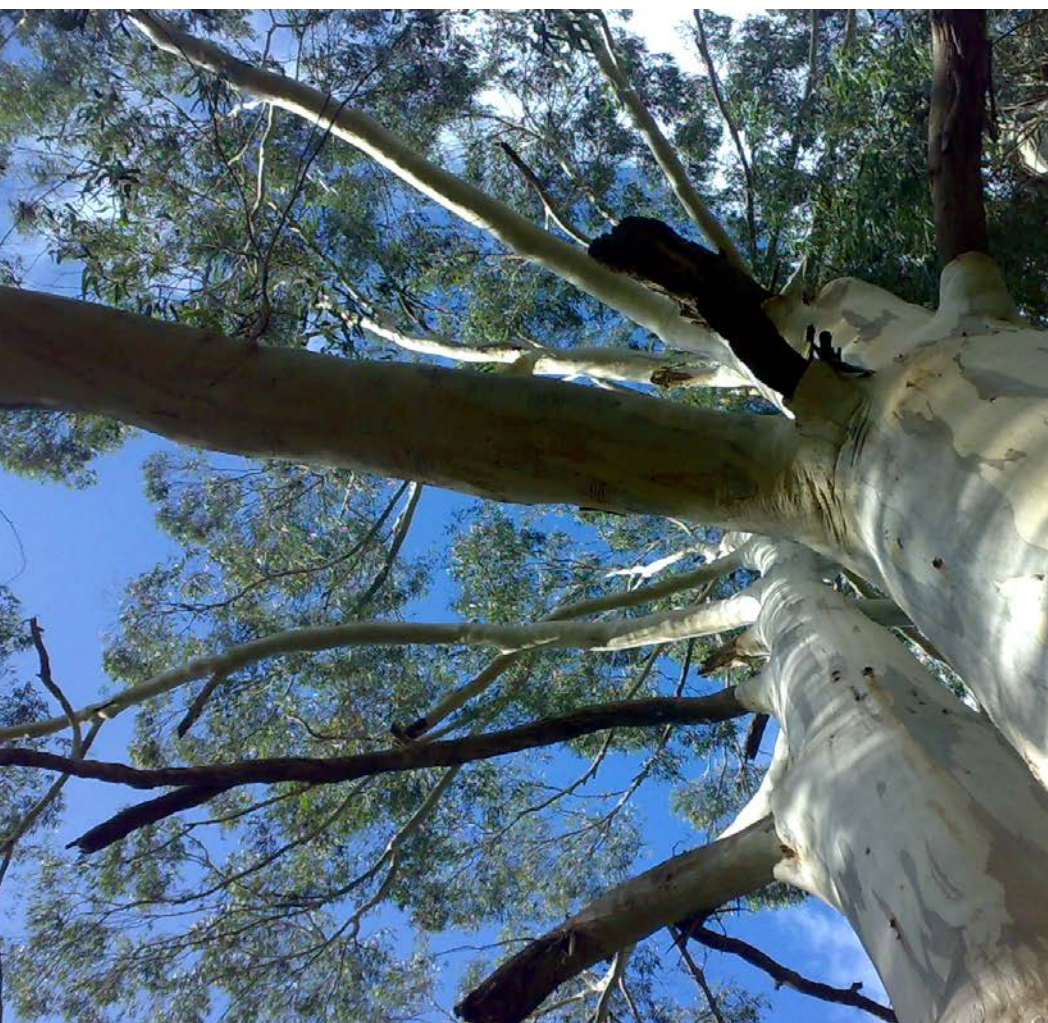


CARDINIA SHIRE COUNCIL SIGNIFICANT TREE STUDY

MAY 2009

VOLUME 2 – TREE ASSESSMENT STAGE 1



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ADDITIONAL VOLUMES:

VOLUME 1: MAIN REPORT

NOTE ON THIS REPORT

This study has been undertaken to identify trees of natural and cultural significance. Apart from a cursory review it is not an assessment of the condition of trees, or of their safety. An on-going program of tree safety should be undertaken as part of a due diligence programme on subject sites.

Assessments and recommendations have been made on the current available information and conditions at the time of assessment or writing. Sources of information, documental and verbal, are presumed to be accurate, except where inaccuracies or discrepancies are known, and allowances have been

made as considered appropriate.

References to “tree” or “tree’ s” also refer to groups assessed as a single entity.

1 INTRODUCTION TO VOLUME 2

The data sheets contained in this Volume of the Cardinia Shire Council Significant Tree Study are those produced for significant trees identified as part of the original 2008 study. It is intended that as further significant trees are identified then additional volumes will be produced with these data sheets. Any person seeking a comprehensive list of registered Significant Trees within the Shire of Cardinia should contact council to confirm that they have all relevant volumes of this report.

This volume is to be read in conjunction with the *Cardinia Shire Council Significant Study: Volume 1* (John Patrick Pty Ltd, October 2008) which contains the body of the report including background information and further recommendations.

2 SUMMARY OF SIGNIFICANT SITES

Township	Address	Species / Site Name	Tree No.	Pg.
Beaconsfield	40 Railway Avenue	<i>Quercus canariensis</i> × <i>robur</i> Hybrid Oak	01-3807-02	42
Beaconsfield Upper	120, A' Beckett Road	<i>Pinus radiata</i> Monterey Pine	01-3808-01	44
Beaconsfield Upper	10-12 Salisbury Road	<i>Ulmus</i> × <i>hollandica</i> 'Vegeta' Huntingdon Elm	01-3808-02	46
Catani	55 Taplins Road	<i>Quercus canariensis</i> , Algerian Oak	01-3981-01	72
Cockatoo	McBride Street	<i>Quercus rubra</i> Red, Hybrid and English Oak	01-3781-02	11
Cockatoo	Alma Treloar Reserve, 79 Pakenham Road	<i>Prunus laurocerasus</i> Cherry Laurel	01-3781-01	8
Cora Lynn	Corner of Dessent & Main Drain Road	<i>Quercus robur</i> English Oak	01-3814-02	70
Emerald	2-28 Monbulk–Emerald Road	<i>Quercus palustris</i> Pin Oak	01-3782-07	20
Emerald	29-63 Beaconsfield - Emerald Road	<i>Prunus laurocerasus</i> Cherry Laurel(Hedge)	01-3782-01	14
Emerald	6 Brookdale Avenue	<i>Laurus nobilis</i> Bay Laurel	01-3782-02	16
Emerald	356-358 Belgrave- Gembrook Road	<i>Chamaecyparis</i> <i>lawsoniana</i> cv Lawsons Cypress & <i>Chamaecyparis obtusa</i> cv, Hinoki Cypress	01-3782-06	18

Township	Address	Species / Site Name	Tree No.	Pg.
Emerald	Railway Reserve along Sellars Road	<i>Fagus sylvatica</i> Beech	01-3782-08	23
Emerald	Station Street/Williams Street/Ambrose Street	<i>Ulmus × hollandica</i> Dutch Elms	01-3782-09	26
Garfield	6 Campbell Street	<i>Washingtonia robusta</i> Cotton Palm	01-3814-01	67
Gembrook	Bank Smith Drive	<i>Tilia cordata</i> Small-leaved Linden	01-3783-01	30
Gembrook	Main Street	<i>Quercus canariensis</i> , Algerian Oak	01-3783-02	32
Gembrook	Redwood Drive	<i>Quercus robur</i> Hybrid Oaks, Oaks	01-3783-03	36
Gembrook	Ure Road	<i>Eucalyptus obliqua</i> , Messmate	01-3783-04	40
Officer	13-23 Tivendale Road	<i>Quercus canariensis</i> Algerian Oak	01-3809-01	50
Pakenham	9-13 Main Street	<i>Quercus canariensis</i> Algerian Oak	01-3810-02	55
Pakenham	Princes Hwy & Oaktree Drive intersection	<i>Quercus robur</i> English Oak	01-3810-03	58
Pakenham	North-east corner of Syme and Toomuc Valley Road	<i>Quercus robur</i> English Oak	01-3810-04	61
Pakenham Upper	Corner of Bourke Creek Road & Pakenham Road	<i>Corymbia maculata</i> Spotted Gum & <i>Corymbia citriodora</i> Red Flowering Gum	01-3810-01	52
Tynong	Railway Avenue	Tynong War Memorial Planting	01-3813-01	64

3 DATA SHEETS

**CHERRY LAUREL, ALMA TRELOAR RESERVE,
79 PAKENHAM ROAD, COCKATOO**

TREE NO: 01-3781-01

Botanical Name:	<i>Prunus laurocerasus</i>
Common Name:	Cherry Laurel
Address:	Alma Treloar Reserve, 79 Pakenham Road
Suburb/Township:	Cockatoo
Setting/Position:	Beside gravel car park on west side of Senior Citizen's Centre. A third Cherry Laurel appears to have been removed from the embankment near the Senior Citizen's building.
Number of Trees:	2
Public/Private:	Public
GPS Location:	145.49051301400, -37.93667477200 145.49051980000, -37.93679826970
Height:	7m
Canopy N-S:	9m
Spread E-W:	8m
Trunk	Girth: 120, 75, 115cm DBH: 38, 24, 37cm
Approximate Age:	>65 years
Projected amenity period:	Short/Medium
TPZ:	9m



Figure 1- Close-up of Kettle embedded in trunk of Cherry Laurel



Figure 2 - View of Cherry Laurel trees from car park

History:	The site of Alma Treloar Reserve was owned by a succession of local families prior to acquisition by the local Shire. The park is named after the last private owner. A kettle, used to carry chicken feed, was accidentally left by Treloar's son in the crotch of a Cherry Laurel, c.1940. It was not re-discovered until years later, firmly embedded in the branches of the tree, where it remains to this day. It is known as the Tea Pot Tree.
Integrity:	The kettle remains firmly embedded in the tree.
Significant Features:	Larger (southern) tree has an iron kettle embedded within the trifurcation.
Comparative Analysis:	Cherry Laurels are widespread throughout Cardinia and have become a weed in southern Victoria. The size of these trees suggests they are early plantings within the municipality and notable for their age.
Statement of Significance:	
What is significant?	Two Cherry Laurels (<i>Prunus laurocerasus</i>) beside a gravel car park on west side of Senior Citizen's Centre, Alma Treloar Reserve, Cockatoo.
How is it significant?	The Cherry Laurels at Alma Treloar Reserve are of local significance to Cardinia Shire.
Why is it significant?	For their outstanding age, an early surviving planting of this taxon. The "Tea Pot Tree" is of significance for its association with a prominent local family and the last owners of the site prior to acquisition as a park, and its role as a talking point and local curiosity.
Level:	Local Significance
Categories of Significance:	A1C Historical Associations B2C Age E2C Embedded Kettle

