

# ARBORICULTURAL REPORT

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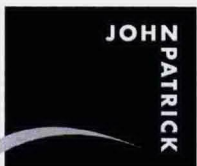
71 – 73 BEDDOE AVENUE, CLAYTON.

14 DECEMBER 2018

**PREPARED BY:**

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## 1 INTRODUCTION

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- 1.1 John Patrick, consulting arborists have been engaged by Southlink Developments to prepare this Arboricultural Report.
- 1.2 Their client is wanting to develop the site, known as **71 – 73 Beddoe Ave, Clayton** into a multi- storey student accommodation, with basement car parking. The Arboricultural Report is to accompany the planning permit application.

## 2 OBJECTIVES

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- 2.1 The intent of this report is to:
  - a) Assess the condition of trees within the subject site and those neighbouring that may be impacted by any redevelopment of the site.
  - b) Identify any trees worthy of retention and provide preliminary arboricultural advice to assist in their protection and retention.
- 2.2 Individual trees identified with a DBH of 150mm or less i.e. shrubs, were not assessed in this report unless rare or of unusual attributes.
- 2.3 The report will include the following;
  - Botanic / Common names
  - Origin
  - Tree Size (Height & Width)
  - DBH (Trunk Diameter)
  - Tree Health & Structural Condition
  - ULE (Useful Life Expectancy)
  - TPZ (Tree Protection Zones)
  - Arboricultural Value
  - Other tree characteristics of consideration.

## 3 METHODOLOGY

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- 3.1 On Tuesday 23 October 2018, I visited the site and undertook a visual assessment of the trees within the subject site and immediately neighbouring, that maybe impacted by the proposed development, (Parallel Workshop, Project No. 18195 Rev G, 06/12/2018).
  - The DBH of trees was measured using a diameter tape, measure at 1.4m above ground level in accordance with AS-4970 'Protection of Trees on Development Sites'.
  - DBH were estimated, where access was not available directly to the tree in neighbouring properties.
  - Heights of trees were measured using a laser range finder.
  - Widths were calculating by stepping out.
  - Tree Protection Zones (TPZ's) were calculated in accordance with AS-4970.

- 3.2 The tree assessment was undertaken from the ground by a suitably qualified and experienced arborist, with minimum AQF 5 qualification.
- 3.3 No aerial or diagnostic testing was undertaken of the trees or the soil in which they were growing.
- 3.4 Each tree was assigned an identification number for reference purposes, denoted in the Tree Data and on the Tree Location Plan which is based on the Nearmap October 2018. No feature survey was available at the time of inspection.

## 4 OBSERVATIONS

- 4.1 The site consists of two properties with mid 20 century, single storey weatherboard dwellings and detached garages on each, facing east.
- 4.2 There trees on the site are predominantly small fruit trees, but a large Lemon Scented Gum stump does exist in the front yard of 73. Two large eucalypts are growing on the boundary in 75. The front boundary of 71 has a mix of trees and shrubs, Pittosporum, Callistemon and Cotoneaster, that have been hedged to 3m in height for screening. The rear yard of 73 is dominated by small fruit trees.

### Site Photos



*Image 1: Site Map (Nearmap October 2018).*



*Image 2: Street frontage 23/10/2018, showing trees 11, 10, 9 & 1 (left – right).*

