappropriate work procedures around trees and
- 1.1.6 Specify remedial treatments and / or contingency plans

1.2. Protected trees

The following trees are to be protected under this TMP. The location of each tree can be found in section 3; in the Tree Protection Plan. The following table provides the identification number, Genus, and Species, Diameter at Breast Height (DBH) of the trunk and the Structural Root Zone (SRZ), the Tree Protection zone, plus any pruning works required.

Tree #	Genus / Species	DBH (m)	SRZ (m)	TPZ (m)	Work required
1	Liquidambar styraciflua	.22	1.96	2.67	N/A
2	Liquidambar styraciflua	.23	2.13	2.78	N/A
3	Liquidambar styraciflua	.19	1.96	2.29	N/A
4	Liquidambar styraciflua	.35	2.45	4.31	N/A
5	Acer capestre	.24	1.96	2.94	N/A
6	Acer capestre	.22	1.96	2.67	N/A
7	Lophostemon confertus	.55	2.85	3.48	EWR canopy

Table 1: Protected Trees

The Tree protection zone (TPZ) for each tree may not be able to be isolated during development of the land. The area that is to be defined is known as the tree protection area for the purposes of this report. This tree protection is defined by the tree protection fencing usually at 3 m from the tree centre and is shown on the tree protection plan in Section 3

1.3 general activities to be restricted in the Tree Protection Zone

The following activities are to be restricted within the TPZ unless approved by the Site Arborist or as specifically allowed in this tree Management Plan. These activities must not be undertaken unless approved within this tree management plan or by the Project arborist. This list of restricted activities has been adapted from the Australian Standard AS4970:2009 – *Protection of Trees on Development Sites*

- Machine excavation (including but not limited to) pier drilling, trenching
- Excavation for site fencing
- Installation of utilities:
- Placement of fill or site spoil
- Soil level changes
- Soil cultivation
- Storage of materials and / or waste (including fuels, oils or chemicals)
- Preparation of any cement products
- Storage and / or parking of vehicles and / or any plant
- · Wash down of equipment and
- Physical damage of any kind to the tree, including attaching items to the trunk, or branches).

2 TREE MANAGEMENT PLAN (TMP)

The TMP follows a staged process that must be followed in chronological order. There are specific requirements that must be followed at each stage of the landscape / construction. There are five (5) distinct stages within the TOMP and each stage details specific actions that must be followed and approved by the site arborist. The five stages are;

- Landscape construction
- Pre-Construction
- Construction
- Building and Landscape Construction Completion
- Final Certification

The TMP Certification Template in Section 4 provides the client a check list that can be used to 'sign off' the completion of the tasks required at each stage of landscape and development construction. This checklist may be used for reporting purposes by the Site Arborist to local responsible authorities and / or the project manager and / or the land owner.

Role of the Site Arborist

A Site Arborist (syn. Project Arborist) must be engaged to supervise and advise on the actions that are required to be undertaken during all stages of development / construction. The Site Arborist must be suitably qualified in Arboriculture and experienced in tree protection on development sites. The Site Arborist must hold a minimum AQF Level 5 (Diploma Level) in Arboriculture or equivalent and / or relevant experience in accordance with the Australian Standard AS 4970:2009.

The Site Arborist is responsible for monitoring and certification of the TMP. Only the Site Arborist may vary the requirements of the TMP under written



consent of the local responsible authority. Only the project arborist may submit any staged reports as required by the TMP and / or local responsible authority.

2.1. STAGE 1 – PRE - LANDSCAPE WORKS

2.1.1. Site Induction Meeting

Prior to the commencement of the landscape works being undertaken on site, an induction meeting must be undertaken with the Site Arborist, Project Manager, and representative from the Landscape Contractor. The site induction meeting will allow the Project Arborist to discuss the tree management plan actions and the timing of actions to ensure successful protection for the protected site trees.

The TMP must be provided to the Landscape Contractor and should form part of the contract documents and / or scope for the Landscape phase of the project. All actions within this stage must be completed before any further landscape works are undertaken.

