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Managing the Urban Forest

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Arboricultural Assessment for:

# Tree Identification, Heath and Retention Value

32 – 70 McDermott Road

&

91 – 125 Coriyule Road

**CURLEWIS, 3222**

This report has been commissioned by:

**Curlewis Bellarine Pty Ltd**

In reference to

**Pre Development Arboricultural Assessment**

**March 2020**



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## 1.0 Key Objectives

This report has been commissioned by Cardno TGM in relation to trees which require consideration in a development project on two allotments referred to as 32 – 70 McDermott road, and 91 – 125 Coriyule road, Curlewis, 3222

The report is to look at indigenous trees on the site, and make consideration of identification, health, arboricultural retention value and tree protection zone calculations so as planning for the site can progress in tree focused manner.

This report does not give permission for tree removal, pruning or management.

It is assumed the permissions for removal or pruning if any are required, are sought and approved by other means, i.e. the application and granting of vegetation management permits.

## 2.0 Methodology

On the 12th of March 2020, the inspection for this report was performed on site, by Matthew Branagh, a Level 5 Consulting Arborist from 'Let's Talk About Trees'.

A ground-based Visual Tree Assessment was performed on the above-ground section of all trees on site, in line with modern Arboricultural Practices and Principles, AS 4970 – 2009 – Protection of Trees on Development Sites and AS 4373 – 2007 – Pruning of Amenity Trees.

All photographs and data within graphs tables and charts were taken or recorded at the time of the inspection and shall be used within this report for referencing or identification purposes.

### 3.0 Observations

#### 3.1 General Observations

91 – 125 Coriyule road, Curlewis

9 trees were identified on this site.

The following tree data was collected at inspection and refers to the trees.

No.	Identification	Est. Age Yrs	ULE	Health	Structure	Significance	Hazard	Esti. Height (m) & Spread (m)	DBH (cm) *multi stemmed	TPZ Radius (m) SRZ Radius (m)	Comment
1	<i>Eucalyptus viminalis</i> – Manna Gum	M	L	P	P	H	L	14 x 10	160	15.0 SRZ 4.0	On the rail trail corner, SE corner of the site. Sound tree with a good form however poor health and 50% dead in canopy. Remanent indigenous native tree.
2	<i>Eucalyptus camaldulensis</i> – Red Gum	M	L	G	G	L	M	16 x 8	62	7.4 SRZ 2.7	This tree is located in a garden bed in front of a dwelling on the site. Significantly younger than the other trees of this report, and growing in a formal landscape environment. This tree is a planted specimen. Retention of this specimen in development will see the specimen impacted in site clearing works, the tree is endocormic. As such the tree has a low retention value. Remanent indigenous native tree.
3	<i>Eucalyptus camaldulensis</i> – Red Gum	M	L	G	F	M	L	14	67	8.0 SRZ 2.8	Sound tree with an upright form. Presents with an endocormic canopy the result of coppicing many years ago. The tree has a biased lean to the north. Remanent indigenous native tree.
4	<i>Eucalyptus camaldulensis</i> – Red Gum	M	L	G	G	H	L	12	91	10.9 SRZ 3.2	Tree with sound form showing typical for age past limb failings. Remanent indigenous native tree.

5	<i>Eucalyptus camaldulensis</i> – Red Gum	M	L	F	F	H	L	12	88	10.6 SRZ 3.1	Sound tree with good shape and form. Remanent indigenous native tree.
6	<i>Eucalyptus camaldulensis</i> – Red Gum	M	L	F	F	H	L	11	91	10.9 SRZ 3.2	Sound tree with good shape and form. Remanent indigenous native tree.
7	<i>Eucalyptus camaldulensis</i> – Red Gum	M	L	F	P	H	M	12	77	9.2 SRZ 3.0	Structure bifurcated, the canopy has a major past limb failing evident. Sound tree. Remanent indigenous native tree.
8	<i>Eucalyptus camaldulensis</i> – Red Gum	M	L	F	F	H	L	14	65	7.8 SRZ 2.8	Sound upright form with deadwood throughout the canopy. Evident past pruning in the trees structure resulting in endocormic limbs.
9	<i>Eucalyptus viminalis</i> – Manna Gum	M	L	G	F	H	L	12	85	10.2 SRZ 3.1	Tree on neighbouring allotment – Rail Trail. Sound tree with deadwood in the upper canopy. Canopy open and spreading with past major failings. Remanent indigenous native tree.

