



Arbor Survey

# DEVELOPMENT IMPACT ASSESSMENT

**Site Address:**

Nunawading Christian College  
Early Learning Centre  
161 Central Road  
**NUNAWADING**

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

**Prepared:** 3 June 2024

**Revised:** 01 November 2024

**Document Ref:** R6864\_2 Nunawading Christian College ELC NUNAWADING

**Version / Revision:** 2

**Issued:** 6/11/2024

arborsurvey.com.au

office@arborsurvey.com.au

03 8521 4966

**ADVERTISED  
PLAN**

## CONTENTS

- 1. **SUMMARY**.....3
- 2. **INTRODUCTION** .....4
- 3. **REPORT OBJECTIVES, RESOURCE DOCUMENTS AND VEGETATION CONTROLS** .....4
  - 3.1 REPORT OBJECTIVES .....4
  - 3.2 DOCUMENTS / RESOURCES VIEWED IN PREPARATION OF THIS REPORT .....5
  - 3.3 VEGETATION CONTROLS.....5
- 4. **SITE ANALYSIS**.....6
  - 4.1 SITE LOCATION, AREA AND TOPOGRAPHY.....6
  - 4.2 TREE LOCATION .....6
  - 4.3 ORIGIN AND LANDSCAPE SIGNIFICANCE .....6
- 5. **ARBORICULTURAL AND PROTECTION VALUE ASSESSMENT** .....7
  - 5.1 ARBORICULTURAL VALUE ASSESSMENT .....7
  - 5.2 PROTECTION VALUE ASSESSMENT .....7
- 6. **DEVELOPMENT IMPACT ASSESSMENT AND IMPACT MITIGATION RECOMMENDATIONS** .....8
  - 6.1 DEVELOPMENT / CONSTRUCTION IMPACT ASSESSMENT .....8
  - 6.2 IMPACT MITIGATION RECOMMENDATIONS.....9
- 7. **TREE DATA AND PLANS** .....11
  - 7.1 TREE DATA .....11
  - 7.2 TREE LOCATION AND DEVELOPMENT IMPACT PLANS.....13
  - 7.3 TREE DATA SHEETS.....15
- 8. **APPENDICES** .....31
  - 8.1 SURVEY METHODOLOGY AND DESCRIPTORS .....31
  - 8.2 GLOSSARY OF COMMONLY USED TERMS.....36
  - 8.3 BIBLIOGRAPHY AND CITED REFERENCES .....37
  - 8.4 TREE PROTECTION GUIDELINES.....37
  - 8.5 TERMS AND CONDITIONS .....39

## LIST OF TABLES

- TABLE 1: VEGETATION PROTECTION CONTROLS.....5
- TABLE 2: HIGH AND MODERATE PROTECTION VALUE TREES - TREE PROTECTION DISTANCES .....7
- TABLE 3: ENCROACHMENT SUMMARY .....8
- TABLE 4: CONSTRUCTION / DEVELOPMENT IMPACT SUMMARY .....8

## LIST OF FIGURES

- FIGURE 1: AERIAL PHOTOGRAPH OF PROJECT SUITE AND WORKS AREA (YELLOW POLYGON) (NEARMAP™, DATE: 16/05/2024).....6

ADVERTISED  
PLAN

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

## DOCUMENT CONTROL

ITEM	DETAIL
Arbor Survey Reference:	R6864_2 Nunawading Christian College ELC NUNAWADING
Client Reference:	N/A
Site / Data Collected:	24/04/2024
Report Prepared:	03/06/2024
Reviewed:	07/06/2024
Status:	Final
Version / Revision No:	2
Revision Date:	01/11/2024
Issued Date:	6/11/2024
Issue format:	Portable Document Format (*.pdf) – Uncontrolled when Printed

## 1. SUMMARY

The Development Impact Assessment has been undertaken to determine the impact to trees or vegetation on or adjoining Nunawading Christian College, 161 Central Road, Nunawading from the proposed construction of an Early Learning Centre. The report provides an overview of the site characteristics and relevant regulatory controls, the arboricultural condition of the trees and determines the Protection Value of the trees and vegetation on the project site and adjoining lands where the tree protection zones may be impacted. The primary purpose of this assessment is to identify the impact from the proposed construction and to outline impact mitigation and tree protection measures for trees of high or moderate protection value. The survey has identified a total of 32 trees and or groups of trees within and surrounding the project site. The following is a summary of the protection value of the trees.

### HIGH PROTECTION VALUE TREES

- 3 trees are of high protection value.
  - Trees 1 & 26 are located within the project site and have been given this rating as they are of good health and fair-good structure and of high landscape significance. These trees should be considered for protection and incorporation into the proposed landscape where possible and practical.
  - Tree 9 is located on adjoining land (Vic Rail) and potential construction impacts should be minimised where possible.

### MODERATE PROTECTION VALUE TREES

- 7 trees or groups of trees (Trees 4, 11, 23\*, 27-29 & 31) are of moderate protection value. These trees have been given this rating as they are of fair-good arboricultural condition overall and of moderate to high landscape significance. These trees may have characteristics that can be improved with modern arboricultural practices. Where possible and practical, these trees should be considered for protection within the project site.

### TREES OF NO PROTECTION VALUE

- 22 trees or groups of trees are of no protection value (Refer to the Tree Data in Section 7). Trees of no protection value may be of poor arboricultural condition in terms of their health and/or structure, low landscape significance, unsuitable within the project site as they are situated in an inappropriate location for long term growth or landscape functionality or causing damage to surrounding infrastructure. These trees may be subject to a permit for removal.

The proposed development plans were viewed in the preparation of this report. Based on the proposed design and the guidelines of the *Australian Standard AS4970 - 2009 - Protection of Trees on Development Sites*:

### TREES THAT CANNOT BE PROTECTED

- 15 trees or groups of trees cannot be protected as they are located within building/ driveway envelopes, or they are within close proximity to buildings and works and will incur a high level of encroachment into the Tree Protection Zone (TPZ) and the Structural Root Zone (SRZ). Of these trees:
  - 2 trees (Trees 1 & 26) are considered to be of high protection value. Note Tree 1 is shown to be retained – a redesign to maintain existing levels would be required to retain this tree.
  - 5 trees/groups (Trees 4, 23\* & 27-29) are of moderate protection value and,
  - 8 trees/groups (Trees 2, 3\*, 5-8, 10 & 24\*) are of no protection value.

### TREES THAT WILL INCUR MAJOR ENCROACHMENT (GREATER THAN 10%) INTO THE TREE PROTECTION ZONE

- 1 tree, Tree 11, will incur 'Major Encroachment' into its tree protection zone. The impact to this moderate protection value tree may be mitigated through the recommendations provided in Section 6.2.

### TREES THAT WILL INCUR NO OR MINOR ENCROACHMENT (10% OR LESS) INTO THEIR TREE PROTECTION ZONE

- 16 trees or groups of trees will incur no or 'Minor Encroachment' into the tree protection zones.
  - Trees 9 and 31 are of high and moderate protection value. Impact mitigation (where required), and protection measures are outlined in Section 6.2.