2.1.2. Tree Pruning / Vegetation Clearance in the TPZ

Before installation of the tree protection fence, tree pruning must be undertaken by a suitably qualified Arborist (minimum Level 3 in Arboriculture) to remove deadwood / and reduce end weight on long lateral limbs particularly on haul roads and predicted building clearances. All items for pruning are marked in Table 1.

The recommended correct tree pruning must be in accordance with the Site Arborist's recommendations and a site meeting must be undertaken before the works are undertaken. The pruning works are designed to help the site arborist monitor ongoing tree condition, reduce the likelihood of limb / stem failure and ensure that there is sufficient clearance from any possible mechanical damage during the landscape and construction phases. Where pruning cannot be undertaken but there is potential for trunk / branch damage during the landscape works within the tree protection area (3m) then trunk / branch protection must be used in accordance with AS4970. Trunk / branch protection will be determined by the site arborist on site during the initial site induction meeting. Further details can be found in Appendix 7.1; Tree protection fencing, trunk, trunk / branch / ground protection.

All pruning must be carried out in accordance with AS4373:2007 *Pruning of Amenity Trees* and by a suitably qualified Arborist.

2.1.3. 240V Power within TPA

The running of power must be outside the tree protection area for each tree on site. Where no option exists for the location of permanent services, services that must enter the Tree Protection Area must be bored under the tree protection area. All boring activities must be supervised by the project arborist. The project arborist must detail the boring stages in the stage 2 certification report.

The laying of temporary low power in areas must be installed within hi vis conduits and suitably marked.

2.1.4. Machinery Location / Movement

Site access for machinery will need to be identified during the initial site induction meeting. Machinery must not pass over the tree protection area (TPA) for any tree on / adjacent to site without ground protection being in place, or an existing driveway unless approved by the project arborist



The spreading of 100mm thick crushed rock with granitic sand spread by bobcat with the bobcat only located on top of the crushed rock is one such suitable measure. The Site Arborist must be on site to oversee the machinery movement within the TPA.

Any modification to the TPA and fencing location must be shown on an updated Tree Protection Plan and submitted with the certification for the stage one works that is to be completed by the site arborist.

2.1.5. Tree Protection Fencing / Ground Protection and Mulching

Prior to the commencement of any Landscape or Construction works (after the pruning works) a protective fence must be installed at the recommended location as shown in the Tree Protection Plan in Section 3. The tree protection fence will not always be located at the radial Tree Protection Zone (TPZ) due to site constraints. The tree protection fence defines the structural root zone and must be at least **3 metres** from tree centres for trees numbered: 1,2,3,4,5,6,7,8 and 9 and be placed in accordance with the Tree Protection Plan in Section 3.

In this instance, the fence will not be required to cover the structural root zone of at least 3 metres from tree centre as there is the permanent fence / wall and pedestrian conduit necessary. Any alterations to fence location will be determined during the initial site meeting with the Site Arborist and the landscape representative. The Site Arborist must recommend installation and must inform the Responsible Authority.

Should a protective fence be required, it must be rigid, (chain link / weld mesh or the like) and must not be less than 1.8 m in height. Fencing must be firmly attached to a removable concrete or similar base. **Star pickets and parawebbing is not considered as an adequate Tree Protection fence.** Fencing must be in accordance with the Australian standard for *Temporary Fencing and Hoardings* (AS4687). Further details can be found in Appendix 7.1 – Tree Protection Fencing, Trunk, Branch, and Ground Protection. In cases where TPA cannot be entirely fenced, ground protection may be required. Ground protection is used to prevent soil compaction through point loading to the root system. Further details can be found in Appendix 7.1 – Tree Protection Fencing, Trunk, Branch, and Ground Protection. Mulch must be laid within the Tree Protection Area (within the fenced area). Mulch must be organic eg: wood chips, (with at least 25% leaf matter) and must be laid to a depth of 100mm across the Tree Protection Zone.

