



# GERVIS TREE SERVICES

Nurturing Nature

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# Emmanuel Main Campus Assessment & Management Plan

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**PLANNING and ENVIRONMENT ACT  
Warrnambool PLANNING SCHEME**

**PERMIT NO. PA2201869**

**ENDORSED PLAN  
Sheet 1 of 10**

Signed:  for  
**MINISTER FOR PLANNING**  
Date: 16/6/2023

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## Scope

Gervis Tree Services has been engaged by Jason Beveridge of Emmanuel College Warrnambool to conduct a tree risk assessment report and management plan of any trees that stand out as a potential hazards within the surrounds of Botanical road campus. This report is to determine the condition and risks/hazards presented by the trees assessed. Recommended actions and timelines will also be provided.

## Key objectives

- Assess the relevant trees potential risks and hazards
- Assess the relevant trees general wellbeing
- Provide recommendations for works to reduce potential risks and ideally improve tree health &/or structure.

## Methodology

Site inspection and data collection was carried out on 08/05/2023 by Kyle Gervis. Data was collected from the ground on foot and recorded digitally on the day. The trees were not climbed, tree height and width was estimated, no samples of the tree or soil was taken. Relevant photos were taken on site during the site inspection. Trees assessed were done so because they presented with visible issues that could be rectified with Arboricultural works. Proximity to permanent and temporary targets was a primary consideration in the assessment of the trees.



## Site description

The site is Warrnambool's Emmanuel College's junior campus which can be accessed from either botanic road or Ardlie Street. The area assessed is approximately 81,000m2 with generally flat topography. Within the school boundaries the main structures and areas are buildings, two sporting ovals, court areas and car parking.

Figure 1: Site Map



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## Tree data & recommendations

All tree data and recommendations are in PDF document “Emmanuel College Junior Campus Tree Risk Assessment Data” PDF attached or accessed through the link

<https://app.au.safetyculture.com/report/public/audit/4a8c591fc59ee2d76aa35a9f212e593f1c6a1786b83da3565f40b8c1c69a8689>

## Discussion

All works detailed in “Emmanuel College Junior Campus Tree Risk Assessment Data” PDF are to be carried out by a qualified Arborist with a Certificate 3 or higher.

This site will require monitoring every 1-2 years.

In general the a large portion of the existing established trees have been poorly pruned in the past which has produced large amounts of epicormic regrowth which has a higher likelihood of failure due to poorer structural attachment. The bulk of the tree removals are Eucalyptus species that have had this poor pruning in the past. After lopping, Eucalyptus trees are very difficult to properly manage because of the distance and infrequency between branches on the epicormic shoots. This large spacing of branches makes crown reduction work difficult and in most cases a waste of time and resources. Considering the location, increased likelihood of large limb failures and the consequences of such failures removal and replanting is advised.

## Conclusion

Most trees within this site are not a cause of immediate concern based on a ground based visual assessment and will continue to provide benefits if a regular maintenance and monitoring schedule is followed. The trees assessed should be dealt with within the given time periods.



## References and appendix

- Australian Standards 2009, AS 4970-2009 Protection of trees on development sites.
- Australian Standards 2007, AS 4737-2007 Pruning of Amenity Trees.
- Mattheck K, Breloer H. 1994. The body language of trees, a handbook for failure analysis, London, England.
- Shigo, A.L. 1986. A New Tree Biology. Shigo & Trees, Associates, Durham, New Hampshire.
- Shigo, A.L. 1991, Modern Arboriculture. Shigo & Trees, Associates, Durham, New Hampshire.
- Lonsdale, David, Principles of Tree Hazard Assessment and Management Tree Hazard Assessment & Management TSO (The Stationery Shop, PO Box 29, Norwich, NR3 IGN)
- & AS4373

### 1.1.1 Tree age

Term	Definition
Young	Juvenile or recently planted 1-7 years ago.
Semi-mature	Tree actively growing.
Mature	Tree has reached expected size in situation.
Senescent	Tree is over mature and starting to decline.
Dead	This tree has stopped life functions

### 1.1.2 Tree Origin

Term	Definition
Exotic	The species originates in a country other than Australia.
Native	The species originates within Australia.
Indigenous	The species originates within the local environs.