**This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright**

- 14 trees (Trees 12-22\*, 25\*, 30 & 32) have no protection value. Although these trees are not worthy of retention, the majority of trees will not be impacted by proposed works and may be retained. Standard tree protection measures are recommended for any trees to be retained / protection.

The Tree Location Plan (Existing Conditions) and Development Impact Plan in Section 7.2 provide a visual representation of the protection values of the trees and indicates the Tree Protection Zone (TPZ), Structural Root Zone (SRZ) and encroachment from proposed works for trees that are considered to be of high or moderate protection value.

\* - Denotes groups of trees

## ADVERTISED PLAN

## 2. INTRODUCTION

Arbor Survey Pty Ltd has undertaken a Development Impact Assessment in accordance with the *Australian Standard AS4970 - 2009 - Protection of Trees on Development Sites* for the trees on and adjoining Nunawading Christian College, 161 Central Road, Nunawading. This assessment is an analysis of 32 trees or groups of trees that are located within the project site and on adjacent land where the tree protection zones (TPZ) may extend into the project site and may be affected by the proposed construction.

This report provides an assessment of the condition of the trees, expressed as the Arboricultural Value and a determination of the Protection Value. The Protection Value of the trees takes into account the arboricultural condition, landscape and environmental significance, ownership and relevant legislative controls including local municipal laws and vegetation, environmental/ landscape significance, cultural or heritage overlays or any other relevant considerations (i.e. exemptions) of the relevant Planning Scheme.

The assessment of the trees in terms of their overall condition has been made in accordance with the Survey Methodology and Descriptors in Appendix 8.1. These must be referred to when reading this report.

Impact mitigation and tree protection measures are recommended to reduce the impact on high and moderate protection value trees where possible. These measures are based on the guidelines of the *Australian Standard AS4970 - 2009 - Protection of Trees on Development Sites*.

**This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright**

## 3. REPORT OBJECTIVES, RESOURCE DOCUMENTS AND VEGETATION CONTROLS

### 3.1 REPORT OBJECTIVES

The Development Impact Assessment has been prepared in accordance with relevant industry standards. The report objectives are:

- To assess tree condition based on the Visual Tree Assessment Methodology (VTA) and landscape significance of the trees or groups of trees on the project site and adjacent land where the tree protection zones (TPZ) may extend into the project site and may be affected by any proposed development or construction
- To identify any relevant Local Laws or Planning controls or exemptions that may be applicable to the site
- To assess the impact to all trees from the proposed development or construction (based upon the *Australian Standard AS 4970 - 2009 - Protection of Trees on Development Sites*)
- To provide impact mitigation and tree protection measures for trees of moderate or high protection value.

The recommendations given are based on the condition of the trees or groups of trees and their suitability for retention and or protection in relation to their current and future growing environment. Recommendations are not driven by the proposed development of the land and impact mitigation measures are provided where possible and practical regarding trees that are of moderate or high protection value.

**Trees that are considered to be worthy of protection are afforded general guidelines for tree protection measures. These guidelines do not constitute a Tree Management or Protection Plan (as per the *Australian Standard AS 4970 - 2009 - Protection of Trees on Development Sites*).**

### 3.2 DOCUMENTS / RESOURCES VIEWED IN PREPARATION OF THIS REPORT

The following documents and resources were viewed or relied upon in preparation of this report:

#### PLANS

- Existing Conditions: Plan of Survey from Bertoli Wellington Pty Ltd (Ref No.: 1965F-2, Version: 1, Sheet: 1, Date: 05/02/2024)
- Proposed Development Plans: Kneeler Design Architects (Dwg No.: WD2110/101 & WD2110/102, Revision: A0, Date: 05/06/2024)

(Note: All plans assessed from others and used as a basis for this assessment are assumed to be true and correct)

#### PLANNING CONTROLS

- Vic Plan – Department of Environment, Land, Water and Planning (DELWP) (<https://mapshare.vic.gov.au/vicplan/>)

#### RESPONSIBLE AUTHORITY

- Whitehorse Planning Scheme
- Whitehorse City Council Community Local Law 2014

#### OTHER

- VicMap Data (Spatial Property Cadastre) (<http://services.land.vic.gov.au/SpatialData/marv/>)
- Aerial Photograph of the site (Nearmap™ – Dated: 16/05/2024).
- Native Vegetation Assessment from Nature Advisory (Report No.: 24220.01 (1.1), Date: October 2024)

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

### 3.3 VEGETATION CONTROLS

The project site is located within Neighbourhood Residential Zone – Schedule 3 (NRZ3) of the Whitehorse Planning Scheme. The site is subject to the following statutory regulations and/or exemptions:

**Table 1:** Vegetation Protection Controls

Vegetation Controls / Exemptions	Applies to tree(s):	Reason
Heritage Overlay (HO)	N/A	Does not apply.
Significant Landscape Overlay – Schedule 5 (SLO5)	<b>Project Site</b> Trees 1, 2, 4-6, 11-16, 23* & 26-32	A permit is required to remove, destroy or lop a tree. This does not apply to: <ul style="list-style-type: none"> <li>A tree with a single trunk circumference of 0.5m (15.9cm Ø) or less at 1m above ground level</li> <li>Pruning (regenerative/ornamental)</li> </ul> Trees that are dead or dying to the satisfaction of the Responsible Authority
Significant Landscape Overlay – Schedule 9(SLO9)	N/A	Does not apply to project area
Environmental Significance Overlay – Schedule 1 (ESO1)	<b>Project Site</b> Trees/groups 1, 11, 12, 23*-26, 28 & 29	A permit is <b>not</b> required to remove, destroy, or lop any vegetation if the vegetation: <ul style="list-style-type: none"> <li>Dead or dying to the satisfaction of the Responsible Authority</li> <li>Non-native vegetation</li> <li>Included in 'The City of Whitehorse Environmental List 2007'</li> </ul>
Vegetation Protection Overlay (VPO)	N/A	Does not apply.
Clause 52.17 'Native Vegetation'	<b>Project Site</b> Trees 1, 11, 12, 28 & 29	Site area is greater than 4000m <sup>2</sup> These trees have been identified as Scattered Trees. Refer to the Native Vegetation Assessment prepared by Nature Advisory.
Clause 52.12 'Bushfire Protection: Exemptions'	N/A	Site is not within a Bushfire Prone Area (BPA)
Local Law	N/A	<b>Clause 3.4</b> A person must not, without a permit destroy, damage or interfere with Council assets (incl. trees).

\* - Denotes groups of trees

## 4. SITE ANALYSIS

### 4.1 SITE LOCATION, AREA AND TOPOGRAPHY

The project site is located on the northern side of Central Avenue, Nunawading. The project area is the north east corner of the property, near Laughlin Avenue. There is a change in grade of approximately 4 metres across the project area from the east to the west. The aerial photograph in Figure 1 shows the College and the proposed works area (yellow polygon).