2.1.6. Tree Protection Signage

Tree protection signage must be placed in a location that is clearly visible to all persons on site. An example of tree protection signage can be found in Appendix 7.2 – Tree Protection Signage

2.1.7. Root Pruning

It is likely that root pruning is considered necessary at this instance during demolition phase. Should any root pruning be required, the Site Arborist must inform the Responsible Authority to seek clarification. No other contractors must interfere with ANY roots within the tree protection zone of each tree to be retained.

2.1.8. Infrastructure Removal within the Tree Protection Zone Any existing infrastructure within the TPZ on the site must be removed by hand under the supervision of the Site Arborist. Care must be taken not



to disturb the root system that may be present within the tree protection zone. The Site Arborist must be present to supervise removal of the infrastructure by the demolition contractor within the Tree Protection Zone.

2.1.9. Demolition works

Should any site demolition works require access within any tree protection zone, the Site Arborist must be on site to oversee the works and all actions within points 2.1.1 to 2.1.8 must be completed

2.1.10. Project Arborist Stage 1 Certification

After actions 2.1.1 - 2.1.9 have been completed, the Site Arborist is to assess compliance with the tree protection requirements of stage 1 of the TMP. The certification template found in section 4 may be used for reporting purposes.

2.2. STAGE 2 - PRE-CONSTRUCTION

2.2.1. Site Induction meeting

Prior to any construction on site, a site induction meeting must be undertaken with the Site Arborist, Builder, and Project Manager. The site induction meeting will allow the Site Arborist to discuss the TMP actions and the timing of actions to ensure successful protection of any protected tree.

The Tree Management Plan must be provided to all contractors on site (included but not limited to; excavators, plumbers, electricians, builders, bricklayers, concreters etc). The TMP should form part of the contract documents and / or scope for each trade involved in the project.

2.2.2. Storage of Materials

An area must be designated on site which is at least 10 m from any protected tree. It is here that all building materials / refuse / chemicals / fuels / oils can be stored throughout the proposed development. Only the Site Arborist can approve the storage location of all the building materials and / or equipment within close proximity to any tree that is protected.

2.2.3. Utility Service Location and Installation

Prior to construction all services must be marked out on site. Services must be installed outside of any tree protection area. Where no option exists for the location of services, services that must enter the tree protection area must either be bored under or hand excavated. Both of these activities must be overseen by the Site Arborist. The Site Arborist must detail the boring / hand excavation details in the Stage 2 certification report.

2.2.4. Maintenance of the Tree Protection Area

The tree protection area (isolation area) must not be altered in any way unless approved by the Site Arborist. The isolation area is to remain in the same location for the duration of the construction phase of the project.

2.2.5. Project Arborist Stage 2 Certification

After actions 2.2.1 - 2.2.4 have been completed, the Site Arborist is to assess compliance with the tree protection requirements of Stage 2 of the TMP. The certification template found in section 4 may be used for reporting purposes.



2.3. STAGE 3 - CONSTRUCTION PHASE

2.3.1. Maintenance of the Tree Protection Area

The tree protection area (isolation area) must not be altered in any way unless approved by the Site Arborist. The tree protection area must remain mulched and watered where required throughout the project. The isolation area is to remain in the same location for the duration of the construction phase of the project.

2.3.2. Project Arborist Stage 3 Certification

After actions 2.3.1 - 2.3.2 have been completed, the Site Arborist is to assess compliance with the tree protection requirements of Stage 3 of the TMP. The certification template found in section 4 may be used for reporting purposes.