Tree Data

Tree No.	Botanic Name	Common Name	Origin	Size (m)	DBH (cm)	TPZ (m)	Age	Health	Structure	ULE (Yrs.)	Arb. Value	Comments
1	<i>Prunus cerasifera 'Nigra'</i>	Purple Leaf Cherry Plum	Exotic	4 x 3	10	2.0	Semi mature	Fair	Poor	0-5	Low	Council street tree front of 71
2	<i>Pittosporum undulatum</i>	Sweet Pittosporum	Vic. Native	8 x 5	twin 25	4.2	Mature	Good	Fair	5-10	Low	In 71
3	<i>Leptospermum petersonii</i>	Lemon Scented Tea-tree	Vic. Native	5 x 6	28/25	4.5	Over mature	Fair	Fair	5-10	Low	In 71
4	<i>Prunus cerasifera</i>	Cherry Plum	Exotic	5 x 4	multi 5	2.0	Mature	Good	Poor	0-5	Low	In 71
5	<i>Pittosporum undulatum</i>	Sweet Pittosporum	Vic. Native	5 x 5	twin 10	2.0	Semi mature	Good	Poor	0-5	Low	In 71
6	<i>Laurus nobilis</i>	Bay Tree	Exotic	7 x 6	multi 5	2.4	Mature	Good	Poor	5-10	Low	In 71
7	<i>Prunus cerasifera 'Nigra'</i>	Purple Leaf Cherry Plum	Exotic	7 x 6	40	4.8	Mature	Good	Poor	0-5	Low	On rear boundary in 74 Marshall Ave. Covered in ivy
8	<i>Acacia baileyana</i>	Cootamundra Wattle	Aus. Native	6 x 7	30	3.6	Over mature	Fair	Fair	0-5	Low	In 73. In decline
9	<i>Allocasuarina torulosa</i>	Rose She-oak	Aus. Native	6 x 7	45	5.4	Mature	Good	Fair	5-10	High	Street tree front of 73
10	<i>Callistemon citrinus</i>	Bottlebrush	Aus. Native	7 x 6	Multi 10	2.4	Over mature	Poor	Poor	0-5	Low	In 73
11	<i>Eucalyptus robusta</i>	Swamp Mahogany gum	Aus. Native	13 x 14	120	14.4	Mature	Good	Fair	10-20	High	On boundary in 75 Beddoe Ave
12	<i>Prunus cerasifera 'Nigra'</i>	Purple Leaf Cherry Plum	Exotic	6 x 5	twin 15	2.5	Mature	Good	Fair	0-5	Low	In 73
13	<i>Eucalyptus nicholii</i>	Narrow Leaf Black Peppermint	Aus. Native	12 x 6	40	4.8	Mature	Fair	Fair	5-10	Medium	On boundary in 75 Beddoe Ave. Top dying off

NOTE: All neighbouring trees to the subject site, must be protected in accordance with AS-4970 'Protection of Trees on Development Sites', unless negotiated with their owner.

Tree Photos



Image 3: Front yard of 71.



Image 4: Stump front of 73.



Image 5: Rear yard of 71, showing Trees 3 - 7. Lemon in foreground not surveyed, riddled with wasp gall.



Image 6: Rear yard of 73 showing Tree 12 behind shed and other fruit trees not assessed.



Image 7: Tree 11, looking from 73



Image 8: Tree 13, with top dying off

## Vegetation Controls

- 4.3 A search of the Planning Maps Online website identified 'No' Planning Overlays protecting vegetation on the site.
- 4.4 A search of the City of Monash website identified 'No' Local Laws protecting vegetation on site.

**\*Note: It is recommended that vegetation controls be confirmed with the local authority prior to any tree removal.**

## 5 DISCUSSION

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- 5.1 Tree 1, is a council street tree of poor structure. It is not worthy of retention and its removal and replacement could be justified, with the approval of the responsible authority.
- 5.2 There are no trees within 71, that are of a condition worthy of retention and therefore they all have a low arboricultural value. They are all proposed to be removed.
- 5.3 There are no trees in 73 that are worthy of retention because of their poor condition. There are several fruit trees in the rear yard, that were not assessed, due to their small size.
- 5.4 Tree 9, a council owned street tree at the front of 73, is proposed to be removed to allow for the installation of the new driveway crossover. There is opportunity to replace it with a new tree in the nature strip, further north because the crossover to 71 is being removed. Its removal and replacement must be approved in writing by the City of Monash.
- 5.5 Tree 11 and 13 are growing on the boundary in 75 and need to be protected in accordance with AS-4970. Their TPZ's cannot be encroached greater than 10% of their overall TPZ, unless it can be proven the trees will not be detrimentally impacted. I.e. a non-destructive root investigation.
- 5.6 Tree 11, is encroached 17% in total. However, 7% of that is for the vehicle crossover and section of driveway in the front setback, before it descends into the basement. If this area is constructed at existing ground level and made permeable, then Tree 13 can be retained in a healthy condition. The large Lemon Scented Gum, whose stump remains, was growing in this area and is likely to have prevented many roots from Tree 11 to encroach into the alignment of the driveway. Thus, it is not expected that roots of Tree 11 will be significantly impacted, if at all.
- 5.7 Tree 13, is encroached 8.8% by the basement. This is within the 10% allowed in accordance with AS-4970 'Protection of Trees on Development Sites, and therefore can be retained in a healthy condition.
- 5.8 Installation of underground services I.e. gas, water etc. are not to be trenched through the TPZ of retained trees, including council and neighbouring trees. Boring must be used or hydro-vac, if installing services within the TPZ.