**Figure 1:** Aerial photograph of project suite and works area (yellow polygon) (Nearmap™, Date: 16/05/2024)

### 4.2 TREE LOCATION

From the 32 trees or groups of trees assessed:

- 31 trees or groups of trees are located within the project site, and
- 1 tree is located on the Vic Rail corridor.

**ADVERTISED  
PLAN**

### 4.3 ORIGIN AND LANDSCAPE SIGNIFICANCE

From the assessment, 8 trees/groups are Indigenous to the local area, 2 trees/groups are Victorian Native specimens (not Indigenous to the local area), 3 trees/groups are Australian Native specimens and 19 trees/groups are Exotic specimens. All trees except Trees 1, 11, 12, 28 & 29 are considered to be planted.

6 trees (Trees 1, 11 & 26-29) are of high landscape significance and are dominant within the site. These trees are 12-19 metres in height with canopy spreads of 6.5-14 metres. 3 trees / groups (Trees 4, 23\* & 31) are of moderate landscape significance. These trees may provide screening or other landscape attributes that are of value.

The remaining trees are of low landscape significance and value in terms of their mass and contribution to the canopy coverage to the immediate local area. Some of these trees may be in good condition in terms of their arboricultural characteristics, however, the landscape or amenity value they provide could easily be replaced with new planting.

## 5. ARBORICULTURAL AND PROTECTION VALUE ASSESSMENT

### 5.1 ARBORICULTURAL VALUE ASSESSMENT

Arboricultural value is rated according to the overall health, structure, life expectancy and significance within the landscape. The Arboricultural Value only relates to the physical condition of the tree or trees and does not take into account the vegetation/ environmental status/ controls, the suitability of the tree in the landscape or the ownership of the tree (Refer to Appendix 8.1 for further information on the descriptors used).

The Arboricultural Value rankings are provided in the tree data is found in Section 7.1. The Arboricultural Value only provides a rating of the arboricultural condition of the trees. In general, trees that are considered to be of moderate to high Arboricultural Value are also considered to be of moderate to high Protection Value unless the trees are inappropriate for long term growth or landscape functionality or causing damage to surrounding infrastructure. Additionally, some trees may be of no Protection Value if there are relevant planning exemptions (i.e. Clause 52.12). Similarly, some trees may be of low Arboricultural Value, however they are given a high Protection Value as they are located on adjoining private property or Council owned land.

### 5.2 PROTECTION VALUE ASSESSMENT

The Protection Value of the trees has been determined by taking into consideration the arboricultural value, landscape significance, habitat value, ownership and relevant legislative controls (including local municipal laws, vegetation protection and environmental/landscape significance overlays and cultural/heritage overlays) or any other relevant considerations (i.e. exemptions) of the relevant Planning Scheme. Only trees of high and moderate protection value should be considered for protection (Refer to Appendix 8.1 for further information).

Table 2 documents the trees that are worthy of protection and provides the trunk and basal diameters (DBH and Basal Dia.), Structural Root Zone (SRZ) and Tree Protection Zone (TPZ) (Note: SRZ and TPZ are a radial measurement from the centre of the trunk). This table should be viewed in conjunction with the Tree Location (Existing Conditions) and Development Impact (Proposed Development) Plans located in Section 7.2. Trees that have been determined to have a high and moderate protection value are shown and have the Tree Protection Zone (TPZ) and Structural Root Zone (SRZ) drawn.

**Table 2:** High and Moderate Protection Value Trees - Tree Protection Distances

Tree No	Botanical Name	Ownership	Protection Value	DBH (cm)	Basal Dia (cm)	SRZ (m)	TPZ (m)	TPZ Area (m <sup>2</sup> )
1	<i>Eucalyptus radiata</i>	Project Site	High	3.3	8.4	221.7	5.8	1
4	<i>Salix babylonica</i>	Project Site	Moderate	3.0	9.7	295.6	6.7	4
9	<i>Eucalyptus leucoxylon</i>	Vic Rail	High	1.7	2.0	12.6	1.4	9
11	<i>Eucalyptus cephalocarpa</i>	Project Site	Moderate	3.5	10.4	339.8	7.2	11
23*	<i>Acacia melanoxylon</i>	Project Site	Moderate	1.8	2.0	12.6	1.4	23*
26	<i>Corymbia maculata</i>	Project Site	High	2.6	5.4	91.6	3.7	26
27	<i>Pinus pinaster</i>	Project Site	Moderate	3.1	9.5	283.5	6.5	27
28	<i>Eucalyptus cephalocarpa</i>	Project Site	Moderate	3.1	10.8	366.4	7.4	28
29	<i>Eucalyptus goniocalyx</i>	Project Site	Moderate	3.6	9.5	283.5	6.5	29
31	<i>Pyrus calleryana</i>	Project Site	Moderate	1.9	2.6	21.2	1.8	31

\* - Denotes groups of trees

**Note:** DBH (cm) is the diameter at breast height (1.4m from natural ground level), Basal Dia (cm) is the diameter of the trunk above the root flare, SRZ (m) is the structural root zone in metres in a radius from the centre of the trunk, TPZ (m) is the tree protection zone in metres in a radius from the centre of the trunk. These measurements and distances are calculated based on the Australian Standard AS4970 - 2009 - Protection of Trees on Development sites.

**ADVERTISED  
PLAN**

**This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any**

## 6. DEVELOPMENT IMPACT ASSESSMENT AND IMPACT MITIGATION RECOMMENDATIONS

### 6.1 DEVELOPMENT / CONSTRUCTION IMPACT ASSESSMENT

The following table provides a summary of the impact of the proposal on the assessed trees based on their protection value in accordance with the guidelines of the *Australian Standard AS4970 - 2009 - Protection of Trees on Development Sites*. The encroachment is based on all works including the building footprint, crossovers, driveways and hard landscaping elements such as pathways.

**Table 3:** Encroachment Summary

Protection Value	No Encroachment	Minor Encroachment	Major Encroachment	Cannot be Protected
None	13 trees/groups (Trees 12-22*, 30 & 32)	1 group (Tree 25*)	0 trees	8 trees/groups (Trees 2, 3*, 5-8, 10 & 24*)
Moderate	1 tree (Tree 31)	0 trees	1 tree (Tree 11)	5 trees/groups (Trees 4, 23* & 27-29)
High	1 tree (Tree 9)	0 trees	0 trees	2 trees (Trees 1 & 26)

\* - Denotes groups of trees

The encroachment into the tree protection zone from buildings and or any works (including the construction of paths, driveways, landscaping etc) may be considered as low impact to significant impact. For example, a tree may have an encroachment of 30% into the tree protection zone (TPZ), however this encroachment is from landscaping/ path works or for a wooden deck that is to be constructed above natural ground level. In such cases, the impact can be defined as 'Low Impact' and impact mitigation actions can be easily applied during construction. Conversely, an encroachment into the TPZ of 30% may be from a deep excavation (such as a basement) in which case the impact would be defined as 'Significant Impact' and impact mitigation can only be achieved through a redesign of the works proposal. In some cases, similar type works (i.e. such as a new driveway or crossover in a TPZ) may be defined as either Low, Moderate, High or Significant Impact. In these cases, the impact level will be defined by the topography of the site and the ability to construct above natural grade.