2.4. STAGE 4 – BUILDING AND LANSCAPE WORK COMPLETION 2.4.1. Landscape Construction and Maintenance within the TPZ

At the conclusion of the building and landscape works (ie when the building works are in their final stage after lock up and internal finishes are complete) the Site Arborist must visit the site and assess if the tree protection fencing may be removed. Should the Site Arborist give approval for the removal of the tree protection fence and other measures, the Site Arborist must inform the Responsible Authority

2.4.2. Project Arborist Stage 4 Certification

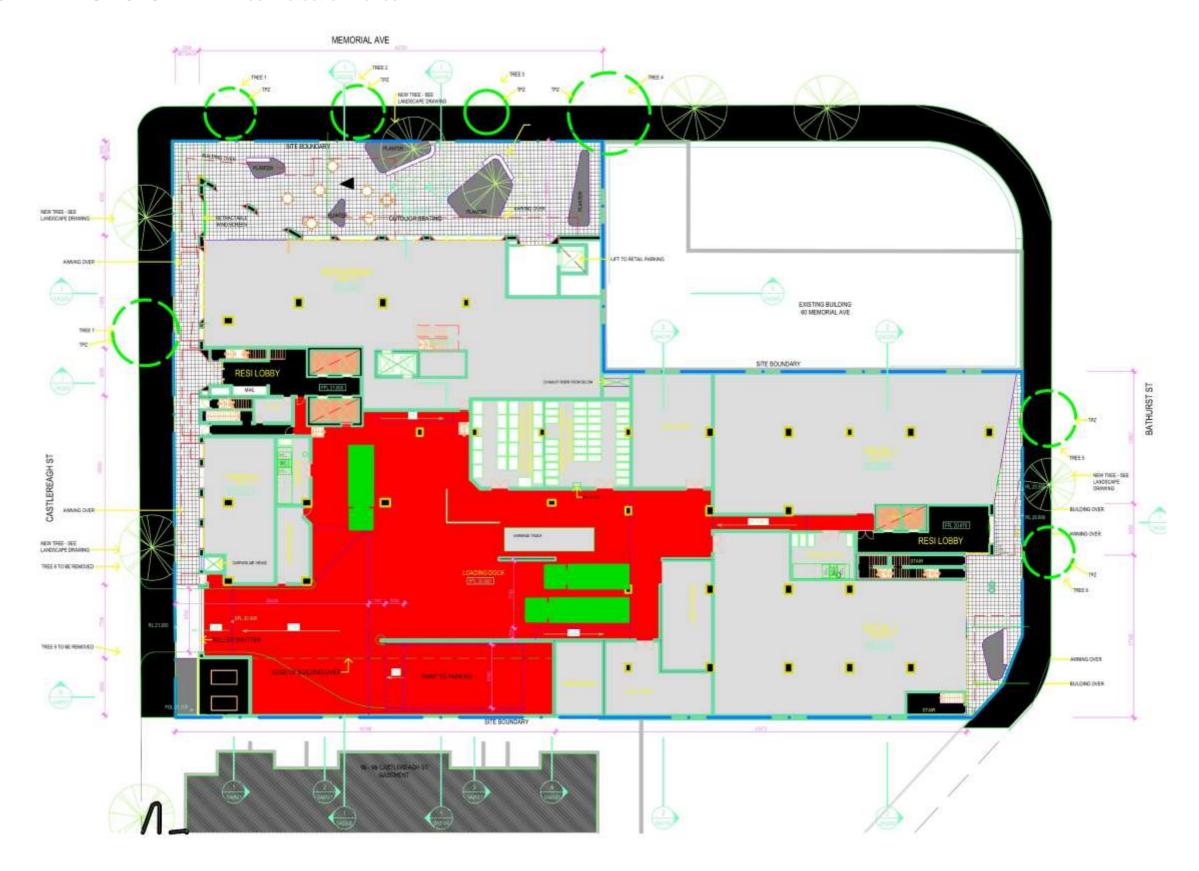
After actions 2.4.1 has been completed, the Site Arborist is to assess compliance with the tree protection requirements of Stage 4 of the TMP. The certification template found in section 4 may be used for reporting purposes.

2.5. STAGE 5 – FINAL CERTIFICATION 2.5.1. Project Arborist Stage 5 Certification

At the conclusion of all site works, the Site Arborist must visit the site to provide a final certification of tree protection for the project. The final certification documentation will detail all of the site visits for the project (including dates and actions taken or advised on site during each inspection) and provide a final certification report to the local responsible authority, project manager, builder and /or owner of the land.