32 – 70 McDermott Road, Curlewis

1 tree was identified on this site.

The following tree data was collected at inspection and refers to the trees.

No.	Identification	Est. Age Yrs	ULE	Health	Structure	Significance	Hazard	Esti. Height (m) & Spread (m)	DBH (cm) *multi stemmed	TPZ Radius (m) SRZ Radius (m)	Comment
10	<i>Eucalyptus camaldulensis</i> – Red Gum	M	L	G	G	L	M	16 x 8	142	15 SRZ 3.8	Sound tree on municipal naturestrip. Shows canopy deadwood and past failings

## **4.0 Discussion**

### **4.1 91 – 125 Coriyule road, Curlewis**

#### **Tree 1**

Tree 1 grows on a neighbouring allotment a public open space referred to as The Bellarine Rail Trail.

The tree is a remnant indigenous tree, and is in poor health and a greater than 50% dead canopy. The tree carries a significant ecological value to the neighbouring site, and development which avoids impact to this tree is recommended. Planned development which encroaches the tree no closer than 10.3 m eliminate an impact greater than 10% as such an acceptable development impact when guided by AS4970-2009 Protection of Trees on Development Sites.

#### **Tree 2**

Tree 2 grows in the formal landscape of a current site dwelling, and presents as a planted specimen. The tree has been coppiced in its earlier years, I suggest to manage its growth in the formal landscape. The tree has regrown and now presents with an endocormic canopy. As such the long term retention of the tree is greatly reduced. Long term retention of this tree is not recommended.

#### **Trees 3 – 8**

Trees 3 – 8 are remnant trees retained in an open pasture which has been in the past used for cropping and grazing of cattle.

The area across the root zones of all trees shows past impact from site excavation typical for cropping and also erosion in close proximity to the trees from the movement of stock.

As such, whilst the trees in most show a sound health, their size and canopy spread is not typical of this species at the mature age these trees present as.

Trees 3, 7 and 8 present as the most impacted trees. Trees 3 and 8 presenting as having had major canopy reduction earlier in their life, now presenting with a modified endocormic canopy.

Tree 7 shows significant past structural failings resulting in a modified canopy which is bifurcated, and will become structurally deficient as the tree continues to age.

Trees 4, 5 and 6 present as sound and balanced in canopy.

The open spread of the trees in the landscape allows for the retention of some trees, and the loss of others in development without detrimental impact to other trees in the group. This is because no two trees have a dependency on another for retention of integrity.

## **4.2 32 – 70 McDermott Road, Curlewis**

### **Tree 10**

This tree identified as a remnant indigenous native was identified as a specimen of *Eucalyptus camaldulensis*, - Red Gum.

The tree grows on a municipal naturestrip.

The tree is sound in form and structure, but presents with minor canopy deadwood and past branch failures. The tree has along useful life and is a significant tree in the landscape of the area.

Retention of the tree is achieved by implementing tree protection guided by AS4970-2009 Protection of trees on Development Sites and encroachment to the tree should not exceed any greater than 10% of its TPZ, achieved when development encroaches no closer than 10.3m from the trees trunk.

Noting the trees trunk is greater than the maximum recognised by the standard the true TPZ of this tree is greater than the calculated 15m.

## **5.0 Conclusion**

In conclusion the trees present as a disjointed group across the site.