Table 4 below provides a summary of the encroachment and indicates whether the impact is considered to be Low, Moderate, High or Significant. The impact mitigation recommendations in Section 6.2 outline what is required to protect these trees where possible. The impact to trees of no protection value are not provided as these trees should not be considered for retention or protection as part of the proposal. Encroachment calculations are provided for these trees in the tree data in Section 7.1.

## ADVERTISED PLAN

**Table 4:** Construction / Development Impact Summary

Tree No.	Botanical Name	Protection Value	Encroachment	Element	Impact Level
1	<i>Eucalyptus radiata</i>	High	100%	Driveway, Entry Path & ELC	Lost - Significant works within SRZ/TPZ & level changes. Design modification required to maintain existing levels on north & east of tree required.
4	<i>Salix babylonica</i>	Moderate	100%	Driveway	Lost - Within works footprint
9	<i>Eucalyptus leucoxylon</i>	High	0%	None	No Impact - Standard tree protection
11	<i>Eucalyptus cephalocarpa</i>	Moderate	13%	Entry Path	Low - Existing concrete & bitumen. Construct path at/above grade. Refer to Impact Mitigation.
23*	<i>Acacia melanoxylon</i>	Moderate	Up to 100%	Storage & ELC	Lost - Within works footprint. Part of group could be retained if NGL maintained.
26	<i>Corymbia maculata</i>	High	100%	ELC	Lost - Within works footprint
27	<i>Pinus pinaster</i>	Moderate	100%	ELC	Lost - Within works footprint



Tree No.	Botanical Name	Protection Value	Encroachment	Element	Impact Level
28	<i>Eucalyptus cephalocarpa</i>	Moderate	100%	ELC	Lost - Within works footprint
29	<i>Eucalyptus goniocalyx</i>	Moderate	100%	ELC	Lost - Within works footprint
31	<i>Pyrus calleryana</i>	Moderate	0%	None	No Impact - Maintain NGL in playground area. Standard tree protection

\* - Denotes groups of trees

## 6.2 IMPACT MITIGATION RECOMMENDATIONS

Trees that have been determined to have no protection value should not be considered for long term retention and or protection as part of any future development on the project site. Trees of no protection value are not provided impact mitigation recommendations in this Development Impact Assessment.

Tree protection and impact mitigation measures are listed below in order to reduce the potential of direct or indirect impacts (soil compaction, physical tree/root damage etc). For further information on general guidelines for tree protection see Appendix 8.3.

### TREES PROTECTION STATUS

- Trees 9, 11, 23 (part of group) and 31 are of moderate and high protection value and can be retained/protected as part of the proposed works. Refer to the Specific Construction recommendations below for impact mitigation (where required).
- Although Trees 1, 4, 23 (part of group) and 26-29 are of high / moderate protection they cannot be retained under the current design. Potential design alterations are provided below for the retention of Trees 1 & 23\*.
- 8 trees / groups (Trees 2, 3\*, 5-8, 10 & 24\*) of no protection value cannot be retained as part of the proposed works. Suitable replacement planting should be undertaken in lieu of their removal.
- 14 trees / groups (Trees 12-22\*, 25\*, 30 & 32) are of no protection value however will not be impacted by proposed works. Standard tree protection measures are recommended for any tree retained.

### PERMIT REQUIREMENTS

- Trees/groups 1, 23\*, 24\*, 26, 28 & 29 require a permit under ESO1 for their removal.
- Trees/groups 1-6, 23\* & 26-29 require a permit under SLO5 for their removal.
- A Native Vegetation Removal Report is required for Trees 1, 28 and 29 – Refer to Native Vegetation Assessment from Nature Advisory (Report No.: 24220.01 (1.1), Date: October 2024)

### FURTHER INVESTIGATION REQUIRED

- No further investigation is required at this stage.

### POTENTIAL DESIGN ALTERATIONS

- Tree 1 – in order to retain this tree, the proposed driveway and paths would require modification. Given this tree is growing in a raised garden bed (Refer to photograph in Tree Data Sheets) it is recommended that any works on the north to east of this tree is above grade as it is likely that this is where the majority of roots would be present.
- Tree group 23 – This group (or part of) may be retained if the storage unit is relocated and NGL is maintained within the garden areas.

### SPECIFIC CONSTRUCTION RECOMMENDATIONS

- Tree 11 – the proposed path and garden areas should be constructed at above grade.
- Tree group 23 – This group (or part of) may be retained if the storage unit is relocated and NGL is maintained within the garden areas.
- Tree 31 – this tree may be retained if NGL is maintained within the tree protection zone.

**ADVERTISED  
PLAN**

**This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright**

### STANDARD TREE PROTECTION MEASURES

- Standard tree protection fencing must be established around the TPZs of Protected Trees (where outside proposed works footprint). The fencing is to remain in place during all site preparation / levelling and construction works.

### SPECIALISED TREE PROTECTION MEASURES

- Ground protection will be required where the TPZs cannot be adequately isolated with fencing and heavy vehicle access is required

### GENERAL TREE PROTECTION REQUIREMENTS

- Soil levels within the TPZs (where outside building/ driveway or works footprints) should remain at existing grade and permeable
- Any excavation (demolition and construction) within the TPZs should be supervised by a qualified arborist. Any roots uncovered must be cleanly pruned with sharp/sterile hand tools
- All tree protection measures must remain in place for the duration of works and can only be removed in consultation with the Project Arborist or local Responsible Authority
- Any new boundary fencing within the TPZ should be of light weight construction with no continuous footings and manually excavated stump holes (by hand or post hole auger only)
- Any required pruning must be in accordance with *Australian Standard AS4373-2007 Pruning of Amenity Trees* and carried out by a minimum AQF Level 3 Arborist.
- All services should be located outside the TPZ of trees to be protected. Where no alternative exists, a non-destructive root investigation or directional boring under supervision of a qualified Arborist must be undertaken to install the services.

### TREE MANAGEMENT DURING CONSTRUCTION

Dependant on the final design, it is recommended that a Tree Management Report and Protection Plan (TMPP) is created as a condition of permit that will specify the exact requirements for tree protection of all high and moderate protection value trees to be protected. As part of the TMPP, it is recommended that there is a certification framework that details the actions required at all stages of development, the timing of supervision and the Certification methods to be undertaken by the Project Arborist.