3. TREE PROTECTION PLAN: Tree Protection Zones



4. TREE MANAGEMENT PLAN CERTIFICATION TEMPLATE

Site Address:

Site Arborist: Christopher Carne Contact Number: 0407485437

Project Manager: Contact Number:

STAGE 1: PRE – LANDSCAPE WORKS

Site induction - Landscape Contractors.

Meeting on site held? (Yes / No) Date / Time:

Persons Present:

Site Access:

Site access determined and acceptable?	(Yes / No)
Modification required to Tree Protection Plan?	(Yes / No)

Pruning and Vegetation / Infrastructure Clearance within TPZ

Tree Pruning required?	(Yes / No)
Tree Pruning undertaken to AS 4373?	(Yes/No)
Tree Pruning undertaken in accordance with TMP recommendations?	(Yes/No)
Vegetation cleared from TPZ in accordance with TMP recommendations?	(Yes/No)
Infrastructure cleared from TPZ in accordance with TMP recommendations?	Yes / No)

Fencing / Trunk / Branch / Ground Protection // Mulching

Fencing installed in correct location as per TMP Protection Plan?	(Yes / No)
Ground protection installed correctly as per TMP protection Plan?	(Yes / No)
Trunk / Branch Protection installed correctly as per TMP protection Plan?	(Yes / No)
Has the Tree Protection area been mulched to 100 mm depth?	(Yes/No)

Signage:

Signage complies with TMP?	(Yes/No)
Signage has Site Arborist contact details?	(Yes/No)

Root Pruning:

Has root pruning been undertaken in accordance with TMP?	(Yes/No)
Supplementary Measures (list as needed)	(Yes / No)
Has the Tree Protection Area been watered in accordance with the TMP?	(Yes/No)

Comments / notes re Stage 1 Certification

Photographs Taken?	(Yes / No)
Clear images of DW %?	(Yes / No)
Tree management Plan given to all parties?	(Yes / No)

Date(s) Inspected:



Site induction - Builders / Construction trades. Meeting on site held? (Yes/No) Date / Time: Persons Present: Site Access: Site access determined and acceptable? (Yes/No) (Yes/No) Modification required to Tree Protection Plan? Storage of Materials Has an area been designated on site for the storage of materials /waste? (Yes/No) Does this area comply with the TMP (Yes/No) **Utility Service Locations** Have all utility services been marked out on site? (Yes/No) Are all services located outside of the TPZ? (Yes/No) Are services required to be bored / hand dug inside the TPZ? (Yes/No) **Maintenance of Tree Protection area** Is the tree protection fencing situated in the correct location? (Yes/No) Does the Tree Protection Plan need to be modified? (Yes/No) Is the Trunk / Branch / Ground Protection still in place? (Yes / No) Has the Tree Protection area been mulched to 100 mm depth? (Yes/No) Has the Tree Protection Area been watered in accordance with TMP? (Yes/No) Comments / notes re Stage 2 Certification

Photographs Taken? (Yes / No)
Tree management Plan given to all parties? (Yes / No)

Date(s) Inspected:



STAGE 3: CONSTRUCTION PHASE

Footings:

Are all footings and installation in accordance with the TMP?

Maintenance of Tree Protection area

Is the tree protection fencing situated in the correct location?

Does the Tree Protection Plan need to be modified?

Is the Trunk / Branch / Ground Protection still in place?

Has the Tree Protection area been mulched to 100 mm depth?

Has the Tree Protection Area been watered in accordance with TMP?