The trees on neighbouring allotments show no correlation to the trees on the site with the exception of trees 1 and 9 which both contribute to the vegetation of the neighbouring allotment.

Noting both trees to be in poor health with a reduced long term retention value may influence a decision of tree removal pre development. In urbanising this site, this report supports the loss and replacement of these trees.

Tree 3 is a managed impacted planted specimen, and holds no retention value to the site. This reports supports the loss of this tree.

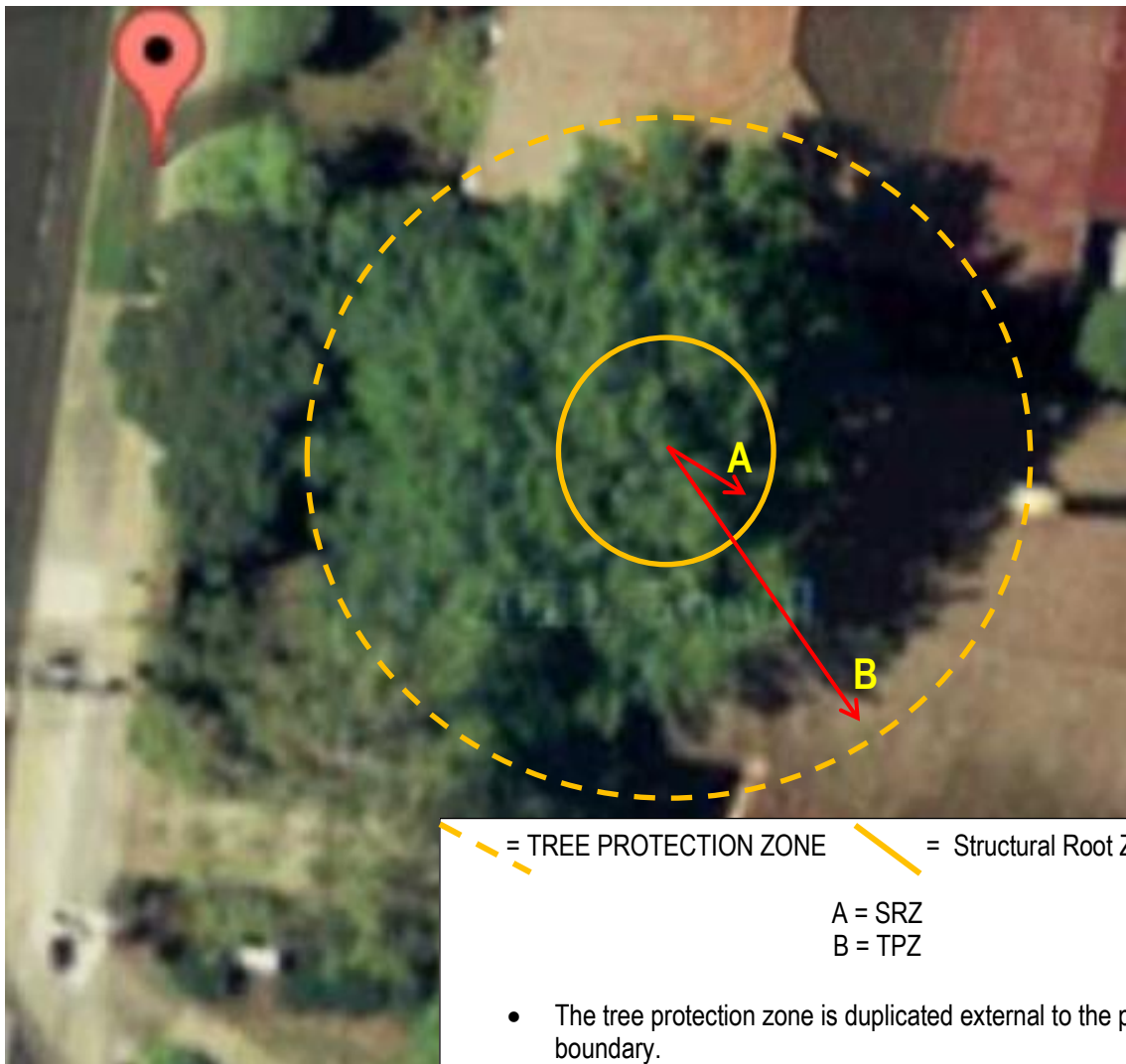
Trees 4, 5 and 6 offer trees suitable for long term retention form a heath management and future retention value view.