**This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright**

**ADVERTISED  
PLAN**

## 7. TREE DATA AND PLANS

### 7.1 TREE DATA

Tree No	Botanical Name	Common Name	Origin	DBH (cm)	Basal Dia (cm)	Height (m)	Spread (m)	Health	Structure	Age Class	Arbor Value	Ownership	Protect Value	SRZ (m)	TPZ (m)	Encroach (%)	Notes
1	<i>Eucalyptus radiata</i>	Narrow-Leaved Peppermint	Indigenous	38/37/46 (70)	102	12	10	Good	Fair-Good	Mature	High	Project Site	High	3.3	8.4	84%	Minor deadwood
2	<i>Liquidambar styraciflua</i>	Liquidambar	Exotic	17	22	6.5	4	Good	Fair-Good	Semi-Mature	High	Project Site	None	1.8	2.0	100%	Codominant stems
3*	<i>Camellia japonica</i>	Camellia	Exotic	Multi-stem	Approx. 15	5	2.5	Good	Fair	Semi-Mature	Medium	Project Site	None	1.5	2.0	100%	Group of 7, Pöhutukawa, Camellia, Yucca, Bottlebrush, Diosma
4	<i>Salix babylonica</i>	Weeping Willow	Exotic	Multi-stem	Approx. 81	8	12	Good	Fair	Mature	Medium	Project Site	Moderate	3.0	9.7	100%	Deadwood
5	<i>Prunus dulcis</i>	Almond	Exotic	12/12/22 (28)	22	6	6	Fair-Good	Fair	Mature	Medium	Project Site	None	1.8	3.4	100%	Fig tree growing through canopy
6	<i>Ficus carica</i>	Common Fig	Exotic	Multi-stem	Approx. 45	5	6	Fair-Good	Fair	Semi-Mature	Medium	Project Site	None	2.4	5.4	100%	Multi stem from base
7	<i>Citrus x limon</i>	Lemon	Exotic	7/10 (12)	16	3	3	Fair-Good	Fair-Poor	Semi-Mature	Low	Project Site	None	1.5	2.0	100%	Wound with decay in main stem
8	<i>Citrus x limon</i>	Lemon	Exotic	Multi-stem	15	2	3	Fair-Good	Poor	Semi-Mature	Low	Project Site	None	1.5	2.0	100%	Ground heave
9	<i>Eucalyptus leucoxylo</i>	Yellow Gum	Vic Native	Approx. 15	20	6	4	Fair-Good	Fair	Semi-Mature	Medium	Vic Rail	High	1.7	2.0	0%	On train line, higher soil grade on train line side
10	<i>Callistemon 'Harkness'</i>	Harkness Bottlebrush	Aus Native	9/11 (14)	23	4.5	4	Fair	Poor	Semi-Mature	Low	Project Site	None	1.8	2.0	100%	Split stem
11	<i>Eucalyptus cephalocarpa</i>	Silver-Leaved Stringybark	Indigenous	31/56/59 (87)	118	12	14	Good	Fair	Mature	Medium	Project Site	Moderate	3.5	10.4	13%	Split crossing stems
12	<i>Eucalyptus cephalocarpa</i>	Silver-Leaved Stringybark	Indigenous	35/20 (40)	45	5	4	Fair	Poor	Mature	Low	Project Site	None	2.4	4.8	0%	Lopped stems
13	<i>Robinia umbraculifera 'Moptop'</i>	Moptop Robinia	Exotic	21	22	3	2	Good	Fair	Semi-Mature	Medium	Project Site	None	1.8	2.5	0%	Low landscape value
14	<i>Pyrus calleryana</i>	Callery Pear	Exotic	23	26	6	4	Good	Fair	Semi-Mature	Medium	Project Site	None	1.9	2.8	0%	Acute unions
15	<i>Pyrus calleryana</i>	Callery Pear	Exotic	32	37	7	5	Good	Fair	Semi-Mature	Medium	Project Site	None	2.2	3.8	0%	Acute unions
16	<i>Pyrus calleryana</i>	Callery Pear	Exotic	23/21 (31)	26	7	7	Good	Fair	Semi-Mature	Medium	Project Site	None	1.9	3.7	0%	Acute unions
17	<i>Jacaranda mimosifolia</i>	Jacaranda	Exotic	13	15	4.5	3.5	Good	Fair	Semi-Mature	Medium	Project Site	None	1.5	2.0	0%	Low landscape value
18*	<i>Leptospermum petersonii</i>	Lemon-Scented Tea-Tree	Aus Native	Multi-stem	Approx. 15	4	3	Good	Fair	Semi-Mature	Medium	Project Site	None	1.5	2.0	0%	Group of 2
19	<i>Juniperus chinensis 'Spartan'</i>	Conifer Spartan	Exotic	Multi-stem	Approx. 15	5	2	Good	Fair	Semi-Mature	Medium	Project Site	None	1.5	2.0	0%	Low landscape value
20*	<i>Leptospermum petersonii</i>	Lemon-Scented Tea-Tree	Aus Native	8/13 (15)	17	4	3	Good	Fair	Semi-Mature	Medium	Project Site	None	1.6	2.0	0%	Group of 2
21	<i>Juniperus chinensis 'Spartan'</i>	Conifer Spartan	Exotic	Multi-stem	Approx. 15	6	2	Good	Fair	Semi-Mature	Medium	Project Site	None	1.5	2.0	0%	Low landscape value
22*	<i>Pittosporum tenuifolium</i>	Kohuhu	Exotic	Multi-stem	15	3	2	Good	Fair-Poor	Semi-Mature	Low	Project Site	None	1.5	2.0	0%	Group of 4
23*	<i>Acacia melanoxylon</i>	Blackwood	Indigenous	16	23	7.5	4	Good	Fair	Semi-Mature	Medium	Project Site	Moderate	1.8	Up to 100%	100%	Up to 100%

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Tree No	Botanical Name	Common Name	Origin	DBH (cm)	Basal Dia (cm)	Height (m)	Spread (m)	Health	Structure	Age Class	Arbor Value	Ownership	Protect Value	SRZ (m)	TPZ (m)	Encroach (%)	Notes
24*	<i>Acacia verticillata</i>	Prickly Moses	Indigenous	Multi-stem	17	4.5	4	Fair-Poor	Fair-Poor	Semi-Mature	Low	Project Site	None	1.6	2.0	100%	Group of 4 , 3 in poor health
25*	<i>Acacia melanoxylon</i>	Blackwood	Indigenous	13	16	6.5	3.5	Good	Fair	Semi-Mature	Medium	Project Site	None	1.5	2.0	3%	Group of 2
26	<i>Corymbia maculata</i>	Spotted Gum	Vic Native	45	58	17	6.5	Good	Fair-Good	Mature	High	Project Site	High	2.6	5.4	100%	
27	<i>Pinus pinaster</i>	Maritime Pine	Exotic	79	87	19	13	Fair	Fair-Good	Mature	Medium	Project Site	Moderate	3.1	9.5	100%	Thin canopy
28	<i>Eucalyptus cephalocarpa</i>	Silver-Leaved Stringybark	Indigenous	34/34/49/58 (90)	86	13	10	Good	Fair	Mature	Medium	Project Site	Moderate	3.1	10.8	100%	Acute unions
29	<i>Eucalyptus goniocalyx</i>	Long-Leaved Box	Indigenous	79	122	14	9	Good	Fair	Mature	Medium	Project Site	Moderate	3.6	9.5	100%	Lopped stem, epicormic growth
30	<i>Pyrus calleryana</i>	Callery Pear	Exotic	Approx. 15	Approx. 17	7	2	Fair-Good	Fair	Semi-Mature	Medium	Project Site	None	1.6	2.0	0%	Low landscape value
31	<i>Pyrus calleryana</i>	Callery Pear	Exotic	19/11 (22)	26	8	4	Good	Fair	Semi-Mature	Medium	Project Site	Moderate	1.9	2.6	0%	Lopped branches
32	<i>Robinia umbraculifera</i> 'Moptop'	Moptop Robinia	Exotic	15	18	3.5	3	Fair	Fair	Semi-Mature	Medium	Project Site	None	1.6	2.0	0%	Low landscape value