### 1.1.3 Health

Term	Definition
Good	The foliage of tree entire, with good colour, very little signs of pathogens and the density and growth indicators are good ie. Extension growth of twigs and wound wood development. Minimal or no canopy dieback (Deadwood).
Fair	The tree is showing one or more of the following symptoms: <25% Deadwood, minor canopy dieback, foliage generally with good colour though some imperfections may be present. Minor pathogen damage present, with growth indicators such as leaf size, canopy density and Twig extension growth typical for the species in this location.
Poor	The tree is showing one or more of the following symptoms of tree decline; >25% deadwood, canopy dieback is observable, discoloured or distorted leaves. Pathogens present, stress symptoms are observable as reduced leaf size, extension growth and canopy density.
Dead or dying	The tree is in severe decline; >55% deadwood, very little foliage, possibly epicormic shoots, minimal extension growth.

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### 1.1.4 Structure

Term	Definition
Good	Trunk scaffold branches to good taper and attachment with minor or no structural defects.
Fair	The tree shows some minor structural defects or minor damage to the trunk eg; Bark missing, there could be cavities present. Minimal damage to structural roots. The tree could be seen as a typical specimen.
Poor	There are major structural defects, damage to Trunk or bark missing. Co-dominant stems could be present or poor structure with likely points of failure. Girdling or damaged roots obvious. The tree is structurally problematic.
Hazardous	The tree is an immediate hazard with the potential to fail, this should be rectified as soon as possible.

### 1.1.5 Useful Life Expectancy (ULE)

Useful Life Expectancy is approximately how long a tree can be retained usefully in the landscape.

Term	Definition
Long ULE	Trees that appeared to be retained at all with the acceptable level of risk for more than 40 years. <ol style="list-style-type: none"> <li>Structurally sound trees located in positions that can accommodate future growth.</li> <li>Storm damaged or defective trees that could be made suitable for retention in the long-term by remedial tree surgery.</li> <li>Trees of special significance for historical, commemorative or rarity reasons that would warrant extraordinary effort to secure the long-term retention.</li> </ol>
Medium ULE	Trees that appear to be retainable with an acceptable level of risk or 15 to 40 years. <ol style="list-style-type: none"> <li>Trees that may only live between 15 and 40 years.</li> <li>Trees that may live for more than 40 years but would be removed to allow for safe development of more suitable individuals.</li> <li>Trees that may live for more than 40 years but would be removed during the course or normal Management for safety and nuisance reasons.</li> <li>Storm damaged or defective trees that can be made suitable for retention in the medium term by remedial work.</li> </ol>
Short ULE	Trees that appeared to be retainable with an acceptable level of risk for 5 to 15 years. <ol style="list-style-type: none"> <li>Trees that may live for 5 to 15 years.</li> <li>Trees that may live for more than 15 years but would be removed to allow the safe development of more suitable individuals.</li> <li>Trees that may live for more than 15 years but would be removed during the course of normal Management for safety and nuisance reasons.</li> <li>Storm damaged or defective prayers that require substantial remedial work to make safe and are only suitable for retention in the short term.</li> </ol>
Remove	Trees with a high level of risk that would need removal within the next 5 years. <ol style="list-style-type: none"> <li>Dead trees.</li> <li>Dying or suppressed or declining cruise through disease or inhospitable conditions.</li> <li>Dangerous trees through instability or recent loss of adjacent trees.</li> <li>Dangerous trees through structural defects including cavities, decay, occluded bar, wounds or poor form.</li> <li>Damaged trees that are considered unsafe to retain.</li> <li>Trees that will become dangerous after removal of other trees for the above reasons.</li> </ol>

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### 1.1.6 Retention Value

Term	Definition
Low	Trees that offer little in terms of contributing to the Future landscape for the reasons of poor health or structural condition, species suitability in relation to unacceptable growth habit, noxious, poisonous or weed species or ULE. Or a combination of these characteristics. Could be considered for removal.
Medium	Trees with some beneficial attributes that may benefit the site in relation to botanical, horticultural, historical a local significance but may be limited to some degree by their future growth potential at the site by the maintenance requirements now or in the future. These trees could be considered for attention if possible, within the development design, they may be modified to allow for construction. (eg. pruning etc)
High	Trees with the potential to positively contribute to the site due to their botanical, historical or local significant in combination with good characteristics of structure, health, and future developments. Should be considered for inclusion within development plans.

### 1.1.7 Hazard

Term	Definition
Low	The tree appears to be structurally sound, is healthy with no signs of pest or diseases, as good vigour and is clear of any hazards.
Medium	Tree display signs of structural problems, evidence of pests or disease, signs of low vigour, decay, deadwood, maybe growing into an area that could create a hazard.
High	The tree is an immediate hazard with the potential to fail, this should be rectified as soon as possible.