Trees 7 and 8 present as modified in structure and form and offer a reduced life expectancy. This report supports the loss of these trees in urbanisation of the site.

Tree 10 grows on the municipal naturestrip of the second site, presents as sound, in good health and with a long useful life expectancy. Retention of this tree should be highly considered.

## Diagram 1

The following diagram indicates how the dimensions of the Structural Root Zone and the Tree Protection Zone are applied.



## 6.0 Recommendations

It is the recommendations of this report that;

1. The trees on this site should be managed as per this report.
2. Before development of this site and project, Tree Protection Zones should be established and delineated. This is achieved through the development of tree management plan, once trees for retention and removal have been determined.
3. All vegetation to be retained on site should be protected and retained using AS4970 – 2009 Protection of Trees on Development Sites.
4. The process of managing trees on construction sites is clearly outlined by AS4970 – 2009 Protection of Trees on Development Sites, and further reports may be required to protect and guide the retention of trees throughout the process of development of this project. These should be commissioned as practicable.
5. A full understanding of the Australian Standard 4970 – 2009 Protection of Trees on Development Sites is required to fully manage this project. In order that this is carried out, a Level 5 Project arborist should be commissioned for the projects entirety to manage all retained / impacted and proposed to be impacted trees.
6. It is recommended that due consideration be given to any vegetation removed as a result of this report in regards to replacing lost vegetation post development.

Indigenous vegetation of a same or similar species should be used in order to retain an environment in keeping with the location of the site.