\* - Denotes groups of trees

Note: DBH (cm) is the diameter at breast height (1.4m from natural ground level), Basal Dia (cm) is the diameter of the trunk above the root flare, Arbor Value is the Arboriculture Vale, SRZ (m) is the structural root zone in metres in a radius from the centre of the trunk, TPZ (m) is the tree protection zone in metres in a radius from the centre of the trunk. The Encroach (%) is the level of encroachment into the tree protection zone of the tree from the excavation/ construction works. These measurements and distances are calculated from the Australian Standard AS4970 - 2009 - Protection of Trees on Development sites.

# ADVERTISED PLAN

**This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright**

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright



**Arbor Survey**  
 3 / Arbor Way  
 CARRUM DOWNS VIC 3201  
 Phone: 03 8521 4966

## 7.2 TREE LOCATION PLAN (EXISTING)

Site: NCC - Early Learning Centre  
 161 Central Road NUNAWADING

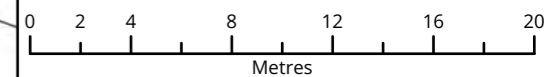
Client: [REDACTED]

Arbor Survey Ref: R6864\_NCC

Revision: -

Date Drawn: 4/06/2024

Source Plan: Plan of Survey  
 Bertoli Wellington  
 Ref: 1965F-2 Sheet: 1  
 Ver: 1 Date: 19/04/2024



Coordinate System: GDA 2020 MGA Zone 55  
 Scale: 1:300 at Sheet Size A3

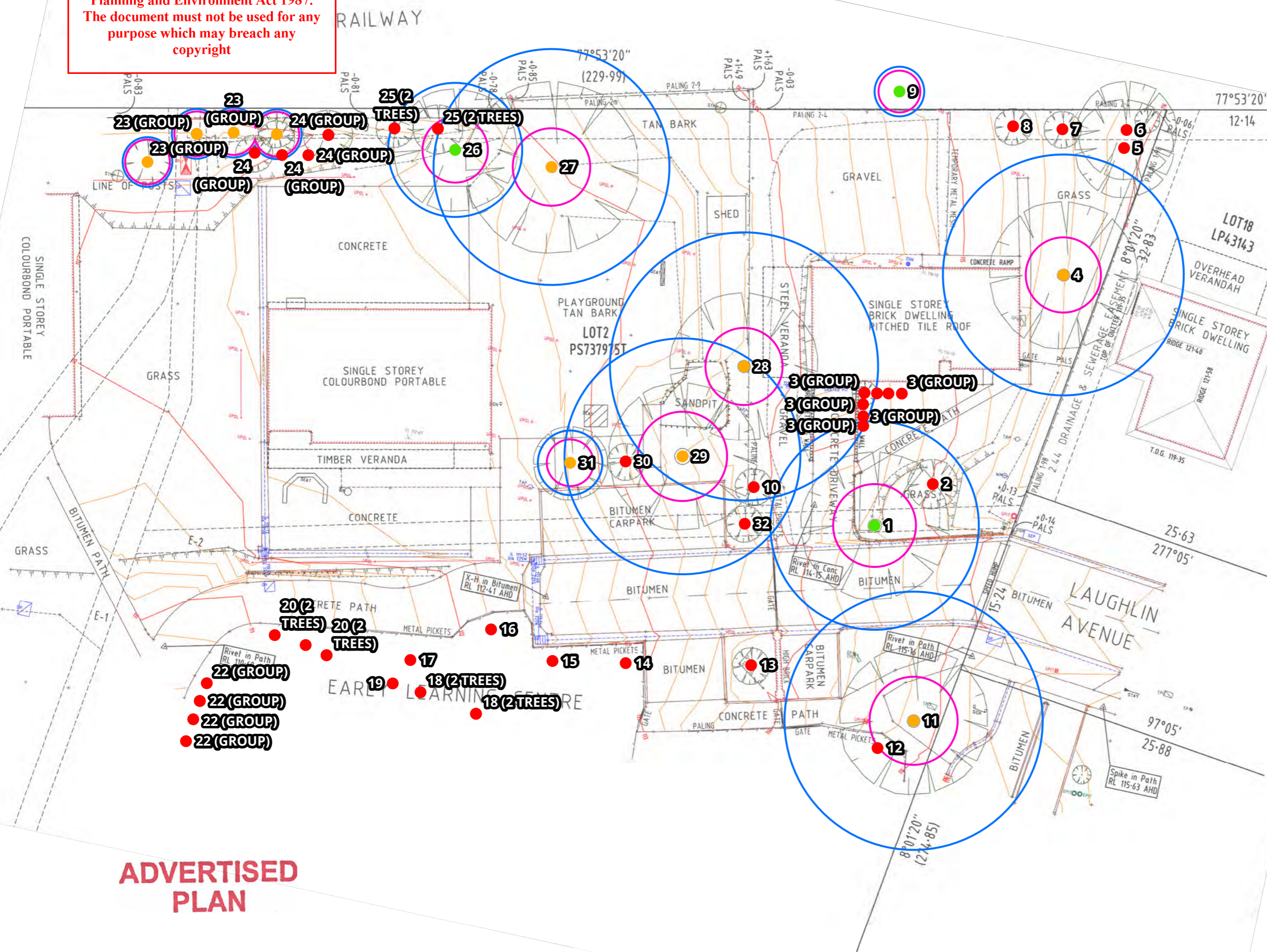
### Legend

#### Tree / Group Protection Value

- High (3)
- Moderate (7)
- None (22)

#### Tree Protection Areas

- Tree Protection Zone (TPZ)
- Structural Root Zone (SRZ)



**ADVERTISED PLAN**

# ADVERTISED PLAN

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright



**Arbor Survey**  
 3 / Arbor Way  
 CARRUM DOWNS VIC 3201  
 Phone: 03 8521 4966

## 7.2 DEVELOPMENT IMPACT PLAN

Site: NCC - Early Learning Centre  
 161 Central Road NUNAWADING

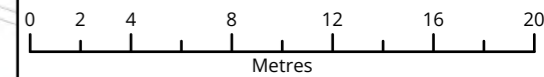
Client: [REDACTED]

Arbor Survey Ref: R6864\_NCC

Revision: -

Date Drawn: 4/06/2024

Source Plan: Proposed Site Plan  
 Kneeler Design Architects  
 Ref: N/A Dwg: WD2110/102  
 Rev: A0 Date: 05/06/2024