Tree Condition:	Trees are over mature, with suckers at the base. The larger tree has two large scars on the west side.
Threats/Risks:	<ul style="list-style-type: none"> • Mechanical damage to trees from vehicles using car park. • Paving of car park and damage to tree roots during construction works / modification of water availability to root zone. • Removal due to weedy reputation of taxon.
Management Prescriptions:	<ul style="list-style-type: none"> • Remove suckers from base of trees. • Regular assessment and maintenance.
Extra Research:	None specified
Tree Rating:	Five (5)
References:	Personal Communication, Dot Griffin, Cockatoo History Committee, October, 2008
Assessed By:	SH-JPLA
Date:	July 2008

**RED, HYBRID AND ENGLISH OAKS,
MCBRIDE STREET, COCKATOO**

TREE No: 01-3781-02

Botanical Name:	Quercus rubra, Q. canariensis × robur, Q. robur
Common Name:	Red Oak, Hybrid Oak, English Oak
Address:	McBride Street
Suburb/Township:	Cockatoo
Setting/Position:	Within nature strip on McBride Street, northern end of Alma Treloar Reserve
Number of Trees:	12
Public/Private:	Public
GPS Location:	145.49061980700, -37.93549632990 145.49051891200, -37.93547902690 145.49041895800, -37.93546908630 145.49033506000, -37.93545457250 145.49022949600, -37.93543760060 145.49096880000, -37.93573963000 145.49089538800, -37.93572921560 145.49075121600, -37.93571589360 145.49065509900, -37.93570803020 145.49056710000, -37.93568783040 145.49026312700, -37.93570387210 145.49014778900, -37.93568605460
Height:	16m
Canopy N-S:	16m
Spread E-W:	12m
Trunk	Girth: 170cm DBH: 54cm
Approximate Age:	>50years
Projected amenity period:	Medium/Long
TPZ:	16m



Figure 3 - Oaks overhanging the footpath



Figure 4 - Oaks within the Streetscape

History:	These trees are believed to have been planted c.1950's. There are possible links between these trees and an earlier World War I memorial planting located at the former Cockatoo Primary School site; however this is yet to be verified.
Integrity:	Good
Significant Features:	A mixed planting, with Red Oaks on the south side of the carriageway, and a mixed plantation on the north side. The trees contribute to the amenity of the adjacent reserves.
Comparative Analysis:	This is a fine mixed plantation of Oaks within Cardinia, comparable to the World War II Avenue of Honour at Emerald.
Statement of Significance:	
What is significant?	The mature Red, Hybrid and English Oaks at McBride Street, Cockatoo, located within nature strip at the northern end of Alma Treloar Reserve.
How is it significant?	The Red, Hybrid and English Oaks are of local significance to Cardinia Shire.
Why is it significant?	For their contribution to the amenity of the surrounding streetscape, creating an informal entry to the Cockatoo township.
Level:	Local
Categories of Significance:	EIC Contribution to landscape
Tree Condition:	Trees appear in fair health. Limited deadwood is evident in canopies.
Threats/Risks:	<ul style="list-style-type: none"> • Road works within tree root zones. • Compaction / mechanical damage from vehicles parking on nature strip. • Removal due to hazard posed by shed acorns on footpath.
Management Prescriptions:	<p>Regular assessment and maintenance.</p> <p>Address deadwood issue within plantation, particularly in regards hazard reduction along a busy thoroughfare.</p>

Extra Research: Investigate link between this plantation and the earlier World War I commemorative avenue.
Undertake detailed Avenue of Honour survey for entire Shire.

Tree Rating: Five (5)

References: Personal Communication, Dot Griffin, Cockatoo History Committee, October, 2008

Assessed By: SH-JPLA

Date: July 2008

**CHERRY LAUREL HEDGE,
29-63 BEACONSFIELD-EMERALD ROAD, EMERALD**

TREE NO: 01-3782-01

Botanical Name:	<i>Prunus laurocerasus</i>
Common Name:	Cherry Laurel Hedge
Address:	29-63 Beaconsfield-Emerald Road
Suburb/Township:	Emerald
Setting/Position:	Within street frontages of residential blocks
Number of Trees:	Numerous
Public/Private:	Private
GPS Location:	363856.173, 5800243.699
Height:	1.2-4m
Canopy N-S:	N-S: n/a
Spread E-W:	E-W: n/a
Trunk	n/a
Approximate Age:	Age: >40 years
Projected amenity period:	Medium/Long
TPZ:	3m



Figure 5 - View along Beaconsfield Emerald Road north towards Emerald of Cherry Laurel Hedge



Figure 6 - View along Beaconsfield Emerald Road facing north of Cherry Laurel Hedge

History:	The hedge is believed to be associated with the former Nobelius Nursery site, forming a planting along the former western boundary.
Integrity:	Good. Hedge is continuous for at least 500m along properties' boundaries.
Significant Features:	Best maintained section is from No 41 to No 57.
Comparative Analysis:	This hedge planting is unusual in that extends as a relatively uniform plantation throughout a number of private residential properties. Hedges of such an extent are usually seen associated with larger, single rural holdings.
Statement of Significance:	
What is significant?	An extensive Cherry Laurel Hedge located from 29-63 Beaconsfield-Emerald Road, Emerald.
How is it significant?	
Why is it significant?	As an outstanding and continuous hedge plantation within Cardinia, forming a feature on the roadside on the approach to the Emerald township from the south.
Level:	Local
Categories of Significance:	DIC Outstanding example of cultivation technique
Tree Condition:	The hedge appears to be in fair health. Maintenance varies along its length from tightly clipped sections approximately 1.2 meters high, to unclipped sections 3-4 metres in height.
Threats/Risks:	<ul style="list-style-type: none"> • Removal of sections of the hedge by individual owners, reducing its continuity. • Failure to maintain sections of the hedge as a clipped massing.
Management Prescriptions:	Encourage owners to maintain the Cherry Laurels as a clipped hedge
Further Research:	Assess the hedge as part of the broader landscape that was once part of the Nobellius Nursery site
Tree Rating:	Five (5)
Assessed By:	SH-JPLA
Date:	July 2008

BAY TREE
6 BROOKDALE AVENUE, EMERALD

TREE NO: 01-3782-02

Botanical Name:	Laurus nobilis
Common Name:	Bay
Address:	6 Brookdale Avenue
Suburb/Township:	Emerald
Setting/Position:	Within expanse of unmown turf (formerly grazed) on vacant block as part of residential subdivision.
Number of Trees:	1
Public/Private:	Private
GPS Location:	145.44384758200, -37.91826981560
Height:	6m
Canopy N-S:	N-S: 8m
Spread E-W:	E-W: 9m
Trunk	multi-stemmed
Approximate Age:	>70 years
Projected amenity period:	Medium/Long
TPZ:	10m



Figure 7 - Bay in paddock setting

History:	Part of the early landholding of the site developed c.1920's. Latter bequeathed to the Trust for Nature and managed by Burnley College (University of Melbourne), the land has recently been subdivided for sale.
Integrity:	The tree is now located on a residential lot as part of the front yard of a dwelling, near a circular driveway.
Significant Features:	The unusual raised canopy (giving a distinct mushroom shape) was caused by grazing horses. With their removal from the site, the tree is reverting to a more "natural" form.

Comparative Analysis:	A number of laurels of a comparable size can be found in a number of historic metropolitan parks and gardens, such as Edinburgh Gardens, Fitzroy North.
Statement of Significance:	
What is significant?	The Bay tree, within expanse of unmown turf (formerly grazed) on vacant block at Brookdale Avenue, Emerald.
How is it significant?	The tree is of local significance to Cardinia Shire
Why is it significant?	The Bay is an outstanding example of this taxon notable for its size and growth form, dating from the early history of the area.
Level:	Local
Categories of Significance:	B2C Outstanding age
Tree Condition:	The tree appears to be in good health.
Threats/Risks:	<ul style="list-style-type: none"> • The mushroom shaped form is likely to be lost due to the removal of horses and the changed land use of the site. • Removal for residential construction works. Root disturbance close to the tree for development works, e.g. installation of services.
Management Prescriptions:	Ensure the tree is adequately protected during future construction or other development works within the precinct. Regular assessment and, if necessary, maintenance.
Tree Rating:	Four (4)
Assessed By:	SH-JPLA
Date:	July 2008

**LAWSON'S CYPRESS, HINOKI CYPRESS,
356-358 BELGRAVE-GEMBROOK ROAD, EMERALD**

TREE NO: 01-3782-06

Botanical Name:	Chamaecyparis lawsoniana CV, Chamaecyparis obtusa CV
Common Name:	Lawson's Cypress and Hinoki Cypress
Address:	356-358 Belgrave Gembrook Road, Emerald
Suburb/Township:	Emerald
Setting/Position:	Specimen trees within grassed area adjacent to road reserve
Number of Trees:	3
Public/Private:	Public
GPS Location:	145.44166810000, -37.93204456000 145.44153200000, -37.93215034010 145.44142690000, -37.93222300990
Height:	15m
Canopy N-S:	N-S: 6m
Spread E-W:	E-W: 6m
Trunk	Trunk girth: 155cm DBH: 49cm
Approximate Age:	>50 years
Projected amenity period:	Long
TPZ:	5.9m



Figure 8 - Lawson's Cypress and Hinoki Cypress trees in streetscape setting

History:	Trees appear to be associated with the development period of the site, contemporary with the construction of the adjacent Hall. Further research is required into the history of these trees
Significant Features:	Trees read as three tree plantings.

Comparative Analysis:	A number of other mature conifer cultivars are located throughout the Emerald area. Many of these trees were stock from the former Nobelius Nursery.
Statement of Significance:	
What is significant?	Two Lawson's Cypress (cultivars) and one Hinoki Cypress (cultivars) planted as specimen trees within grassed area adjacent to road reserve, Main Street Emerald.
How is it significant?	The trees are of local significance within Cardinia Shire.
Why is it significant?	The Lawson's and Hinoki Cypresses are of significance for their high amenity value and contribution to the broader streetscape. The trees represent a planting style typical of the early to mid-20th century which has since fallen out of fashion, that is, specimen plantings of hybridized coniferous trees.
Level:	Local
Categories of Significance:	EIC Aesthetic contribution to landscape
Tree Condition:	The trees appear to be in good health. All have had their lower canopies raised, but generally retain their natural, symmetrical forms.
Threats/Risks:	Mechanical damage to tree trunks from mowing machinery. Development within/adjacent to trees. Works in the adjacent road reserve leading to root damage.
Management Prescriptions:	Regular assessments and ongoing maintenance.
Extra research	Identify planting period for these trees and relationship with adjacent built environment i.e. Hall/Church building.
Tree Rating:	Five (5)
Assessed By:	SH-JPLA
Date:	25th June 2008

**PIN OAK ROW,
2-28 MONBULK–EMERALD ROAD, EMERALD**

TREE NO: 01-3782-07

Botanical Name: Quercus palustris
Common Name: Pin Oak
Address: 2-28 Monbulk–Emerald Road
Suburb/Township: Emerald
Setting/Position: Street trees on east side of carriageway within road reserve
Number of Trees: 24
Public/Private: Public
GPS Location: 145.44489472700, -37.92777422340
145.44478817000, -37.92768185300
145.44459805400, -37.92750939600
145.44448427900, -37.92742473270
145.44438612700, -37.92734876620
145.44418871100, -37.92716589210
145.44407056900, -37.92707625360
145.44399490200, -37.92701956030
145.44391411100, -37.92692873300
145.44370052100, -37.92673064430
145.44360255400, -37.92663097850
145.44349479900, -37.92649364010
145.44343590000, -37.92642298040
145.44330290100, -37.92624797030
145.44318160000, -37.92610639960
145.44300130000, -37.92593985030
145.44293260000, -37.92583256030
145.44288750000, -37.92576650970
145.44281713200, -37.92540920660
145.44287200000, -37.92525605040
145.44287749900, -37.92515153040
145.44291120000, -37.92499873040
145.44303350000, -37.92476739000
145.44306320000, -37.92468591990
Height: 18m
Canopy N-S: N-S: 13m
Spread E-W: E-W: 11m
Trunk Trunkgirth: 170cm
DBH: 54cm
Approximate Age: >50 years
Projected amenity period: Long
TPZ: 6.5m



Figure 9 – Individual Pin Oaks specimen's within the avenue



Figure 10 – Avenue of Pin Oaks in streetscape context

History:	These trees form the World War II Avenue of Honour. The size of the trees suggests they date from the early post-war period.
Integrity	Good. The row is comparatively uniform along its length with few gaps. It is not known if the plantation extended to the west side of the carriageway, and was subsequently removed.
Significant Features:	Continuity and scale of the row.