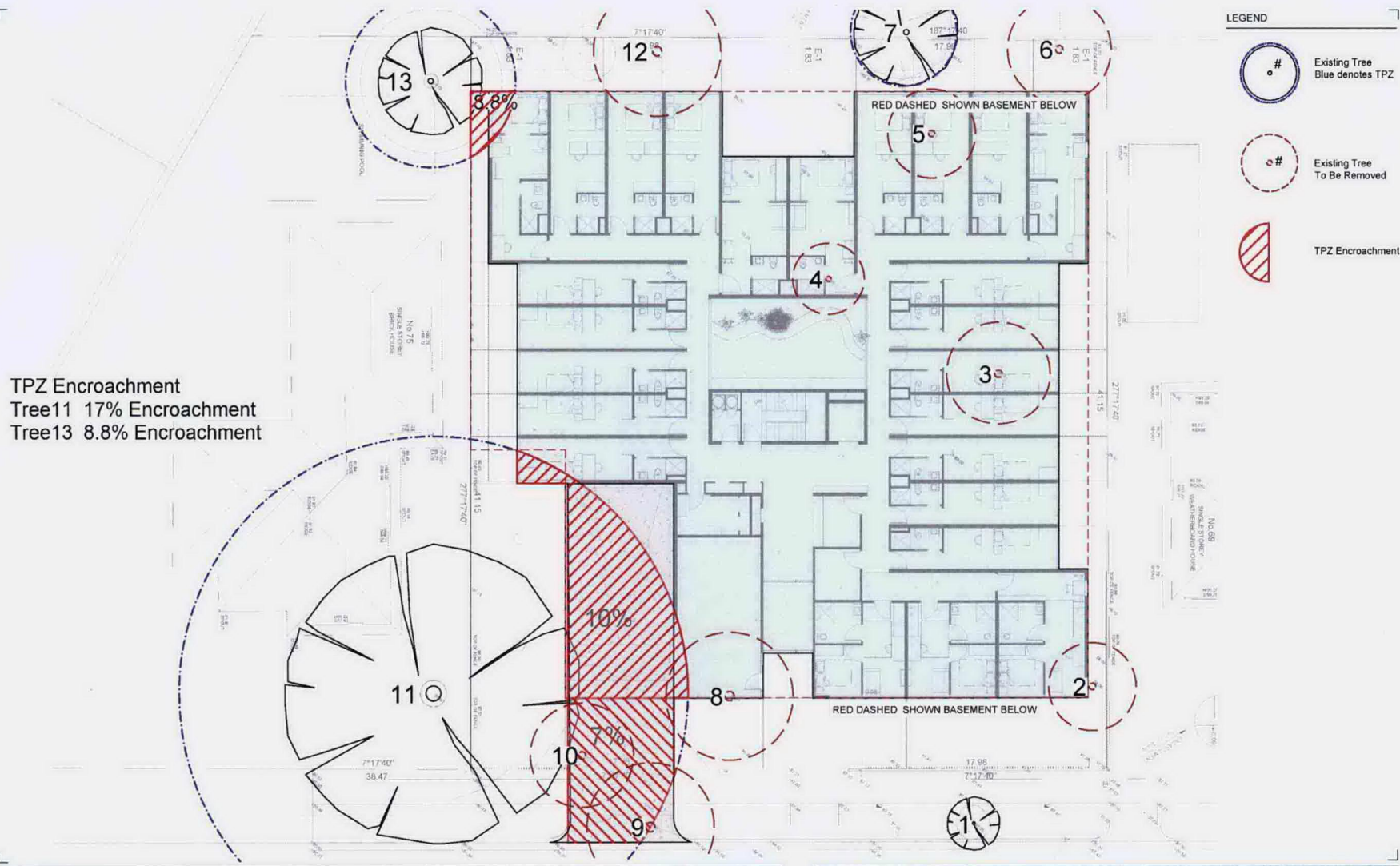
## 6 CONCLUSION

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- 6.1 A tree assessment of the trees within and directly neighbouring the site was undertaken on the 23/10/2018.
- 6.2 There are no trees on the subject site worthy of retention due to their small size or poor condition. All are proposed to be removed.

- 6.3 The removal of Tree 9, is proposed for the installation of the new crossover. This must be negotiated and agreed to by the City of Monash.
- 6.4 Neighbouring Trees 11 and 13, are encroached by the proposed development. However, engineering solutions, such as the driveway within the front setback, being constructed at existing ground level and made permeable, will allow for encroachments to be reduced below the 10% in accordance with AS-4970 and therefore Trees 11 and 13 can be retained in healthy conditional.
- 6.5 A Tree Management Plan must be prepared and implemented prior to any works occurring on the property, including demolition, to ensure neighbouring trees, to be retained are protected. An arborist must oversee any excavations within the TPZ of Trees 11 and 13 to ensure roots are not indiscriminately damaged.