(Yes / No)

(Yes / No)

Comments / notes re Stage 3 Certification

Photographs Taken? (Yes / No) Tree management Plan given to all parties? (Yes / No)

Date(s) Inspected:



STAGE 4: BUILDING COMPLETION AND LANDSCAPE CONSTRUCTION

<u>Site induction – Landscape Construction</u>

Meeting on site held? (Yes / No) Date / Time:

Persons Present:

Site Access:

Site access acceptable for landscape construction? (Yes / No)
Modification required to Tree Protection Plan? (Yes / No)

Storage of Materials

Has an area been designated on site for the storage of materials /waste? (Yes / No)
Does this area comply with the TMP (Yes / No)

Removal of Tree Protection Fencing

Can tree protection fencing and / or ground protection be removed? (Yes / No) Is there a need for modified tree protection measures? (Yes / No)

Landscape Construction

Do all works within the Tree Protection Area comply with the TMP? (Yes / No) Has the Tree Protection Area been watered in accordance with TMP? (Yes / No)

Comments / notes re Stage 4 Certification

Photographs Taken? (Yes / No)
Tree management Plan given to all parties? (Yes / No)

Date(s) Inspected:



STAGE 5: FINA	L CERTIFICATION		
The site arborist has inspected all stages of the project as defined by the Tree Management Plan. Any actions that has not complied has been rectified and approved by the Site Arborist. All works as noted within the approved Tree Management Plan have been undertaken and any modifications to the Tree Management Plan have been approved in writing by the local responsible authority. Comments / notes re Stage 3 Certification			
Final Certification App	proved?		(Yes/No)
Photographs Taken? Final Certification give	en to all parties?		(Yes / No) (Yes / No)
Date(s) Inspected:	m to all parties:		(100/140)
Project Arborist:	Christopher Carne	Signed:	



tree technics

5. REFERENCE DOCUMENTS

Australian Standard AS 4970; 2009 protection of trees on development sites
Australian Standard AS4373 - Pruning of Amenity Trees
Australian Standard AS4687 – Temporary fencing and hoardings
Australian Standard AS4454 – Composts, soil conditioners and mulches
Matheny, N. & Clark J 1998, Trees and development, a technical guide to perseveration of trees during Land Development. ISA Publications





6. QUALIFICATIONS AND EXPERIENCE OF CONSULTANT

Christopher James Carne

Chris is the director and consulting arborist for Tree Technics Pty Ltd since its inception in 2015.

With twenty years of experience in the tree / bushland industry, he draws his body of knowledge from his double geography degree and ex Australian Tumbling / Acrobatic background. These two fortuitous skills are synergistically combined to vividly display a passion for trees and the joy that trees present both as an amenity and as a sport / vocation.

Qualifications

University of Newcastle BSc (Geog) 1992 - 2000.

Bush Regeneration Cert 2 2001 Arboriculture Cert 5 2012

Professional Membership

Member of Arboriculture Australia
Member of Australian Association of Bushland Regenerators

Arboricultural Experience

Chris has been practicing as an arborist and consulted for government, local government, corporate, and private clients. Clients have included; architects, Schools, builders, Landscapers, Land Developers, Strata Managers, and Real Estate Agencies.

Particular bodies that Chris / Tree Technics Pty Ltd has represented include:

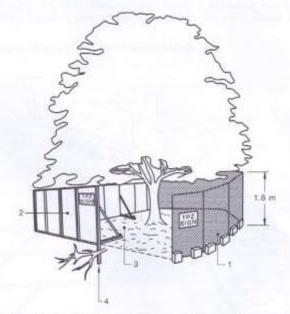
KMC council, North Sydney Council, Sydney City Council, National Parks and Wildlife Servies, Shore School, Northside Montessori School, Croll Real Estate, Raine and Horne Real Estate, 5 Star Real Estate, Shead Real Estate, J & T Project Developers, LJ Hooker Real Estate Lamb and Walters Strata Managers, Pave n Care Landscapes, Sunrise Strata



7. APPENDICES

7.1 Tree Protection Fencing / Trunk, Branch and Ground Protection

(Taken from AS4970: 2009 - Protection of Trees on Development Sites)



LEGEND:

- Chain wire mesh panels with shade cloth (if required) attached, held in place with concrete feet.

 Alternative plywood or wooden paling fence panels. This fencing material also prevents building materials or soil entering the TPZ.

 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. construct the TPZ
- 4 Bracing is permissible within the TPZ. Installation of supports should avoid damaging roots.