Comparative Analysis:	Other notable street tree row and avenue plantations are located within Cardinia. Local examples include the Elms along Station St, Emerald and the Oak Avenue, Main Street, Gembrook and the Gembrook Avenue of Honour. A similar World War II Avenue of Honour, planted with the same taxon, is located at the town of Cardinia.
Statement of Significance:	
What is significant?	The row of Pin Oak street trees on east side of carriageway within road reserve, adjacent to 2-28 Monbulk-Emerald Road, forming the World War II Avenue of Honour.
How is it significant?	The street trees are of local significance to Cardinia Shire.
Why is it significant?	The Pin Oak Row is significance as a prominent and attractive street tree planting that contributes to the amenity of the local area. The row is of social significance as a World War II Avenue of Honour, reflecting the impact the war had on the local community and their efforts to commemorate those who served.
Level:	Local
Categories of Significance:	EIC, G2C Contribution to landscape
Tree Condition:	Trees appear in fair health. Vigour should be re-assessed during active growing season. Clearance pruning has been undertaken along the carriageway, but structure is generally fair.
Threats/Risks:	<ul style="list-style-type: none"> • Trees appear in fair health. Vigour should be re-assessed during active growing season. Clearance pruning has been undertaken along the carriageway, but structure is generally fair. • The trees are located very close to the edge of the carriageway and so the threat of removal for road widening or safety works is ever present. • Removal of individual trees and failure to replace with the same taxon, to ensure the ongoing amenity of the plantation.
Management Prescriptions:	Undertake regular assessment and implement a management strategy to ensure the trees' ongoing amenity. As part of this, develop a replacement strategy to ensure trees removed from the row are replaced with the same taxon, ensuring the amenity of the row is perpetuated into the future beyond the current tree generation.
Extra research	A number of commemorative plantings exist within the Shire, particularly World War Avenues of Honour and their locations and origin are often unclear. A full census of such Avenues could be undertaken, identifying the location and extent of existing avenues, and the former location of avenues that have since been lost.
Tree Rating:	Five (5)
Assessed By:	SH-JPLA
Date:	25th June 2008

**BEECH, RAILWAY RESERVE,
SELLARS ROAD, EMERALD**

TREE NO: 01-3782-08

Botanical Name:	Fagus sylvatica
Common Name:	Beech
Address:	Railway Reserve, Sellars Road
Suburb/Township:	Emerald
Setting/Position:	Woodland setting in reserve below road, near Puffing Billy railway line
Number of Trees:	1
Public/Private:	Public
GPS Location:	145.45730895300, -37.93204329070
Height:	35m
Canopy N-S:	N-S: 20m
Spread E-W:	E-W: 20m
Trunk	Trunkgirth: 380cm DBH: 121cm
Approximate Age:	>80 years
Projected amenity period:	Medium/Long
TPZ:	14.5m



Figure 11 - View of Beech tree from near the Puffing Billy Railway line



Figure 12 - The Beech tree from Sellar's Road

History:	Tree dating from the Nobelius Nursery period of development of the site.
Integrity	Tree forms part of an extensive, now mature collection of trees that once formed the central Nobelius Nursery site.
Significant Features:	Woodland setting of tree adjacent to Puffy Billy train line.
Comparative Analysis:	A number of other large Beeches are located throughout Cardinia and the Dandenong Ranges, with a number located within the precinct formerly occupied by the Nobelius Nursery. This tree is outstanding for its size and overall form.
Statement of Significance:	
What is significant?	The mature Beech located in the Railway Reserve between Sellars Road and the Puffing Billy Railway, Emerald.
How is it significant?	The tree is of local significance within Cardinia Shire.
Why is it significant?	The Beech is of significance for its high amenity value and contribution to the broader precinct. The tree is one of many throughout the local area that are directly associated with the former use of the site
Level:	Local
Categories of Significance:	EIC Aesthetic contribution to landscape
Tree Condition:	Tree appears in fair health. Vigour should be re-assessed during active growing season. Canopy is symmetrical. Lower canopy branches have been removed.
Threats/Risks:	Widening of Sellars Road embankment into tree root zone. Failure to control woody weeds or re-establishing native trees that may compete with this tree and lead to early decline.

Management Prescriptions: Regular assessment and maintenance, including removal of establishing woody weeds and native trees within canopy zone.

Extra research Opportunity exists to undertake a detailed census of plant material within this precinct that is directly associated with the former Nobelius Nursery site, excised during subdivision.

Tree Rating: Three (3)

Assessed By: SH-JPLA

Date: 25th June, 2008

**DUTCH ELMS AND OAKS,
STATION AVE / WILLIAM STREET/AMBROSE STREET, EMERALD TREE NO: 01-3782-09**

Botanical Name: Ulmus ×hollandica,
Quercus spp.

Common Name: Dutch Elm, Oaks

Address: Station Avenue/ William Street/Ambrose Street

Suburb/Township: Emerald

Setting/Position: Rows of elms along Station Avenue extending to Ambrose Street and William Street, located within road reserve. Oaks are located at the western end of Station Avenue.

Number of Trees: 26

Public/Private: Private/Public

GPS Location: 145.45742400000, -37.93385538030
145.45734559900, -37.93363191960
145.45731360000, -37.93357006020
145.45716180000, -37.93341458020
145.45709290000, -37.93339714010
145.45696680000, -37.93332330040
145.45681881500, -37.93331345560
145.45674726700, -37.93333191680
145.45693440000, -37.93352546960
145.45700470000, -37.93351290040
145.45706550000, -37.93356721040
145.45719280000, -37.93360434020
145.45724920000, -37.93363954960
145.45727180000, -37.93373601960
145.45731920000, -37.93380492030
145.45734750000, -37.93390684980
145.45734300000, -37.93401388000
145.45733850000, -37.93415855960
145.45733150000, -37.93423474970
145.45735460000, -37.93431144000
145.45733860000, -37.93436559000
145.45733880000, -37.93441025970
145.45738079900, -37.93449977980
145.45736320000, -37.93491526980
145.45745650000, -37.93431705970
145.45750900000, -37.93411086040

Height: 24m

Canopy N-S: N-S: 12m

Spread E-W: E-W: 10m

Trunk 240cm

Approximate Age: >60 years

Projected amenity period: Medium/Long

TPZ: 9.1m



Figure 13 – Dutch Elms and Oaks along western end of Station Street



Figure 14 – Dutch Elms and Oaks along Ambrose Street



Figure 15 – Dutch Elms and Oaks forming an avenue

History:	Part of avenue planting associated with the former Nobelius Nursery site. The Nursery to the south of the railway was a later land acquisition.
Integrity	The trees read as a relatively continuous row / avenue planting, and form part of an extensive plantation of trees within the broader locality, associated with the Nobelius Nursery.
Significant Features:	Bundled cabling has been installed on the south side of Station Avenue to reduce the need for clearance pruning along this section.
Comparative Analysis:	This plantation forms one of the oldest and most continuous avenue / row plantings within Cardinia. Dutch Elms, a characteristic exotic tree of the Melbourne area where grown at the Nobelius Nursery. This plantation contains at least one variety of likely rarity.
Statement of Significance:	
What is significant?	The Elm and Oak avenue plantings associated with the former Nobelius Nursery site, located along Station Avenue, William Street and Ambrose Street, Emerald.
How is it significant?	The trees are of regional significance within Cardinia Shire.
Why is it significant?	The Dutch Elms and Oaks are of significance as a major remnant component of the former Nobelius Nursery site, of high aesthetic value to the broader precinct. The Elms are of scientific significance as they represent several cultivated varieties and at least one of these is yet to be identified.
Level:	Regional
Categories of Significance:	BIC Rare cultivated variety EIC Contribution to landscape

Tree Condition:	Tree Condition: Trees vary in health and condition There are a number of woody weeds and maturing, regenerating Acacias in the reserve along the north side of Station Avenue within the canopy area of some of the trees. These are capable of out competing the Elms and lead to their premature demise. Ivy (<i>Hedera helix</i>) is also evident in the canopies of some of the trees.
Threats/Risks:	<ul style="list-style-type: none"> • Competition / smothering from woody weeds and vines, as well as regenerating native trees. • Over zealous clearance pruning adjacent to power lines. • Failure to replace senescent trees from the rows, leading to the decline in the quality and integrity of the plantation.
Management Prescriptions:	<ul style="list-style-type: none"> • Regular assessment and maintenance, including removal of establishing woody weeds, climbers and native trees within canopy zone. • Replacement of senescent specimens with the same taxon as part of a managed replacement strategy for the trees.
Tree Rating:	Three (3)
Assessed By:	SH-JPLA
Date:	25th June, 2008

**LINDEN,
BANK SMITH DRIVE, GEMBROOK**

TREE NO: 01-3783-01

Botanical Name:	Tilia cordata
Common Name:	Small-leaved Linden
Address:	Bank Smith Drive
Suburb/Township:	Gembrook
Setting/Position:	Specimen tree located on small corner allotment on Council owned land adjacent to dwelling and roadway
Number of Trees:	1
Public/Private:	Public
GPS Location:	145.54813210000 -37.95335957020
Height:	18m
Canopy N-S:	N-S: 17m
Spread E-W:	E-W: 20m
Trunk	Trunkgirth: 280cm DBH: 89cm
Approximate Age:	>50 years
Projected amenity period:	Medium/Long
TPZ:	10.7m



Figure 16 – View of Linden tree in vacant block

History:	Tree from the early history of the site, pre-dating nearby residential development. Further research is required to identify any further cultural associations.
Significant Features:	Tree is sited conspicuously on corner allotment that appears to be part of the frontage of a residential lot, although it is located on Council owned land.
Comparative Analysis:	The only large Linden recorded within the study area. In a broader context, other large Lindens are located at the Black Spur and Daylesford. This is comparable in size to these trees.