7 TREE LOCATION PLAN



TPZ Encroachment  
 Tree11 17% Encroachment  
 Tree13 8.8% Encroachment

**LEGEND**

- Existing Tree  
Blue denotes TPZ
- Existing Tree  
To Be Removed
- TPZ Encroachment

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**CLIENT**  
 Southlink Developments Pty Ltd

**DRAWING**  
 Tree Location Plan

**PROJECT**  
**TREE ASSESSMENT**  
 71-73 Beddoe Avenue, Clayton



<b>SCALE</b>	1:200 @ A3
<b>DATE</b>	SEP 2018
<b>DRAWN</b>	SO
<b>CHECKED</b>	MR
<b>JOB NO</b>	18-0799
<b>DWG NO</b>	TLP-01



## APPENDIX 1: DESCRIPTORS

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### Tree Number:

Refers to the identification number for reference purposes, denoted on the Tree Data and Tree Survey Plan.

### Botanical Name:

Botanical name of species, based on nomenclature and spelling used by Spencer in *Horticultural Flora of South Eastern Australia* (vols 1-5). Where *Eucalyptus spp.* are not found in this source, nomenclature is based on *Euclid: Eucalypts of Australia* (2006). Eucalypt subspecies information is also based on this source.

While accurate tree identification is attempted, and uncertainties are indicated, some inaccuracies in tree identification may still be present – especially in certain, difficult to determine, genera (e.g. *Cotoneaster* and *Ulmus*) and with cultivars which can have similar characteristics.

Where a doubt as to exact species is indicated, the common name and origin are based on the listed species and would change if the species were found to be incorrect.

From time to time taxonomists revise plant classification, and name changes are assigned. If it is known names have been revised post the publication of the relevant above listed source, the new nomenclature has been used.

### Common Name:

Common names are based primarily on names and spelling used by Spencer in *Horticultural Flora of South Eastern Australia* (vols 1-5). The source of common names is taken in the following order:

- Single name supplied in *Horticultural Flora of South Eastern Australia*;
- First in list of names supplied in *Horticultural Flora of South Eastern Australia*, unless another name in the list is deemed more appropriate;
- As per name supplied in *Trees of Victoria and Adjoining Areas*;
- Then by best known common name if not available in either source.
- Common names are provided for thoroughness; the botanical name should be used when referring to the tree taxon.

### Origin:

**Exotic:** Tree origin is from outside the Australian mainland, Tasmania or near islands.

**Australian Native:** Origin is from within the Australian mainland or near islands, but outside Victoria.

**Melbourne:** Origin is from within Melbourne, as defined by plants listed in the *Flora of Melbourne*.

This includes trees also found outside Melbourne, and those only within the area at the far extent of their range.

**Indigenous:** Tree's range includes the local area.

### Type:

**Deciduous:** Tree seasonally loses its leaves in Victoria.

**Evergreen:** Tree maintains its leaves throughout the year.

**Semi-deciduous:** Tree may or may not lose its leaves or may only partially lose them.

**Palm:** Tree is a monocotyledon Palm (that is *Arecaceae*).

**Palm Like:** Tree is a monocotyledon but is not a palm (that is not *Arecaceae*).

**Weed Potential:** Trees known to show tendencies to weediness within Victoria.; refer to the Department of Primary Industries website for further information.

**Age:**

**Juvenile:** Tree has recently been planted and is still in its establishment phase. Tree currently makes little contribution to the amenity of the landscape. Trees of this age are possible candidates for relocation during development.

**Semi-mature:** Tree has established. It still has not developed its mature habit. It is starting to contribute to the landscape. The size of the tree would still be expected to increase considerably given no significant changes to the current situation.

**Maturing:** Tree has developed its mature structural habit but still has substantial potential to increase in size.

**Mature:** Tree has or is close to reaching its full potential and expected size. Growth has slowed, and the size of Tree is not exhibiting any major signs of health or structural weakness because of age.

**Over mature:** Tree is no longer actively putting out extension growth and is starting to show signs of decline in health because of age. Canopy is thinning and signs of die back in the canopy may be present

**Height:** The tree's height in metres

**Width:** The trees average canopy width in meters. There may be widths of the canopy that are shorter or longer depending the dissection of the canopy.

**DBH:**

The tree's trunk Diameter at Breast Height (1.4m above ground) In accordance with AS-4970, unless specified as having been taken lower. This can be either estimated or measured as specified in the report.

Stems of multi-stemmed trees may be listed individually, or a measurement given at a lower point where the tree still has one stem. In some cases, especially where trees are not considered worthy of retention or stems are too numerous the DBH may simply be listed as 'multi-stemmed'.