7. This should be reflected in the final plans for the development site.

## 7.0 Appendices

### 7.1 Photographs - Appendix One. - Typical trees of the project.



Tree 1, *E. viminalis*



Tree 2, *E. camaldulensis*



Tree 3, *E. camaldulensis*



Tree 4, *E. camaldulensis*



Tree 5, *E. camaldulensis*



Tree 6, *E. camaldulensis*



Tree 7, *E. camaldulensis*



Tree 8, *E. camaldulensis*

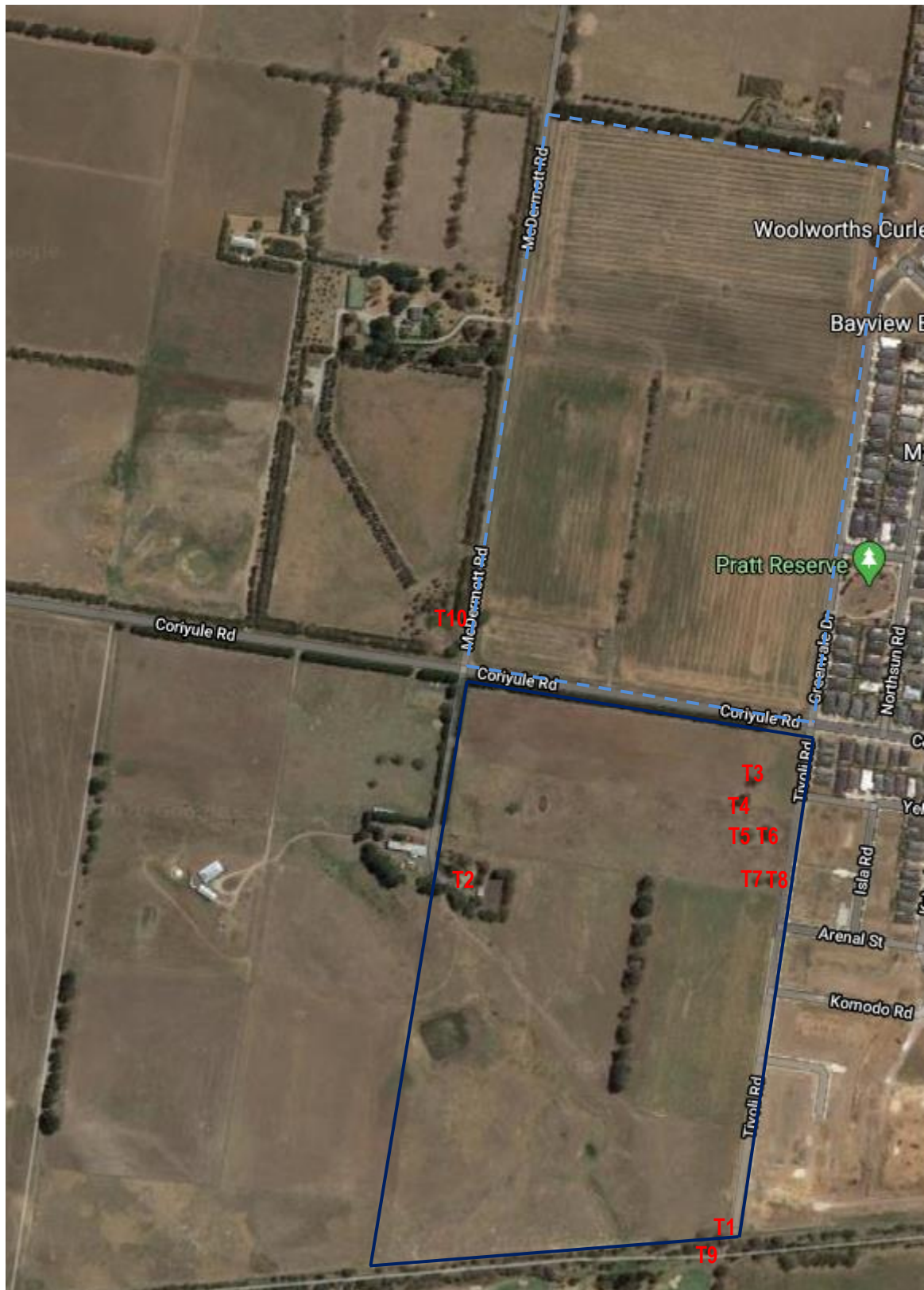


Tree 9, *E. Viminalis*



Tree 10 *E. camaldulensis*

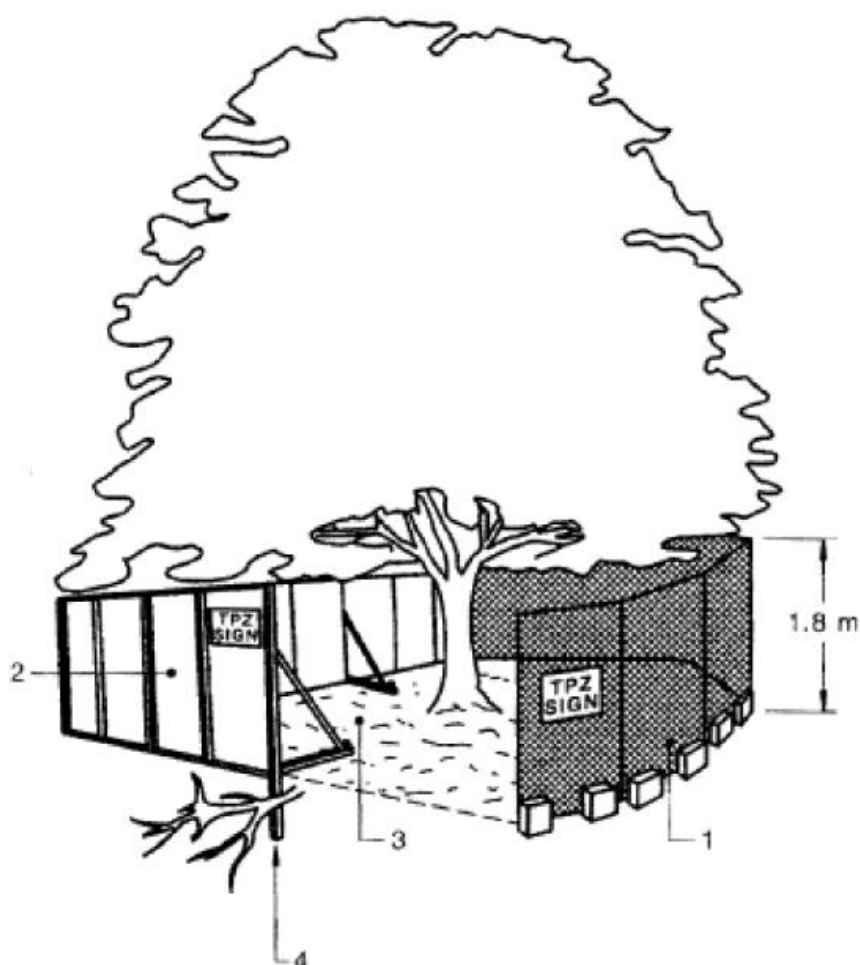
## 7.2 Site Plan



## 7.3 Tree Protection Signage

### 4.4 SIGNS

Signs identifying the TPZ should be placed around the edge of the TPZ and be visible from within the development site (refer Figure 3). The lettering on the sign should comply with AS 1319. Appendix C provides an example of a suitable TPZ sign.