Statement of Significance:**What is significant?**

A single Linden tree located within a vacant block along Bank Smith Drive, Gembrook.

How is it significant?

The tree is of local significance within Cardinia Shire.

Why is it significant?

The Linden is of significance as a particularly large and old specimen of this taxon, which is uncommon within the study area.

Level:

Local

Categories of Significance:

B2C Particularly old example

Tree Condition:

Tree appears in fair health; however this was assessed during dormant growth phase. Vigour should be re-assessed during active growing season. Tree has a relatively heavy covering of lichen throughout branches.

Threats/Risks:

Tree is located within vacant land. Potential for damage from adjacent development, or removal for building works.

Management Prescriptions:

- Regular assessments and maintenance.
- Removal of woody and herbaceous weeds from the proximity of the tree and application of mulch layer.

Tree Rating:

Four (4)

Assessed By:

SH-JPLA

Date:

1 July 2008

**ALGERIAN OAKS,
MAIN STREET, GEMBROOK**

TREE NO: 01-3783-02

Botanical Name:	Quercus canariensis, Q. sp.
Common Name:	Algerian Oak
Address:	Main Street
Suburb/Township:	Gembrook
Setting/Position:	Trees within road reserve abutting kerb on north and south sides of carriageway, extending through township.
Number of Trees:	50
Public/Private:	Public
GPS Location:	145.53824993800, -37.94919719800 145.53827282000, -37.94926819340 145.53832260800, -37.94933181130 145.53838153300, -37.94936441720 145.53843576400, -37.94941848050 145.53849896500, -37.94949626460 145.53855612800, -37.94957991550 145.53863542200, -37.94967823570 145.53878629600, -37.94980689790 145.53887070200, -37.94988149720 145.53892878800, -37.94992525040 145.53930245300, -37.95017595350 145.53936079100, -37.95035197350 145.53946523000, -37.95060309450 145.53975608200, -37.95100559410 145.54006244000, -37.95126912100 145.53836208800, -37.94923349150 145.53814851600, -37.94913072950 145.53787384200, -37.94896451650 145.53779421400, -37.94877500210 145.53751702400, -37.94861046490 145.53720672600, -37.94834987180 145.53704923000, -37.94824241580 145.53700287800, -37.94817292980 145.53698343200, -37.94810260590 145.53698712000, -37.94804041220 145.53661479600, -37.94766976450 145.55407748500, -37.95294273600 145.55506646600, -37.95313040600 145.55541322500, -37.95313753090 145.55540350300, -37.95326996480 145.55477645200, -37.95314147010 145.55434201800, -37.95308103710 145.55381488000, -37.95299344610 145.55264912500, -37.95284642770 145.55214285800, -37.95261441670 145.55180791700, -37.95265054240 145.54981729900, -37.95244652640 145.54945738100, -37.95239388840 145.54854232800, -37.95226807590 145.54814251100, -37.95222842930 145.54398005800, -37.95153030140 145.54779541700, -37.95211225660 145.54829481100, -37.95218015030

145.54872823900, -37.95221267140
145.54929091600, -37.95227813420
145.55014620600, -37.95235675690
145.55052054100, -37.95242657840
145.55245843700, -37.95268993730
145.55326804500, -37.95283930280

Height: 24m
Canopy N-S: N-S: 19m
Spread E-W: E-W: 22m
Trunk Trunkgirth: 330cm
DBH: 105cm
Approximate Age: >70 years
Projected amenity period: Medium
TPZ: 12.6m



Figure 17 – Broad scale view of Algerian Oak plantation



Figure 18 – View beneath Algerian tree at western end

History:	It is not known when these trees were planted.
Integrity	The trees, planted as an avenue, are not continuous through the Gembrook village, with a number of large gaps between trees.
Significant Features:	The finer trees, particularly at the western extent of the plantation are located on the north side of the carriageway. Trees vary considerably in size along the avenue.
Comparative Analysis:	Within Cardinia, these are amongst the most mature street tree plantings. Further research into their history would allow a fuller comparison with other street tree plantations in a broader metropolitan context.
Statement of Significance:	
What is significant?	Plantation of mature Algerian Oaks forming a semi-continuous avenue along Main Street, Gembrook.
How is it significant?	The trees are of local significance within Cardinia Shire.
Why is it significant?	The Algerian Oaks are of significance as a particularly venerable street tree plantation. The trees contribute significantly to the amenity of the broader streetscape and to the heritage character of the township.
Level:	Local
Categories of Significance:	EIC Aesthetic contribution to landscape.

Tree Condition:	Trees vary considerably in health and condition along the plantation. The trees on the on the north side of the carriageway have been lopped beneath power lines, forming an umbrella shape. Many of these trees appear to be in poor condition. At the eastern extent of the avenue beyond the Gembrook commercial centre trees are generally in better condition where there is more space for canopy development.
Threats/Risks:	<ul style="list-style-type: none"> • Road works within root zone. • Kerb and channel works (e.g. replacement). The trees in some instances are flush at the back of the kerb and any works within this zone would require careful management. • Mechanical damage to trunks, especially due to their close proximity to the carriageway.
Management Prescriptions:	<ul style="list-style-type: none"> • Development a tree replacement strategy for these trees. A number of trees are senescent and measures should be in place to ensure their managed replacement, with the same taxon, to ensure the ongoing amenity of the avenue. Gaps in the avenue could also be replanted. • Consider bundled cabling to minimise need for canopy clearance, especially for newly developing trees
Extra Research	Investigate the age of these trees and the context in which they were planted. This research may reveal more about the history of these trees and offer a fuller understanding of their significance both within Gembrook and to the broader Shire.
Tree Rating:	Five (5)
Assessed By:	SH-JPLA
Date:	1 July 2008

**OAKS, AVENUE OF HONOUR,
REDWOOD DRIVE, GEMBROOK**

TREE No: 01-3783-03

Botanical Name:	Quercus robur x canariensis, Q. sp.
Common Name:	Hybrid Oaks, Oaks
Address:	Redwood Drive
Suburb/Township:	Gembrook
Setting/Position:	Lining both sides of street from Gembrook, ending 150m north of the Gembrook Road intersection.
Number of Trees:	25
Public/Private:	Public
GPS Location:	145.54972380000, -37.95265817040 145.54969320000, -37.95282606010 145.54975030000, -37.95336560010 145.54974680000, -37.95345637980 145.54974990000, -37.95345880990 145.54992740000, -37.95381378040 145.54994670000, -37.95383749970 145.55008950000, -37.95404965030 145.55059920100, -37.95439766960 145.55049530000, -37.95445507990 145.55077240000, -37.95470227040 145.55093370000, -37.95486680000 145.55101160000, -37.95499815000 145.55112840000, -37.95508698960 145.55114470100, -37.95512396040 145.54999620000, -37.95353206980 145.55009100000, -37.95362401970 145.55011650000, -37.95374638980 145.55022160000, -37.95390825040 145.55042490000, -37.95414721960 145.55043240000, -37.95427546010 145.55091880000, -37.95464132980 145.55097530000, -37.95481700970 145.55100150000, -37.95502790030 145.54973930000, -37.95277324980
Height:	21.3m
Canopy N-S:	N-S: 10.5m
Spread E-W:	E-W: 21.2m
Trunk	Trunkgirth: 249cm DBH: 79cm
Approximate Age:	60 years
Projected amenity period:	Medium
TPZ:	22m



Figure 19 – Concrete crib retaining wall on east side of Oak avenue



Figure 20 – View of the Oak Avenue looking to the south

History:	The history of the avenue is not clear. Research undertaken by Murray Porter reveals that an Avenue of Honour was planted in 1947 using trees supplied by the RSL “along the Pakenham Road”. Tree guards were installed, constructed by local residents using materials provided by the then Berwick Shire Council. Evergreen Oaks, Golden Cypress and Scarlet Flowered Gums were all mooted as suitable planting choices, prior to the establishment of the Avenue. However a sign at the northern end of the Avenue states it is “In Memory of World War I Soldiers”. Further research is required into the origin of this Avenue and the possible presence of a second, World War 2 avenue within Gembrook.
Integrity	The avenue appears to be reasonably intact, with only one apparent gap in the plantings and few obvious replacement trees. Trees on the eastern side of Redwood Drive appear to have had their trunks partially submerged during the construction of a concrete crib retaining wall.
Significant Features:	<p>The trees are consistently spaced at the northern end of the Avenue, losing regularity around the curve of Redwood Drive in the southern section. Plaques are located at the base of the trees, and appear to be of recent origin.</p> <p>A memorial to Servicemen who served during the World War I and II, Borneo, Vietnam, Korea and Malaya is located at the northern end of the Avenue.</p>
Comparative Analysis:	<p>Avenues of Honour are peculiar to South East Australia, planted in greatest number following World War I, with at least 128 recorded locations. At least another 14 were planted following World War II.</p> <p>This is one of three extant commemorative plantings located within Cardinia Shire, the others single row plantings of Oaks located at both Cardinia and Emerald. This is the most complete Avenue of Honour in the sense of a double row planting within the Shire, notable for its intactness.</p>
Statement of Significance:	
What is significant?	Avenue of Oaks lining both sides of Redwood Drive, Gembrook, and ending 150m north of the Gembrook Road intersection.
How is it significant?	The Avenue of Honour is of regional significance to Cardinia Shire.
Why is it significant?	<p>The Avenue of Honour is of significance as a fine example of a commemorative planting style unique to South East Australia. The Avenue reflects the great personal cost to local communities of the World Wars, and the civic programs that sought to commemorate those who served and died.</p> <p>The Avenue is of additional significance for the aesthetic contribution of the double row of mature exotic trees and the character they impart to the local precinct.</p>
Level:	Regional
Categories of Significance:	<p>A3C Commemorative planting</p> <p>E1N Contribution to landscape</p> <p>G2C Important to social/cultural group</p>
Tree Condition:	The trees appear in fair health, despite the apparent fill within the root zones of the trees on the east of Redwood Drive.