Coordinate System: GDA 2020 MGA Zone 55  
 Scale: 1:300 at Sheet Size A3

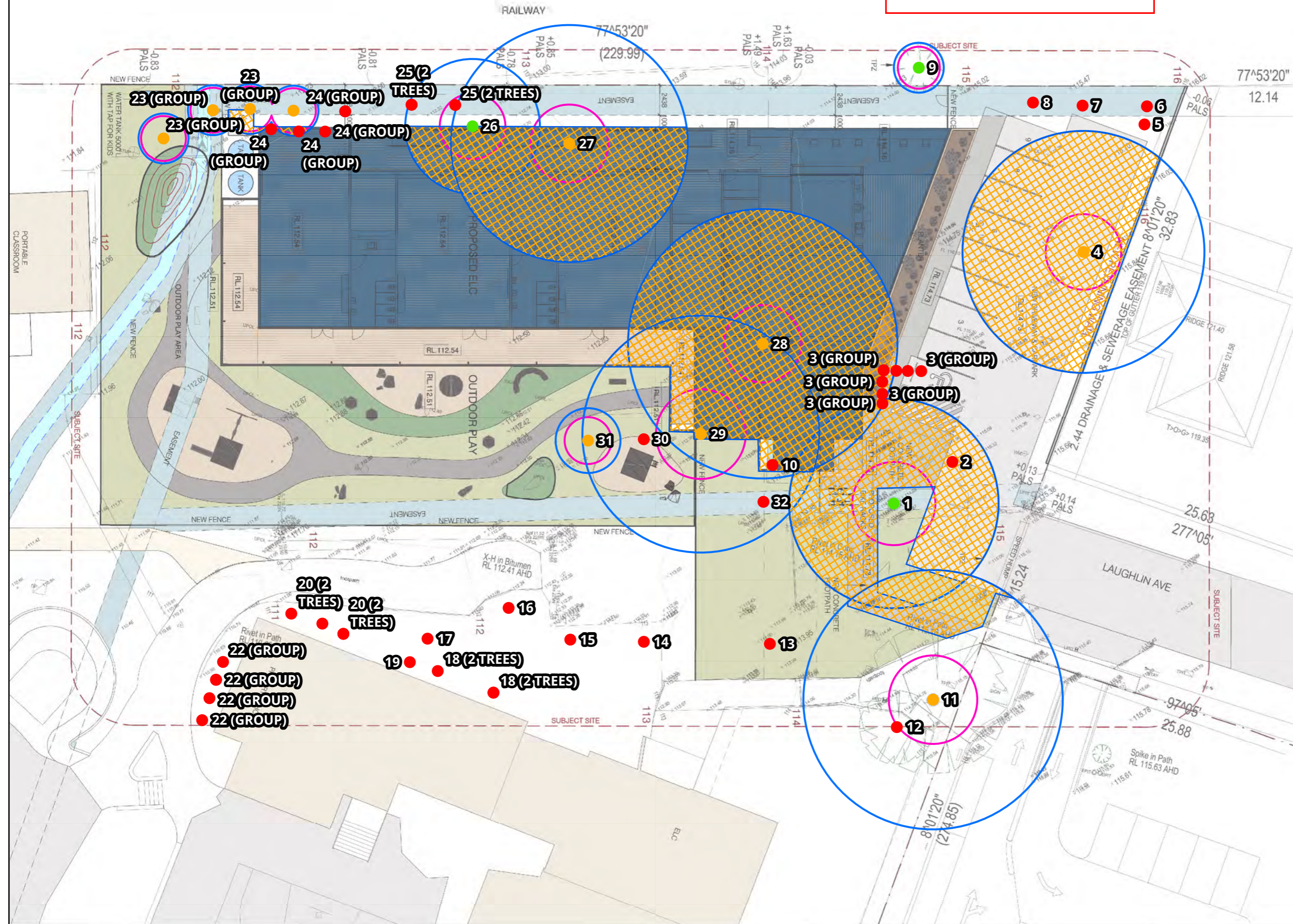
### Legend

#### Tree / Group Protection Value

- High (3)
- Moderate (7)
- None (22)

#### Tree Protection Areas

- Tree Protection Zone (TPZ)
- Structural Root Zone (SRZ)
- Encroachment



**Tree ID:** 1  
**Botanical Name:** *Eucalyptus radiata*  
**Common Name:** Narrow-Leaved Peppermint  
**Origin:** Indigenous  
**Height (m):** 12  
**Spread (m):** 10  
**Health:** Good  
**Structure:** Fair-Good  
**Age Category:** Mature  
**ULE (years):** 25+  
**Significance:** High  
**Arboricultural Value:** High  
**Notes:**  
 Minor deadwood

**Protection Value:** **High**  
**Ownership:** Project Site  
**Establishment:** Scattered Tree  
**ESO1:** ESO1  
**SLO5:** SLO5  
**Clause 52.17:** Yes - Small Scattered Tree  
**Tree Protection Areas**  
**DBH (cm):** 38/37/46 (70)  
**Basal Dia (cm):** 102  
**TPZ (m):** 8.4      **TPZ Area (m2):** 221.7  
**SRZ (m):** 3.3      **TPZ 10% (m):** 5.8  
**Impact Assessment**  
**Encroachment:** 100%  
**Impact Comment:**  
 Lost - Significant works within SRZ/TPZ & level changes. Design modification required if retained.

**ADVERTISED PLAN**



**Tree ID:** 2  
**Botanical Name:** *Liquidambar styraciflua*  
**Common Name:** Liquidambar  
**Origin:** Exotic  
**Height (m):** 6.5  
**Spread (m):** 4  
**Health:** Good  
**Structure:** Fair-Good  
**Age Category:** Semi-Mature  
**ULE (years):** 25+  
**Significance:** Low  
**Arboricultural Value:** High  
**Notes:**  
 Codominant stems

**Protection Value:** **None**  
**Ownership:** Project Site  
**Establishment:** Planted  
**ESO1:** N/A  
**SLO5:** SLO5  
**Clause 52.17:** N/A  
**Tree Protection Areas**  
**DBH (cm):** 17  
**Basal Dia (cm):** 22  
**TPZ (m):** 2.0      **TPZ Area (m2):** 12.6  
**SRZ (m):** 1.8      **TPZ 10% (m):** 1.4  
**Impact Assessment**  
**Encroachment:** 100%  
**Impact Comment:**  
 Lost - Within works footprint

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright



**Tree ID:** 3 (GROUP)  
**Botanical Name:** *Camellia japonica*  
**Common Name:** Camellia  
**Origin:** Exotic  
**Height (m):** 5  
**Spread (m):** 2.5  
**Health:** Good  
**Structure:** Fair  
**Age Category:** Semi-Mature  
**ULE (years):** 25+  
**Significance:** Low  
**Arboricultural Value:** Medium  
**Notes:**  
 Group of 7, Pōhutukawa, Camellia, Yucca, Bottlebrush, Diosma