#### LEGEND:

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

FIGURE 3 PROTECTIVE FENCING

(Extract from AS4970 – 2009 Protection of trees on Development sites)

## 7.4 Tree Protection Zone (TPZ) Example

AS 4970—2009

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### APPENDIX C

#### TREE PROTECTION ZONE SIGN EXAMPLE

(Informative)

A TPZ sign provides clear and readily accessible information to indicate that a TPZ has been established. Figure C1 provides an example of a suitable sign.

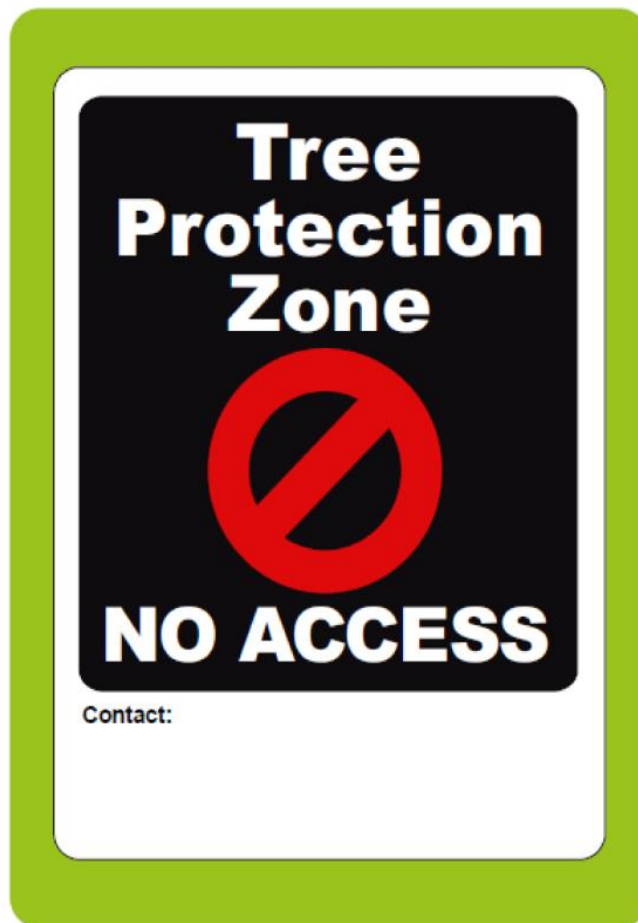


FIGURE C1 TREE PROTECTION ZONE SIGN

(Extract from AS4970 – 2009 Protection of trees on Development sites)