Threats/Risks:	<ul style="list-style-type: none"> • Development within the Avenue, e.g. road widening, extended paving, etc. • Failure to replace senescent specimens (including inappropriate species selection) leading to a loss of the integrity of the plantation as a distinct Avenue. • Impact damage from vehicles • Modification to solar access / competition from adjacent trees not located within the Avenue, including self-sown woody weeds and regenerating indigenous taxa.
Management Prescriptions:	Regular assessments and maintenance, including associated plaques and memorial, which are an integral component of the place. Development and implementation of a replacement strategy.
Extra Research	A number of commemorative plantings exist within the Shire, particularly World War Avenues of Honour and their locations and origin are often unclear. A full census of such Avenues could be undertaken, identifying the location and extent of existing avenues, and the former location of avenues that have since been lost.
Tree Rating:	Three (3)
References:	Porter, M. 2008. Unpublished documentation provided by the Shire of Cardinia.
Assessed By:	AP-JPLA, SH-JPLA
Date:	1 July 2008

**MESSMATE,
URE ROAD, GEMBROOK**

TREE NO: 01-3783-04

Botanical Name:	Eucalyptus obliqua
Common Name:	Messmate
Address:	Ure Road
Suburb/Township:	Gembrook
Setting/Position:	Located within paddock adjacent to road reserve plantation of Eucalypts
Number of Trees:	1
Public/Private:	Private
GPS Location:	145.54113700000, -37.93470387990
Height:	40m
Canopy N-S:	N-S: 30m
Spread E-W:	E-W: 25m
Trunk	Trunkgirth: 710cm DBH: 226cm
Approximate Age:	>100 years
Projected amenity period:	Short
TPZ:	15m



Figure 21 – View of Messmate tree in paddock setting

History:	Size of tree suggests it pre-dates surrounding rural development, possibly pre-settlement history of the district.
Integrity	One of a number of remnant indigenous trees extending along or adjacent to the Ure Road reserve
Significant Features:	Single tree in private paddock adjacent to smaller trees in road reserve
Comparative Analysis:	One of the largest recorded remnant Eucalypts in the Gembrook locality, within private land. A larger Manna Gum is recorded at Emerald (based on trunk diameter), and almost certainly larger trees, including Messmate, are located in more extensive indigenous flora reserves within the Shire.
Statement of Significance:	
What is significant?	Large remnant Messmate located within paddock adjacent to Ure Road road-reserve plantation of Eucalypts.
How is it significant?	The tree is of local significance to Cardinia Shire.
Why is it significant?	The Messmate is significant as an outstanding example of this taxon notable for its size, within a private landholding. The tree, and adjacent indigenous vegetation in the road reserve is also of significance as remnants of the pre-settlement vegetation community of the area.
Level:	Local
Categories of Significance:	A6N Remnant tree from earlier vegetation community B3N Outstanding size
Tree Condition:	Tree appears to be senescent. Canopy is thinning with extensive areas of deadwood. The central leader has been lost.
Threats/Risks:	<ul style="list-style-type: none"> • Removal of tree • Ploughing / soil disturbance in proximity of root zone, leading to damage.
Management Prescriptions:	<ul style="list-style-type: none"> • Regular assessment and, if required, maintenance. • Seek the assistance of the owner in maintaining a protection zone for the tree in the immediate paddock vicinity.
Tree Rating:	Four (4)
Assessed By:	SH-JPLA
Date:	1st July, 2008

**HYBRID OAK,
40 RAILWAY AVENUE, BEACONSFIELD**

TREE NO: 01-3807-02

Botanical Name:	Quercus canariensis × robur
Common Name:	Hybrid Oak
Address:	40 Railway Avenue
Suburb/Township:	Beaconsfield
Setting/Position:	Within suburban garden, near street frontage surrounded by rock garden bed
Number of Trees:	1
Public/Private:	Private
GPS Location:	145.36837642200, -38.05001456760
Height:	18m
Canopy N-S:	N-S: 21m
Spread E-W:	E-W: 21m
Trunk	Trunkgirth: 390cm DBH: 124cm
Approximate Age:	>80 years
Projected amenity period:	Medium
TPZ:	14.9m



Figure 22 – Hybrid Oak within the streetscape context



Figure 23 – Hybrid Oak Tree canopy

History:	Tree dates from prior to subdivision of the surrounding neighbourhood.
Integrity	Tree appears to be sole remnant specimen from early history of the area.
Significant Features:	This tree has a more upright form than is commonly encountered with this inter-specific hybrid.
Comparative Analysis:	A number of large common and hybrid oaks are located throughout the study area. The majority of these trees have more wide-spreading forms than this specimen. This appears to be the largest hybrid oak located at a residential development within the study area.
Statement of Significance:	
What is significant?	The Hybrid Oak located in the front garden of 40 Railway Avenue, Beaconsfield.
How is it significant?	The tree is of local significance to Cardinia Shire.
Why is it significant?	The Hybrid Oak is of significance as a remnant from the early history of the area, prior to residential subdivision. The tree is notable for its size and strong contribution to the amenity of the streetscape.
Level:	Local
Categories of Significance:	A5C Tree from previous land use of area.
Tree Condition:	Tree appears in fair health. Vigour should be re-assessed during active growing season.
Threats/Risks:	<ul style="list-style-type: none"> • Removal of the tree • Car parking on turf within tree root zone leading to soil compaction. • Building up of existing rock edged garden bed and increased susceptibility of collar rot.
Management Prescriptions:	Regular assessment and maintenance.
Tree Rating:	Four (4)
Assessed By:	SH-JPLA
Date:	24th June, 2008

**MONTEREY PINE,
120 A'BECKETT ROAD, BEACONSFIELD UPPER**

TREE NO: 01-3808-01

Botanical Name:	Pinus radiata
Common Name:	Radiata Pine
Address:	120 A'Beckett Road
Suburb/Township:	Beaconsfield Upper
Setting/Position:	Within expansive ornamental garden, within garden bed adjacent to gravel driveway
Number of Trees:	1
Public/Private:	Private
GPS Location:	145.42017214100, -38.01745514720
Height:	37m
Canopy N-S:	N-S: 29m
Spread E-W:	E-W: 25m
Trunk	Trunkgirth: 630cm DBH: 201cm
Approximate Age:	>100 years
Projected amenity period:	Short/Medium
TPZ:	15m



Figure 24 – Radiata Pine within garden setting

History:	<p>Site was established as a rural retreat (Ttekceba) by Edward Fitshaley A'Beckett (1863-1922), who was a Registrar of Melbourne University for 40 years until 1902. Edward married Jane Deodata Burke in 1867. It is likely this tree was planted prior to the house being built and it is thought the tree was planted around 1880.</p> <p>The homestead associated with the early garden burned down c.1970. This tree is one of a pair of Monterey Pines dating from the early history of the site. The other tree has since been removed. Core drilling in recent times estimates the age at approximately 140 years.</p>
Integrity	This is certainly the sole survivor of the earliest development of the site, though other mature Monterey Pines are located within the site, their size suggests a more recent planting date – though some are also likely to be self-sown.
Significant Features:	Scale of tree
Comparative Analysis:	Possibly the oldest and largest surviving Monterey Pine within Cardinia. This is a ubiquitous rural tree, most often seen as shelter plantings, with a reputation for being a weed. These trees usually decline at about 70-80 years of age and are rarely seen in Southern Victoria at this age and in this condition. Most other trees of this taxon are planted as rural shelter beds, whereas this is planted as an ornamental specimen.
Statement of Significance:	
Why is it significant?	The Monterey Pine at 120 A'Beckett Road, Beaconsfield Upper is of local significance for its outstanding size and condition for a tree of this age. It is associated with Ttekceba, formerly the rural retreat of one of Victoria's most prominent families of the 19th century, the A'Becketts.
Level:	Local
Categories of Significance:	A1C Association with historic house B2C Particularly old example
Tree Condition:	Tree appears in fair health, with a relatively symmetrical, wide-spreading canopy. The branch structure is quite intact for a Monterey Pine of this size and age.
Threats/Risks:	Removal – although current owner is very keen to protect tree.
Management Prescriptions:	Regular assessments and maintenance.
Extra Research	Investigate associations of site with A'Beckett family, one of the most prominent families of colonial Victoria.
Tree Rating:	Three (3)
References	<p>Australian Dictionary of Biography Online, http://www.adb.online.anu.edu.au/adbonline.htm</p> <p>Personal Communication, Mrs Veronika Von Saurma-Mylius, Property Owner, June 2008</p>
Assessed By:	SH-JPLA
Date:	24th June, 2008

**HUNTINGDON ELM,
10-12 SALISBURY ROAD, BEACONSFIELD UPPER**

TREE NO: 01-3808-02

Botanical Name:	Ulmus ×hollandica 'Vegeta'
Common Name:	Huntingdon Elm
Address:	Upper Beaconsfield Community Centre, 10-12 Salisbury Road
Suburb/Township:	Beaconsfield Upper
Setting/Position:	Tree located in road reserve outside Upper Beaconsfield Community Centre
Number of Trees:	1
Public/Private:	Public
GPS Location:	145.41181048000, -38.00541793500
Height:	17m
Canopy N-S:	N-S: 16m
Spread E-W:	E-W: 17m
Trunk	220cm DBH: 70cm
Approximate Age:	70 years
Projected amenity period:	Short/Medium
TPZ:	8.5m



Figure 25 – Close up view of Huntingdon Elm tree



Figure 26 – Huntington Elm within the streetscape

History:	This tree was planted by the local branch of the Country Women's Association (CWA) as a Coronation Tree in 1937 (George VI). The plaque beneath the tree suggests that this tree was planted by the CWA to mark the centenary year 1934, but the plaque has been relocated from a flowering gum site after the 1983 fires. The plaque is rare and significant in its own right.
Integrity	Tree appears to have been planted as single commemorative specimen.
Significant Features:	1934 plaque is located at base of tree
Comparative Analysis:	This is one of only a few commemorative plantings recorded within the study area. Others, such as The Gembrook and Cockatoo Avenues of Honour were planted to commemorate service men and women of the First and Second World Wars.
Statement of Significance:	
Why is it significant?	The Huntington Elm is of significance as a commemorative planting from the inter-war period. It is directly associated with the CWA, and reflects their activities at the local level within rural communities.
What is significance?	Huntingdon Elm located adjacent to road reserve outside Upper Beaconsfield Community Centre, 10-12 Salisbury Road, Beaconsfield Upper and 1934 plaque set in ground on new base
How is it significance	The tree and plaque are of local significance to Cardinia Shire.
Level:	Local
Categories of Significance:	A3C Commemorative planting

Tree Condition:	<p>The tree is in poor health and is heavily defoliated by Elm Leaf Beetle (ELB), which if left unchecked may result in tree death. Arboriculture work and treatment of ELB infestation would likely increase tree health, as would removal of the parking bays. Reputedly some work has been done by the Shire in recent years. The green lettering and border on the plaque have faded since installation in the 1990's.</p>
Threats/Risks:	<ul style="list-style-type: none"> • Elm Leaf Beetle • Damage to root zone during works in adjacent road reserve or community centre paved area.
Management Prescriptions:	<ul style="list-style-type: none"> • Implement a regular assessment and maintenance schedule for this tree, including an ELB control program. • Consider vegetative propagation from this tree to grow a replacement as this specimen approaches senescence.
Tree Rating:	Four (4)
Assessed By:	SH-JPLA
Date:	24th June 2008

Additional Images



Figure 27: Plaque accompanying the Huntingdon Elm



Figure 28: Percy Trompf colour lithograph for centenary celebrations
 Source: Persuasive Posters Collectors' List 124 2007