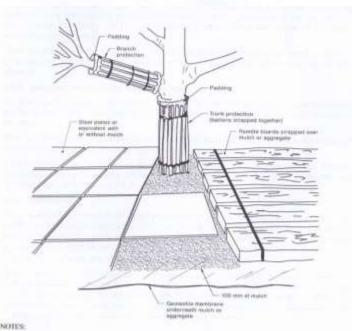


FIGURE 3 PROTECTIVE FENCING

NOTES

- 1 For trunk and branch protection use boards and pudding that will prevent damage to bark. Boards are to be strapped to trees, not nailed or scrowed.
- 2 Rumble boards should be of a suitable thickness to prevent soil compaction and root damage.





7.3 Explanation of Terms

Structural Root Zone (SRZ)

The Structural Root Zone (SRZ) is the calculated distance based on DBH only. The SRZ identifies the minimum radius at which the root plate cannot be disturbed. This measure only relates to the tree's stability and does not account for the implications of a decline in health. The measurement is given in metres in a radius from the tree trunk. (Coder, 1996)

Diameter at Breast Height (DBH)

DBH is measured at 1.4m above ground level. In cases where the tree has up to four stems, the diameter is calculated by taking the area of each stem at 1.4m and calculating the combined diameter. In this case the DBH measurements may not show the individual stem diameters, however the calculated measurement is shown. Multiple stem specimens are noted within the tree data.

Lopping

Cutting back a limb or stem at any point with no regard to natural target pruning. Random cutting of branches between branch unions or at internodes on young trees. Not considered an acceptable practice under the Australian Standard 4373; *Pruning of Amenity Trees*

Tree Protection Zone (TPZ)

The Tree Protection Zone (TPZ) (referenced from AS 4970:2009-Protection of trees on development sites; is the calculated distance based on the DBH of the tree. The TPZ addresses the physiological implications by retaining enough area around the tree not only to minimise the potential for complete tree failure, but for the tree to survive in the landscape on a long term basis. The measurement is given in metres in a radius from the centre of the trunk.

Tree Protection Area (TPA)

The tree protection area is the area within the tree protection fence surrounding a protected tree. The tree protection area is generally a modified area within the tree protection zone and is generally the area which as been reduced due to site constraints. The protection of the tree protection area is critical in the successful retention of a tree in during the development phase of a project.



7.4 Terms and conditions.

- 1. The author contracts with you on the basis that you promise that all legal information which you provide, including land title, and ownership of other property are correct. The author is not responsible for verifying or ascertaining any of these issues
- 2. The author contracts with you on the basis that your promise that all affected property complies with all applicable statutes and legislation.
- 3. The author has taken reasonable care to obtain necessary information from reliable sources and to verify data. However, the author neither guarantees, nor is responsible for the accuracy of information provided by others.
- 4. If, after delivery of this report, you require a representative to attend court to give evidence or to assist in the preparation for a hearing because of this report, you must pay an additional fee at the current rate for expert evidence.
- 5. Alteration of this report invalidates the entire report.
- 6. The author retains the copyright of this report. Possession of the original or a copy of this report does not give you or anyone else any right of reproduction, publication, or use without the written permission of the author.
- 7. The contents of this report represent the professional opinion of the consultant. The consultancy fee for the preparation of this report is in no way contingent upon the consultant reporting a particular conclusion or fact, nor upon the occurrence of a subsequent event.
- 8. Sketches, diagrams, graphs and photographs in this report are intended as visual aids, and are not to scale unless stated to be so. They must not be construed as engineering or architectural reports or surveys.
- 9. Unless expressly stated otherwise;
 - a. The information in this report covers only those items which were examined and reflects the condition of those items at the time of inspection only.
 - b. The inspection is limited to visual examination of accessible components without dissection, excavation or probing. There is no warranty or guarantee, expressed, or implied that even if there were not present during inspection, problems or defects in plants or property examined may not arise in the future.
- 10. This agreement supersedes all prior discussions and representations between the author and the client on the subject, and is the entire agreement and understanding between the two parties.