### 1.1.8 Risk

Likelihood of failure & Impact	Consequence of impact			
	Negligible	Minor	Significant	Severe
Very Likely	Low	Moderate	High	Extreme
Likely	Low	Moderate	High	High
Somewhat likely	Low	Low	Moderate	Moderate
Unlikely	Low	Low	Low	Low

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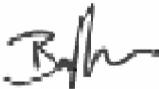
### 1.1.9 Tree works timeframe

Term	Definition
Extreme	Should be undertaken immediately, these trees represent an immediate hazard.
Urgent	Should be undertaken within 6 months.
High	Should be undertaken within 12 months.
Medium	Should be undertaken within 18 months.
Low	Basic recommended works which should be undertaken within 24 – 36 months.

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# TreeAZ: Detailed guidance on its use Australia and New Zealand (Version 10.10-ANZ)

**Figure 1: TreeAZ Categories (Version 10.10-ANZ)**

**CAUTION:** TreeAZ assessments must be carried out by a competent person qualified and experienced in arboriculture. The following category descriptions are designed to be a brief field reference and are not intended to be self-explanatory. They must be read in conjunction with the most current explanations published at [www.TreeAZ.com](http://www.TreeAZ.com).

### Category Z: Unimportant trees not worthy of being a material constraint

**Local policy exemptions:** Trees that are unsuitable for legal protection for local policy reasons including size, proximity and species

- Z1 Young or insignificant small trees, i.e. below the local size threshold for legal protection, etc
- Z2 Too close to a building, i.e. exempt from legal protection because of proximity, etc
- Z3 Species that cannot be protected for other reasons, i.e. scheduled noxious weeds, out of character in a setting of acknowledged importance, etc  
**High risk of death or failure:** Trees that are likely to be removed within 10 years because of acute health issues or severe structural failure
- Z4 Dead, dying, diseased or declining  
**Severe damage and/or structural defects where a high risk of failure cannot be satisfactorily reduced by reasonable remedial care, i.e. cavities, decay, included bark, wounds, excessive imbalance, overgrown and vulnerable to adverse weather conditions, etc**
- Z5 Severe damage and/or structural defects where a high risk of failure cannot be satisfactorily reduced by reasonable remedial care, i.e. cavities, decay, included bark, wounds, excessive imbalance, overgrown and vulnerable to adverse weather conditions, etc
- Z6 Instability, i.e. poor anchorage, increased exposure, etc  
**Excessive nuisance:** Trees that are likely to be removed within 10 years because of unacceptable impact on people
- Z7 Excessive, severe and intolerable inconvenience to the extent that a locally recognized court or tribunal would be likely to authorize removal, i.e. dominance, debris, interference, etc
- Z8 Excessive, severe and intolerable damage to property to the extent that a locally recognized court or tribunal would be likely to authorize removal, i.e. severe structural damage to surfacing and buildings, etc  
**Good management:** Trees that are likely to be removed within 10 years through responsible management of the tree population
- Z9 Severe damage and/or structural defects where a high risk of failure can be temporarily reduced by reasonable remedial care, i.e. cavities, decay, included bark, wounds, excessive imbalance, vulnerable to adverse weather conditions, etc
- Z10 Poor condition or location with a low potential for recovery or improvement, i.e. dominated by adjacent trees or buildings, poor architectural framework, etc
- Z11 Removal would benefit better adjacent trees, i.e. relieve physical interference, suppression, etc
- Z12 Unacceptably expensive to retain, i.e. severe defects requiring excessive levels of maintenance, etc

**NOTE:** Z trees with a high risk of death/failure (Z4, Z5 & Z6) or causing severe inconvenience (Z7 & Z8) at the time of assessment and need an urgent risk assessment can be designated as ZZ. ZZ trees are likely to be unsuitable for retention and at the bottom of the categorization hierarchy. In contrast, although Z trees are not worthy of influencing new designs, urgent removal is not essential and they could be retained in the short term, if appropriate.

### Category A: Important trees suitable for retention for more than 10 years and worthy of being a material constraint

- A1 No significant defects and could be retained with minimal remedial care
- A2 Minor defects that could be addressed by remedial care and/or work to adjacent trees
- A3 Special significance for historical, cultural, commemorative or rarity reasons that would warrant extraordinary efforts to retain for more than 10 years
- A4 Trees that may be worthy of legal protection for ecological reasons (Advisory requiring specialist assessment)

**NOTE:** Category A1 trees that are already large and exceptional, or have the potential to become so with minimal maintenance, can be designated as AA at the discretion of the assessor. Although all A and AA trees are sufficiently important to be material constraints, AA trees are at the top of the categorization hierarchy and should be given the most weight in any selection process.

TreeAZ is designed by Barrell Tree Consultancy ([www.barrelltreecare.co.uk](http://www.barrelltreecare.co.uk)) and is reproduced with their permission

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