**HYBRID OAKS,
13-23 TIVENDALE ROAD, OFFICER**

TREE NO: 01-3809-01

Botanical Name:	Quercus canariensis × robur
Common Name:	Hybrid Oaks
Address:	13-23 Tivendale Road
Suburb/Township:	Officer
Setting/Position:	Two mature specimens located within primary school grounds
Number of Trees:	2
Public/Private:	Public
GPS Location:	145.40939410000, -38.05827483980 145.40932990000, -38.05854826000
Height:	21m
Canopy N-S:	N-S: 22m
Spread E-W:	E-W: 28m
Trunk	Trunk girth: 460cm DBH: 147cm
Approximate Age:	>70 years
Projected amenity period:	Medium/Long
TPZ:	15m



Figure 29 – View of Hybrid Oaks

History:	The history of these trees is not known. They are of a comparable size to the Federation Oak (planted 1901) at nearby Pakenham.
Integrity	Trees appear to have planted as specimen trees
Significant Features:	Pair of trees in west of school grounds. The southern tree is larger. Both are set within mulched play areas.
Comparative Analysis:	A number of hybrid oaks are located throughout the study area, however they are usually encountered as single specimen trees. These are amongst the largest recorded and exhibit the more common wide-spreading form.
Statement of Significance:	
Why is it significant?	The hybrid Oaks are of significance as fine, mature examples of this taxon notable for their size. They contribute strongly to the amenity of the school grounds.
What is significance?	Two mature specimens of hybrid Oak located within the Officer Primary School grounds at Tivendale Road, Officer.
How is it significance	The Oaks are of local significance to Cardinia Shire.
Level:	Local
Categories of Significance:	EIC Aesthetic contribution to landscape
Tree Condition:	Trees appear in fair health. Vigour should be re-assessed during active growing season.
Threats/Risks:	Compaction to root zone due to playground location
Management Prescriptions:	Regular assessment and maintenance, critical due to their location within a school playground.
Extra research	Investigate the origin of these trees in reference to the site's development as a school or previous land uses, if any.
Tree Rating:	Four (4)
Assessed By:	SH-JPLA
Date:	2 July 2008

**SPOTTED GUM, SCARLET FLOWERING GUM,
CORNER OF BOURKE CREEKS RD & PAKENHAM RD, PAKENHAM UPPER TREE No:01-3810-01**

Botanical Name:	Corymbia maculata, C. ficifolia
Common Name:	Spotted Gum, Scarlet Flowering Gum
Address:	Corner of Bourke Creek Road and Pakenham Road
Suburb/Township:	Pakenham Upper
Setting/Position:	Located within fenced area within broad gravel verge.
Number of Trees:	2
Public/Private:	Public
GPS Location:	145.51204760000, -38.01153031040 145.51200760000, -38.01146392990
Height:	18m
Canopy N-S:	Canopy N-S: 9m
Spread E-W:	E-W: 11m
Trunk	Trunk girth: 147cm DBH: 48cm
Approximate Age:	25 years
Projected amenity period:	Medium
TPZ:	5.8m



Figure 30 – View of Spotted Gum and Scarlet Flowering Gum tree in timber enclosure



Figure 31: Commemorative plaque at base of Spotted Gum and Scarlet Flowering Gum trees

History:	Planted as memorial “In honour of the men and women of the Upper Pakenham Community who served their country and in memory of those who made the supreme sacrifice”.
Integrity:	Good. Trees appear to be in original planted context.
Significant Features:	Trees are located within a timber post and rail fenced enclosure.
Comparative Analysis:	This is one of several commemorative plantings within Cardinia Shire. Most are Avenues of Honour, planted following World War I and II.
Statement of Significance:	
What is significant?	Spotted Gum and Scarlet Flowered Gum located at the corner of Bourke Creek Road and Pakenham Road, Pakenham Upper, surrounded by timber post and rail enclosure.
How is it significant?	The trees are of local significance to Cardinia Shire.
Why is it significant?	The Spotted and Scarlet Flowering Gum are of significance as a commemorative planting.
Level:	Local
Categories of Significance:	A3C Commemorative plantings
Tree Condition:	The trees have limited deadwood throughout their canopies. The Scarlet Flowering Gum has a distended leader. Power lines are also located in close proximity to this tree’s canopy.
Threats/Risks:	<ul style="list-style-type: none"> • Compaction to tree roots due to location within road reserve. • Sealing of surrounding hard standing which would have an adverse effect on water and oxygen infiltration into tree root zones. • Pruning of canopies due to proximity of overhead power lines.
Management Prescriptions:	<p>Regular assessment and maintenance.</p> <p>Investigate possibility of installation of bundled cabling or cable re-routing to mitigate the need for clearance pruning.</p>

Extra Research:

A number of commemorative plantings exist within the Shire, and their locations and origin are often unclear. A full census of such Avenues could be undertaken, identifying the location and extent of existing plantings, and the former location of avenues that have since been lost. It is not clear if this planting has associations with the Ash Wednesday fires.

Tree Rating:

Five (5)

Assessed By:

SH-JPLA

Date:

July 2008

**ALGERIAN OAK,
9-13 MAIN STREET, PAKENHAM**

TREE NO: 01-3810-02

Botanical Name: Quercus canariensis
Common Name: Algerian Oak
Address: 9-13 Main Street
Suburb/Township: Pakenham
Setting/Position: Located within vacant block set back from Main Street.
Number of Trees: 1
Public/Private: Private
GPS Location: 145.47683090000, -38.07334123010
Height: 22m
Canopy N-S: N-S: 27m
Spread E-W: E-W: 29m
Trunk Trunkgirth: 440cm
DBH: 140cm
Approximate Age: 100 years
Projected amenity period: Medium
TPZ: 15m



Figure 32 – Algerian Oak tree in leaf



Figure 33 – Algerian Oak tree in winter

History:	The tree was planted to mark the Federation of Australia in early 1901 by Mr Norman Patterson Webster. The site was formerly the Pakenham Consolidated School.
Integrity:	Tree was planted as single specimen
Significant Features:	Wide spreading form.
Comparative Analysis:	This is one of a number of mature oaks located within the study area, and one of several within Pakenham. Most of the other, wide spreading oaks are hybrids between English Oak (<i>Quercus robur</i>) and Algerian Oak (<i>Q. canariensis</i>). An Algerian Oak (known as the Federal Oak) was planted by Henry Parkes to mark the Australasian Federal Convention at Parliament House, Melbourne, in 1890.
Statement of Significance:	
What is significant?	Single Algerian Oak located within vacant block at 9 Main Street, Pakenham.
How is it significant?	The tree is of regional significance to Cardinia Shire.
Why is it significant?	The Algerian Oak is of significance as a commemorative planting to mark the Federation of Australia in 1901, and the activities undertaken by the local community to mark that important event. The tree is of considerable amenity value, with a fine, wide spreading form.
Level:	Regional
Categories of Significance:	A3C Commemorative planting E1N Contribution to landscape
Tree Condition:	Tree appears in fair health. Vigour should be re-assessed during active growing season.
Threats/Risks:	Development works within the site and the possibility of long term damage due to root disturbance, mechanical damage to the trunk and canopy, or removal as part of a development proposal.

Management Prescriptions: Prepare a Tree Management Plan (TMP) to ensure the tree is adequately protected during any future development works on site.
Regular assessments and maintenance

Tree Rating: Three (3)

References Willmott, J, 1996. Unpublished documents provided by Cardinia Shire.

Assessed By: SH-JPLA

Date: 1 July 2008

**ENGLISH OAK,
PRINCES HWY / OAK TREE DRIVE INTERSECTION, PAKENHAM TREE No: 01-3810-03**

Botanical Name:	Quercus robur
Common Name:	English Oak
Address:	30 metres west of Princes Hwy and Oak tree Drive intersection
Suburb/Township:	Pakenham
Setting/Position:	Set within road reserve well back from carriageway
Number of Trees:	1
Public/Private:	Public
GPS Location:	145.50570710000, -38.06618066000
Height:	20m
Canopy N-S:	N-S: 24m
Spread E-W:	E-W: 22m
Trunk	Trunkgirth: 370cm DBH: 118cm
Approximate Age:	>80 years
Projected amenity period:	Medium
TPZ:	14.2m



Figure 34 – View showing upright form of English Oak tree



Figure 35 – English Oak in winter

History:	Not known. Size of the tree suggests it was part of an earlier landholding in the area.
Integrity:	Single specimen tree
Significant Features:	Raised canopy and upright form.
Comparative Analysis:	This is one of several large oak trees within the study area, including English Oaks (<i>Quercus robur</i>), Algerian Oaks (<i>Q. canariensis</i>) and hybrids of these two species. This tree is notable for its size and overall form, which is more upright than the wide spreading forms generally encountered within the study area.
Statement of Significance:	
What is significant?	Single English Oak located 30 metres west of the intersection of Princes Highway and Oak tree Drive, Pakenham.
How is it significant?	The tree is of local significance within Cardinia Shire.
Why is it significant?	The English Oak is of significance for its contribution to the amenity of the local landscape, and its notable upright form.
Level:	Local
Categories of Significance:	EIN Contribution to landscape
Tree Condition:	Tree appears in fair health, with limited dead wood in the canopy.
Threats/Risks:	<ul style="list-style-type: none"> • Road widening works that might encroach on the root zone of the tree and reduce the buffer between the tree and the existing carriageway. This buffer currently limits the possibility of mechanical damage from vehicles and likelihood of soil compaction from vehicles pulled over on the side of the highway. • Development works in the adjacent landholding may also impact on the health of this tree. • Woody weeds or regenerating indigenous trees within immediate tree zone competing for light, water and nutrients.

Management Prescriptions: Regular assessment and maintenance.
Ensure weed control is maintained in immediate vicinity of tree.

Tree Rating: Four (4)

Extra research Investigate origin of tree as part of early landholding of area.

Assessed By: SH-JPLA

Date: 2nd July 2008

**ENGLISH OAK,
NORTH EAST CORNER OF SYME & TOOMUC VALLEY ROAD, PAKENHAM TREE NO:01-3810-04**

Botanical Name:	Quercus robur
Common Name:	English Oak
Address:	North-east corner of Syme and Toomuc Valley Road
Suburb/Township:	Pakenham
Setting/Position:	In rough grassed area of vacant block near Syme Road frontage
Number of Trees:	1
Public/Private:	Private
GPS Location:	145.46703694300, -38.05902198690
Height:	18m
Canopy N-S:	N-S: 21m
Spread E-W:	E-W: 22m
Trunk	Trunkgirth: 350cm DBH: 112cm
Approximate Age:	>70 years
Projected amenity period:	Medium
TPZ:	TPZ: 13.4m



Figure 36 – View of English Oak tree in leaf



Figure 37 – English Oak in winter

History:	The history of this tree is not clear. It may have been part of the Kitchen family landholdings in this area, which included the nearby property Sevenoaks.
Integrity:	Single specimen tree
Significant Features:	Prominent location near road intersection
Comparative Analysis:	One of many large oaks within the study area. This particular tree has a wide spreading form.
Statement of Significance:	
What is significant?	Single English Oak located in rough grassed area of vacant block near Syme Road frontage, North East Corner of Syme and Toomuc Valley Roads, Pakenham.
How is it significant?	The tree is of local significance to Cardinia Shire.
Why is it significant?	The English Oak is of significance for its amenity value and its position as a landmark tree in the local precinct.
Level:	Local
Categories of Significance:	EIN Contribution to landscape
Tree Condition:	Tree health is fair, however limbs have been lopped from canopy on southern side overhanging Symes Road. Makeshift treads and platforms have been nailed into the trunk. Domestic power supply lines run through the canopy.
Threats/Risks:	<ul style="list-style-type: none"> • Lack of maintenance / poor practices are apparent with this tree. • Line clearance works to the canopy • Removal for development. • Woody weeds are growing within the tree canopy area, and will compete for light, water and nutrients.