**Health:**

**Good:** Tree is not stressed and shows no obvious signs of pest or disease. It is free of wounding. Annual growth rate is what would be expected of a healthy specimen in the area. There are no signs of die back and canopy is dense. Tree maybe partially suppressed by neighbouring trees.

**Fair:** Tree is showing signs of reduced health. It maybe drought stressed or show partial signs of pest or disease. Foliage density is less than ideal and may have minor die back. Tree is typical of its species. Remedial works could improve its health.

**Poor:** Tree is showing signs of stress. Has sparse canopy and possibly stunted growth. Large number of dead branches present or dieback. Likely to have pests or disease. Tree often in decline. Remedial works not expected to improve long-term health.

**Dead:** Tree shows no signs of life and is not growing.

**Note on Deciduous Species:** Assessment of deciduous species can be problematic, and results may vary depending on the time of year of assessment. Descriptor comments in relation to foliage density do not apply to deciduous trees assessed when dormant or entering or exiting dormancy. Time of leaf drop, or bud burst, and extent of bud swell may be considered in the health rating of these trees.

The ratings indicate that certain characteristics listed have or have not been observed. Inspections do not assess the whole tree in detail for each characteristic. The comments category should be referred to for further information.

**Structure:**

As a rule, the structure rating is based on identified faults in the tree habit that reduce trees structural integrity and may lead to part / all of the tree failing.

However, it must be noted that this is not a full hazard or failure assessment of the tree.

**Good:** Tree appears to have no obvious structural defects that would diminish the trees structural integrity.

**Fair:** The tree has at least one or more obvious structural defects. E.g. dead branches, bifurcation. However, defects are unlikely to prevent the retention of the tree. Judicious remedial intervention could remove structural defects and improve rating.

**Poor:** Tree has at least one or more structural defects that remedial intervention cannot rectify without significantly reducing the retention value of the tree. These defects reduce the useful life expectancy of the tree.

**Hazardous:** The tree shows one or more structural faults that are prone to failure and present an immediate safety concern. Judicious intervention to remove structural faults and reduce safety risk would leave a tree not worthy of retention. These trees should be removed as a high priority.

**Arboricultural Value:**

There Arboricultural Values shown in the table below have been calculated on the ULE of the tree which considers the tree’s structure and health rating and its significance in the landscape.

The retention value assists in determining the positioning of structures and infrastructure outside the tree’s identified TPZ.

ULE	Arboricultural Value			
	High	Medium	Low	Very Low
20+ yrs.	High Retention	Medium Retention	Low	Very Low
10-20 yrs.	Medium Retention			
5-10 yrs.				
0-5 yrs.	Low Retention			Very Low
0 yrs.	Remove			

**ULE:**

The Safe, Useful, Life Expectancy of the tree from a health, structure, amenity and weediness viewpoint given no significant changes to the current situation. This category is difficult to determine, and should be taken as an estimate only, in addition to this, factors not observed at the time of inspection can lead to tree decline.

- **0 yrs.:** Tree should be removed due advanced decline/ dead or hazardous.
- **0-5 yrs.** Tree is in decline and has poor health or structural that intervention cannot resolve. Often over- mature
- **5-10yrs.** Tree of fair health or structure
- **10-20.** Semi-mature, mature tree of fair health and structure
- **20+ yrs.** Juvenile, semi-mature tree or long-lived species of good health and structure.

**TPZ (Tree Protection Zone)**

The Tree Protection Zone of the tree, measured as a radial distance in metres from the centre of the trunk. The TPZ is calculated using the method specified in *Australian Standard AS4970-2009 Protection of trees on development sites*.  $12 \times \text{DBH} = \text{TPZ}$

**Recommendation:**

i.e. Further exploratory root investigation, alterations to plan to retain trees successfully.

**Comments:**

Any additional comments specific to individual tree specimens.

**AS-4970**

The recognised Australian Standard for the 'Protection of Trees on Development Sites'. It provides guidelines of how to protect trees and provides formulas for calculating Tree Protection Zones (TPZ's), Structural Root Zones (SRZ's) and the Diameter at Breast Height (DBH).

**AS-4373**

The recognised Australian Standard for the 'Pruning of Amenity Trees'. It provides guidelines on how to prune a tree to encourage good health and structure.

**Ecological Vegetation Class (EVC)**

A type of native vegetation classification that is described through a combination of its floristics, life form and ecological characteristics, and through an inferred fidelity to environment attributes. Each EVC includes a collection of floristic communities (i.e. lower level in the classification that is based solely on groups in the same species) that occur across a biogeographic range, and although differing in species, have similar habitat and ecological processes operating.