## 7.5 Indicative Stages in Development and the Tree Management Process

Stage in Development	Tree Management Process	
	Matters for Consideration	Actions and Certificates
<b>Planning (Sections 2 and 3)</b>		
Site acquisition	Legal constraints	
Detail surveys	Council plans and policies Planning instruments and controls Heritage Threatened species	Existing trees accurately plotted on survey plan.
Preliminary tree assessment	Hazard/risks Tree retention value	Evaluate trees suitable for retention and mark on plan Provide preliminary arboricultural report and indicative TPZs to guide development layout.
Preliminary development design	Condition of trees Proximity to buildings Location of services Roads Level changes Building operations space Long-term management	Planning selection of trees for retention Design review by proponent Design modifications to minimise impact to trees.
Development submission	Identify trees for retention through comprehensive arboricultural impact assessment of proposed construction. Determine tree protection measures. Landscape design.	Provide arboricultural impact assessment including tree protection plan (drawing) and specification.
Development approval	Development controls Conditions of consent	Review consent conditions relating to trees.
<b>Pre-construction (Sections 4 and 5)</b>		
Initial site preparation	State based OHS requirements for tree work Approved retention/removal Refer to AS 4373 for the requirements on the pruning of amenity trees Specifications for tree protection measures.	Compliance with conditions of consent.  Tree removal/tree retention/transplanting Tree pruning Certification of tree removal and pruning.  Establish/delineate TPZ Install protective measures Certification of tree protection measures.

Stage in Development	Tree Management Process	
	Matters for Consideration	Actions and Certificates
<b>Construction (Sections 4 and 5)</b>		
Site establishment	Temporary infrastructure Demolition, bulk earthworks, hydrology	Locate temporary infrastructure to minimise impact on related trees. Maintain protective measures Certification of tree protection measures.
Construction work	Liaison with site manager, compliance Deviation from approved plan	Maintain or amend protective measures Supervision and monitoring
Implement hard and soft landscape works	Installation of irrigation services Control of compaction work Installation of pavement and retaining walls	Remove selected protective measures as necessary Remedial tree works Supervision and monitoring
Practical completion	Tree vigour and structure	Remove all remaining tree protection measures Certification of tree protection
<b>Post Construction (Section 5)</b>		
Defects liability / maintenance period	Tree vigour and structure	Maintenance and monitoring Final remedial tree works Final certification of tree condition

**NOTES:**

1. Owing to variations in planning legislation, this Table is a general indication of the process only
2. Certification of tree protection and condition should be carried out by the project Arborist.

***Extract from Australian Standard 4970 – 2009 – Protection of Trees on Development Sites.***

The above Table shows clearly the process of tree protection on development sites as set out in the Australian Standard.

This Table should be followed in the management of all trees on development sites.

Depending on the stage of the project you are undertaking, the type of project you are undertaking and specific other requirements of various planning departments, in some instances additional reports may be required.

The above Table serves as an indicative guide to the process of managing and protecting trees.

## 8.0 References

Australian Standard® **AS4970-2009, *Protection of trees on development sites, 2009, Sydney***

Australian Standard® **AS4373-2007, *Pruning of Amenity Trees, 2007, Sydney***

Writings within the report are of the author's personal knowledge and belief. The information and knowledge released in the report when referenced should be referenced to

**Matt Branagh**, Dip.App.Scl – Horticulture/Arboriculture – Let's Talk About Trees.

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