Management Prescriptions: Ameliorative pruning to correct lopped branches on southern side.
Removal of timber platforms and treads from tree.
Control of woody weeds in vicinity of tree.
Implement regular assessment and maintenance program.

Tree Rating: Five (5)

Extra research Investigate association of the tree with early Kitchen and Syme landholdings in the area, especially the property Sevenoaks.

Assessed By: SH-JPLA

Date: 1st July 2008

**CHESTNUT OAKS,
RAILWAY AVENUE, TYNONG**

TREE NO: 01-3813-01

Botanical Name: Quercus prinus
Common Name: Chestnut Oak
Address: Railway Avenue, Tynong
Suburb/Township: Tynong
Setting/Position: Row of trees along Railway Road, flanking War Memorial.
Number of Trees: 10
Public/Private: Public
GPS Location: 145.62543770000, -38.08458831990
145.62435240000, -38.08451254990
145.62446810000, -38.08452461980
145.62457860000, -38.08452176960
145.62468690000, -38.08452487030
145.62474510000, -38.08452846960
145.62482270000, -38.08451548030
145.62572050000, -38.08458078000
145.62598700000, -38.08458455010
145.62593710100, -38.08463719050
Height: 14m
Canopy N-S: N-S: 9m
Spread E-W: E-W: 9m
Trunk Trunkgirth: 140cm
DBH: 45cm
Approximate Age: 40 years
Projected amenity period: Long
TPZ: 5.4m



Figure 38 – Chestnut Oak trees and War Memorial.



Figure 39 – Chestnut Oak trees and War Memorial.

History:	Not known. The size of the trees suggests a post-World War II planting date.
Integrity:	Row is continuous on south side of road.
Significant Features:	A war memorial is located near the middle of the row, dedicated to the men and women of the Tynong area who served their country in the Boer War, World War I, World War II, Korea and Vietnam. The largest trees in the row are located at the western end.
Comparative Analysis:	This is one of a number of commemorative plantings located within the Shire of Cardinia to those who served during the wars. The Tynong planting differs in that it appears to be of more recent origin. The use of an uncommon taxon, <i>Quercus prinus</i> , is also a notable difference for this plantation. A <i>Quercus prinus</i> is planted as a commemorative tree to the HMAS Canberra near the Shrine of Remembrance, Melbourne.
Statement of Significance:	
What is significant?	A row of Chestnut Oaks planted along Railway Rd, Tynong, flanking the War Memorial forming a commemorative planting.
How is it significant?	The Oaks are of local significance to Cardinia Shire.
Why is it significant?	The Chestnut Oaks are of significance as a commemorative planting associated with the Tynong War Memorial.
Level:	Local
Categories of Significance:	A3C Commemorative planting
Tree Condition:	Trees appear in fair health.
Threats/Risks:	<ul style="list-style-type: none"> • Compaction or damage to trunks by cars parking beneath canopies. • Works in the road or railway reserve that could lead to root damage.
Management Prescriptions:	Regular assessment and maintenance.
Tree Rating:	Four (4)

Extra research

A number of commemorative plantings exist within the Shire, and their locations and origin are often unclear. A full census of such Avenues could be undertaken, identifying the location and extent of existing plantings, and the former location of avenues that have since been lost.

Assessed By:

SH-JPLA

Date:2nd July 2008

**COTTON PALM,
6 CAMPBELL STREET, GARFIELD**

TREE NO: 01-3814-01

Botanical Name:	Washingtonia robusta
Common Name:	Cotton Palm
Address:	6 Campbell Street
Suburb/Township:	Garfield
Setting/Position:	Single specimen located in rear garden of residential allotment
Number of Trees:	1
Public/Private:	Private
GPS Location:	145.44179920000, -37.93189845970
Height:	c.20m
Canopy N-S:	n/a
Spread E-W:	n/a
Trunk	170cm DBH: 54cm
Approximate Age:	>70 years
Projected amenity period:	Medium
TPZ:	2m



Figure 40 – Close up of Cotton Palm.



Figure 41 – Cotton Palm in the landscape

History:	The history of this tree is unknown. The owner states that the house dates from the 1890's, and another palm of the same taxon is located at the nearby locality Iona. This tree was reputedly sourced from that site c.1915.
Integrity:	Appears to have been planted as single specimen in domestic garden
Significant Features:	A maturing White Cedar (<i>Melia azedarach</i>) and Liquidambar (<i>Liquidambar styraciflua</i>) are located in close proximity in the rear garden.
Comparative Analysis:	This specimen is notable as the tallest tree in Garfield. Cotton Palms of this size are more commonly seen in larger private suburban gardens, as well as public gardens dating from the Victorian/ early 20th century eras.
Statement of Significance:	
What is significant?	A single specimen Cotton Palm located in rear garden of 6 Campbell Street, Garfield.
How is it significant?	The palm is of local significance within Cardinia Shire.
Why is it significant?	The Cotton Palm is of significance for its high amenity value. It is a conspicuous specimen within the precinct.
Level:	Local
Categories of Significance:	EIN Contribution to landscape
Tree Condition:	Palm appears in good health.
Threats/Risks:	Removal

Management Prescriptions: Monitor health of tree.
Tree Rating: Five (5)
References Personal Communication, Shaun Gooden, Property Owner, July 2008.
Assessed By: SH-JPLA
Date: 2nd July 2008

**ENGLISH OAK,
CORNER OF DESSERT & MAIN DRAIN ROAD, CORA LYNN**

TREE NO: 01-3814-02

Botanical Name:	Quercus robur
Common Name:	English Oak
Address:	Corner of Dessent and Main Drain Road
Suburb/Township:	Cora Lynn
Setting/Position:	Single tree located partly on road reserve and partly on private property, adjacent to unsealed carriageway and gravel turn-off
Number of Trees:	1
Public/Private:	Public/Private
GPS Location:	145.64440800100, -38.13746722990
Height:	22m
Canopy N-S:	N-S: 28m
Spread E-W:	E-W: 28m
Trunk	Trunkgirth: 510cm DBH: 162cm
Approximate Age:	>80 years
Projected amenity period:	Medium/Long
TPZ:	15m



Figure 42 – View of English Oak tree in leaf



Figure 43 – English Oak Tree in Winter

History:	The history of this tree is unknown. The size of the tree suggests it dates from the early history of the area.
Significant Features:	Tree is located at junction of two roads with a gravel turn-off located beneath canopy.
Comparative Analysis:	This is one of several large oaks within the study area. This particular specimen is notable for its outstanding girth and canopy spread.
Statement of Significance:	
What is significant?	A single English Oak, on road reserve, adjacent to unsealed carriageway and gravel turn-off, Corner of Dessent and Main Drain Road, Cora Lynn.
How is it significant?	The tree is of local significance to Cardinia Shire.
Why is it significant?	The English is of significance as a notably large exotic tree within the Shire. The size and stature of the tree contributes strongly to the amenity of the local precinct.
Level:	Local
Categories of Significance:	E1N Contribution to landscape B3N Outstanding size
Tree Condition:	Tree appears in fair health. Vigour should be re-assessed during active growing
Threats/Risks:	<ul style="list-style-type: none"> • Location adjacent to carriageway and service turn-off could lead to mechanical damage to tree or compaction issues to root zone. • Works within the road reserve could lead to root damage if not carefully managed. • Sealing of the road might cause problems due to modified water infiltration and oxygen availability to root zone
Management Prescriptions:	Regular assessment and maintenance of tree.
Tree Rating:	Three (3)
Assessed By:	SH-JPLA
Date:	2 nd July 2008

**HYBRID OAK,
55 TAPLINS ROAD, CATANI**

TREE NO: 01-3981-01

Botanical Name:	Quercus canariensis x robur
Common Name:	Hybrid Oak
Address:	55 Taplins Road
Suburb/Township:	Catani
Setting/Position:	Located in sporting reserve, adjacent to playground and road reserve
Number of Trees:	1
Public/Private:	Public
GPS Location:	145.64031352700, -38.19399837100
Height:	14m
Canopy N-S:	N-S: 22m
Spread E-W:	E-W: 22m
Trunk	Trunkgirth: 410cm DBH: 131cm
Approximate Age:	>70 years
Projected amenity period:	Medium/Long
TPZ:	15m



Figure 44 – View of Hybrid Oak from Taplins Road



Figure 45 – Hybrid Oak tree in winter

History:	Not known. Size of tree suggests it dates from early development of area
Integrity	Single specimen tree
Significant Features:	Tree has been pruned back on east side for power line clearance. Bundled cabling has been installed in the section adjacent to the tree canopy.
Comparative Analysis:	This is one of several large oaks within the study area. This tree is notable for its large size and wide spreading canopy, and position in central civic location.
Statement of Significance:	
What is significant?	A single Hybrid Oak located within a recreation reserve, at 55 Taplins Road Catani.
How is it significant?	The tree is of local significance within Cardinia Shire.
Why is it significant?	The Hybrid Oak is of significance for its contribution to the local landscape, positioned near the centre of the township in a prominent location. The size of the tree is notable within the local area.
Level:	Local
Categories of Significance:	EIN Contribution to landscape
Tree Condition:	Tree appears in fair health. Pruning for power line clearance on the east side has slightly altered an otherwise fine, symmetrical canopy.
Threats/Risks:	<ul style="list-style-type: none"> • Parking within root zone and resultant effects of compaction, within both the reserve and Taplins Road frontage. • Excessive pruning for canopy clearance, especially in consideration of the bundled cabling. • Limb drop and proximity of playground and sporting facilities

Management Prescriptions:

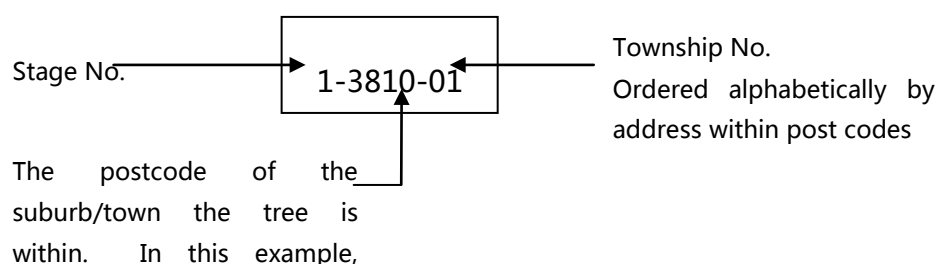
- Regular assessment and maintenance, particularly due to use of immediate precinct.
- Ensure parking is restricted, especially in vicinity of TPZ, including along Taplins Road.

Tree Rating: Four (4)
Assessed By: SH-JPLA
Date: 4th July 2008

5 APPENDIX 1 - TERMINOLOGY

TREE IDENTIFICATION TERMINOLOGY

Tree Number: The individual tree number. The tree number provides a way of ordering trees within the report and is based on the stage of the assessment, and the trees location as illustrated below.



Additional stages of assessments would be numbered accordingly and can be added into the list. Trees numbers within townships are ordered alphabetically by street/reserve name. Each tree number is to be unique within the report.

Botanical Name: The botanical name of the significant tree, 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 by questions marks (?), some inaccuracies in tree identification may still be present – especially in certain, difficult to determine genera and with cultivars which can have similar characteristics.

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:

1. Single name supplied in Horticultural Flora of South Eastern Australia
2. First in list of names supplied in Horticultural Flora of South Eastern Australia, unless another name in the list is deemed more appropriate
3. As per name supplied in Trees of Victoria and Adjoining Areas
4. 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 species.

Where a question mark (?) indicates a doubt as to exact species, the common name is based on the listed species, and may change if the species was found to be incorrect.

LOCATION TERMINOLOGY

Address: The address of the property, listed as it appears on the council rates notices.

Setting/Position: The general location of the tree within its setting

Number of Trees: The number of trees within that citation. This is particularly relevant when groups of trees are registered as a single citation.

Public/Private: Whether the tree is publicly or privately owned. The planning schemes maps have been referred to for clarification if

necessary. As a general rule, Cardinia Shire Council would be responsible for trees listed as "Public" .

GPS Location: The GPS location of the tree..... (to be expanded upon following additional information on equipment and process)

PHYSICAL DESCRIPTIONS TERMINOLOGY

Height: The height of the tree as determined using a height meter (clinometer) and measuring wheel, or using electronic laser equipment. Where terrain does not allow these methods to be used then an estimate or combination of measuring and estimating is used.

Where trees are registered as a group of more than two the height of a typical tree may be listed.

Canopy Spread: The Canopy spread of the tree taken in north-south and east-west directions using a measuring wheel or electronic laser equipment. Where terrain does not allow these methods to be used then an estimate or combination of measuring and estimating is used. The listed canopy spread is the diameter of the canopy.

Where trees are registered as a group of more than two the canopy spread of a typical tree may be listed.

Trunk: The measurements of the trees' trunk taken as a diameter and circumference. The two numbers are provided as the measurement is required in different forms, depending on the use.

Measurements are taken at a height of 1.4m above ground level, unless specified as having been taken lower. The tree is physically measured by wrapping a tape around the trunk unless this is not physically possible (e.g. inaccessible). Stems of multi-

stemmed trees may be listed individually, or a measurement given at a lower point where the tree still has one stem.

The girth of the tree refers to its circumference. The DBH of the tree refers to its diameter at breast height.

Approximate Age: The approximate age of the tree. Known planting dates are used to determine age where possible; otherwise an estimate of the age is listed. Estimates of tree age are difficult, and although factors such as tree size and site history are considered, it should be remembered that they are inexact.

TREE LONGEVITY TERMINOLOGY

Projected Amenity

Period: The projected amenity period is based on an assessment of the safe useful life expectancy (SULE) of the tree from a health and safety viewpoint, given no significant changes to the current situation.

This category is notoriously 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. This assessment does not factor in unknowns such as lightning strikes, bushfire or vehicle impact, which can lead to tree loss.

While the tree's likelihood of failure (and possible need for removal on safety grounds) is considered, this assessment it is not a risk or structural stability assessment of the tree. When determining the project amenity period tree health is also considered, as well as other factors as deemed appropriate.

Ranking	Definition
Short term	The tree or group are expected to decline significantly or require removal in the short term (that is approx. 10 years or less)
Medium	Tree is considered to have the potential to

Ranking	Definition
term	provide amenity in the medium term (that is 10-20 years); but are of an age where decline in that time frame is possible
Long term	Tree is considered to have the potential to provide amenity in the long term (that is 20 years plus)

Note:

Normally a tree being a weed would result in a low SULE rating, as it is not useful, and could potentially have a negative impact on the landscape amenity. However in this case, where heritage factors, rather than environmental, are being considered, a tree species weediness is not taken into account in any part of the assessment. A tree being of heritage significance is by no means a comment on its environmental appropriateness, unless this is specifically stated in the citation.

TPZ:*Description:*

The Tree Protection Zone of the tree, measured as a radial distance in meters from the center of the trunk. During any development excavation, compaction and fill within this zone should be avoided; and the area should be securely fenced off.

It is not necessary that all works be excluded from this zone, but intrusion into it, particularly below ground level, must be restricted if the tree is not to be compromised. (Appendix) provides provisional information on protection requirements. Arboricultural advice should be sought for more site specific information.

Method

The TPZ is calculated using the method devised by Matheny and Clark in their book *Trees and Development* (1998); however the British Standard method of placing an upper end cap of 15m on protection zones has been incorporated into this. Matheny and

Clarks' method determines the TPZ based on the trees DBH, age and species tolerance.

For the purposes of this report, where a tree is multi-trunked, the area of the trunks is calculated, added together and converted back to a single DBH which is then used in the calculation. In some cases a measurement taken at a lower point of the trunk may be used instead.

The species tolerance is based firstly on Matheny and Clark's list, secondly on species knowledge, and finally given a nominal rating of 'moderate' if neither of the above sources indicates another rating.

For Palms and palm like plants, the TPZ is based on the Structural Critical Rooting Distance of Coder as they are not strictly trees, not having a woody root system.

HERITAGE TERMINOLOGY

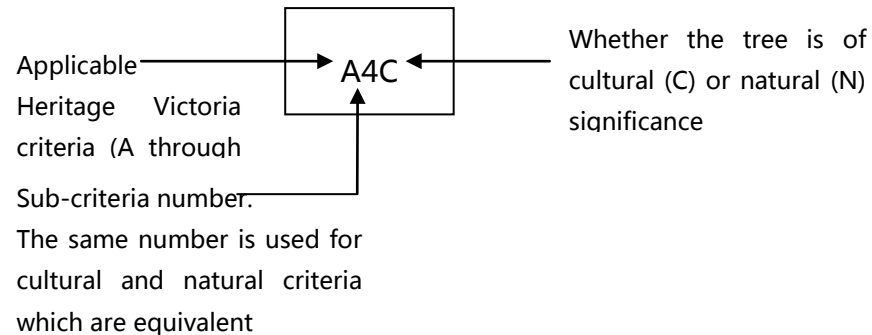
History: This history of the tree comes from a combination of primary and secondary sources. Where possible, these are referenced, and relevant old photographs may be included at the end of the citation sheet.

The nature of this project does not allow a full investigation of the resources for each site; especially primary sources. If required, further research on individual sites may take place at a later date.

Categories of

Significance: Categories of significance applicable to the tree, as defined in Volume 1, Section 2.4 Cardinia Shire Council Assessment Criteria. of this report. The citation sheet lists the criteria code and a brief description, but the above mentioned table is to be referred to for further information.

The listed codes refer to the applicable heritage Victoria criteria, and whether the tree is of natural or cultural heritage as illustrated below.



Integrity: A description of the condition of the tree and surrounding landscapes as it relates directly to its heritage significance. This includes the likely originality of tree or its surrounding landscape, any objects that intrude on the heritage significance and any missing objects.

In some cases, and especially with single tree sites this category may be left vacant.

Significant

Features: A brief description of the significant elements of the tree or group. The information contained within this category should be considered if any works to or around the tree are proposed. In particular, this should be considered in the formulation of replacement or management strategies.

Comparative

Analysis: A brief description of similar sites, and how the tree or group stands in relation to these, where this information is known. It was not possible within the bounds of this study to carry out a full comparative analysis of each site, especially when trees are of state significance. Any information contained within this category, should not be taken as a full comparative analysis. If required, further research for individual sites may be take place at a later date.

Level of

Significance: The level of significance of the tree being of either local, regional or state significance. The listed significance of the tree is the highest applicable (e.g. a tree may be of local aesthetic significance but regional historic significance, and is therefore listed as being of regional significance).

Significance	Definition
Local	Tree is significant as presenting with a degree of rarity relative to the assessment criteria, so as to make it exceptional within the local landscape or township. <u>OR</u> tree has social or historic connections that are considered to be significant at a local township level.
Regional	Tree is significant as presenting with a degree of rarity relative to the assessment criteria, so as to make it exceptional within the Shire of Cardinia. <u>OR</u> tree has social or historic connections that are considered to be significant within the Shire of Cardinia
State	Tree is significant as presenting with a degree of rarity relative to the assessment criteria, so as to make it exceptional within the state of Victoria. <u>OR</u> tree has social or historic connections that are considered to be significant within the state of Victoria.

Statement

of Significance: Briefly outlines what and where the tree is, how it is significant, and to what level this significance applies.

MANAGEMENT TERMINOLOGY

Tree Condition: This is a general description of the condition of the tree in terms of health and structure. It is not a full safety inspection, but provides further detail on factors influencing the Projected Amenity Period. The condition of the tree also informs recommendations on Management Prescriptions and Threats/Risks.

Threats/Risks: A list of any obvious threats or risks to the trees' health, longevity or significance.

Management

Prescriptions: A brief list of management prescriptions required to protect the trees' health, longevity and significance. This is not a full list of works required to manage the trees' health or structure.

Tree Rating: The tree rating is an overall assessment of the tree based on its level of significance and the potential length of time it is able to supply amenity value. While all significant trees are by definition considered worthy of retention; this assessment provides a way ranking the preservation worthiness of significant trees.

Ranking	Definition
One (1)	Tree(s) are of state significance with the potential to be able to provide amenity in the long term
Two (2)	Tree(s) are of state significance with the potential to be able to provide amenity in the medium term <u>OR</u> Tree(s) are of regional significance with the potential to be able to provide amenity in the long term
Three (3)	Tree(s) are of state significance and are considered to be able to provide amenity only in the short term <u>OR</u> Tree(s) are of regional significance with the potential to be able to provide amenity in the medium term <u>OR</u> Tree(s) are of local significance with the potential to be able to provide amenity in the long term
Four (4)	Tree(s) are of regional significance and are considered to be able to provide amenity only in the short term <u>OR</u> Tree(s) are of local significance with the potential to be able to provide amenity in the medium term
Five (5)	Tree(s) are of local significance and are

	considered to be able to provide amenity only in the short term.
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Assessed By: The initials of the assessor

Date: The date of the assessment

Note: Throughout this report any terminology referred to in the singular is also applicable in the plural, and vice versa – where this is relevant to the context. In particular the term “tree” can refer to a single significant tree, a significant group or all of the significant trees within the study.