**Protection Value:** None  
**Ownership:** Project Site  
**Establishment:** Planted  
**ESO1:** N/A  
**SLO5:** Exempt (Size)  
**Clause 52.17:** N/A  
**Tree Protection Areas**  
**DBH (cm):** Multi-stem  
**Basal Dia (cm):** Approx. 15  
**TPZ (m):** 2.0      **TPZ Area (m2):** 12.6  
**SRZ (m):** 1.5      **TPZ 10% (m):** 1.4  
**Impact Assessment**  
**Encroachment:** 100%  
**Impact Comment:**  
 Lost - Within works footprint



## ADVERTISED PLAN

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

**Tree ID:** 4  
**Botanical Name:** *Salix babylonica*  
**Common Name:** Weeping Willow  
**Origin:** Exotic  
**Height (m):** 8  
**Spread (m):** 12  
**Health:** Good  
**Structure:** Fair  
**Age Category:** Mature  
**ULE (years):** 25+  
**Significance:** Moderate  
**Arboricultural Value:** Medium  
**Notes:**  
 Deadwood

**Protection Value:** Moderate  
**Ownership:** Project Site  
**Establishment:** Planted  
**ESO1:** N/A  
**SLO5:** SLO5  
**Clause 52.17:** N/A  
**Tree Protection Areas**  
**DBH (cm):** Multi-stem  
**Basal Dia (cm):** Approx. 81  
**TPZ (m):** 9.7      **TPZ Area (m2):** 295.6  
**SRZ (m):** 3.0      **TPZ 10% (m):** 6.7  
**Impact Assessment**  
**Encroachment:** 100%  
**Impact Comment:**  
 Lost - Within works footprint





**Tree ID:** 5  
**Botanical Name:** *Prunus dulcis*  
**Common Name:** Almond  
**Origin:** Exotic  
**Height (m):** 6  
**Spread (m):** 6  
**Health:** Fair-Good  
**Structure:** Fair  
**Age Category:** Mature  
**ULE (years):** 25+  
**Significance:** Low  
**Arboricultural Value:** Medium  
**Notes:**  
 Fig tree growing through canopy

**Protection Value:** **None**  
**Ownership:** Project Site  
**Establishment:** Planted  
**ESO1:** N/A  
**SLO5:** SLO5  
**Clause 52.17:** N/A  
**Tree Protection Areas**  
**DBH (cm):** 12/12/22 (28)  
**Basal Dia (cm):** 22  
**TPZ (m):** 3.4      **TPZ Area (m2):** 36.3  
**SRZ (m):** 1.8      **TPZ 10% (m):** 2.3  
**Impact Assessment**  
**Encroachment:** 100%  
**Impact Comment:**  
 Lost - Within works footprint



This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

**ADVERTISED PLAN**

**Tree ID:** 6  
**Botanical Name:** *Ficus carica*  
**Common Name:** Common Fig  
**Origin:** Exotic  
**Height (m):** 5  
**Spread (m):** 6  
**Health:** Fair-Good  
**Structure:** Fair  
**Age Category:** Semi-Mature  
**ULE (years):** 25+  
**Significance:** Low  
**Arboricultural Value:** Medium  
**Notes:**  
 Multi stem from base

**Protection Value:** **None**  
**Ownership:** Project Site  
**Establishment:** Planted  
**ESO1:** N/A  
**SLO5:** SLO5  
**Clause 52.17:** N/A  
**Tree Protection Areas**  
**DBH (cm):** Multi-stem  
**Basal Dia (cm):** Approx. 45  
**TPZ (m):** 5.4      **TPZ Area (m2):** 91.6  
**SRZ (m):** 2.4      **TPZ 10% (m):** 3.7  
**Impact Assessment**  
**Encroachment:** 100%  
**Impact Comment:**  
 Lost - Within works footprint



**Tree ID:** 7  
**Botanical Name:** *Citrus x limon*  
**Common Name:** Lemon  
**Origin:** Exotic  
**Height (m):** 3  
**Spread (m):** 3  
**Health:** Fair-Good  
**Structure:** Fair-Poor  
**Age Category:** Semi-Mature  
**ULE (years):** 15 - 25  
**Significance:** Low  
**Arboricultural Value:** Low  
**Notes:**  
 Wound with decay in main stem

**Protection Value:** **None**  
**Ownership:** Project Site  
**Establishment:** Planted  
**ESO1:** N/A  
**SLO5:** Exempt (Size)  
**Clause 52.17:** N/A  
**Tree Protection Areas**  
**DBH (cm):** 7/10 (12)  
**Basal Dia (cm):** 16  
**TPZ (m):** 2.0      **TPZ Area (m2):** 12.6  
**SRZ (m):** 1.5      **TPZ 10% (m):** 1.4  
**Impact Assessment**  
**Encroachment:** 100%  
**Impact Comment:**  
 Lost - Within works footprint



This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

**ADVERTISED PLAN**

**Tree ID:** 8  
**Botanical Name:** *Citrus x limon*  
**Common Name:** Lemon  
**Origin:** Exotic  
**Height (m):** 2  
**Spread (m):** 3  
**Health:** Fair-Good  
**Structure:** Poor  
**Age Category:** Semi-Mature  
**ULE (years):** 15 - 25  
**Significance:** Low  
**Arboricultural Value:** Low  
**Notes:**  
 Ground heave

**Protection Value:** **None**  
**Ownership:** Project Site  
**Establishment:** Planted  
**ESO1:** N/A  
**SLO5:** Exempt (Size)  
**Clause 52.17:** N/A  
**Tree Protection Areas**  
**DBH (cm):** Multi-stem  
**Basal Dia (cm):** 15  
**TPZ (m):** 2.0      **TPZ Area (m2):** 12.6  
**SRZ (m):** 1.5      **TPZ 10% (m):** 1.4  
**Impact Assessment**  
**Encroachment:** 100%  
**Impact Comment:**  
 Lost - Within works footprint



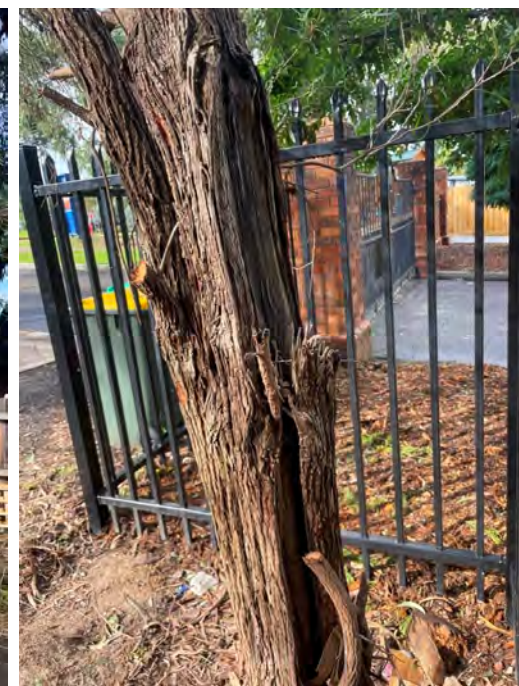
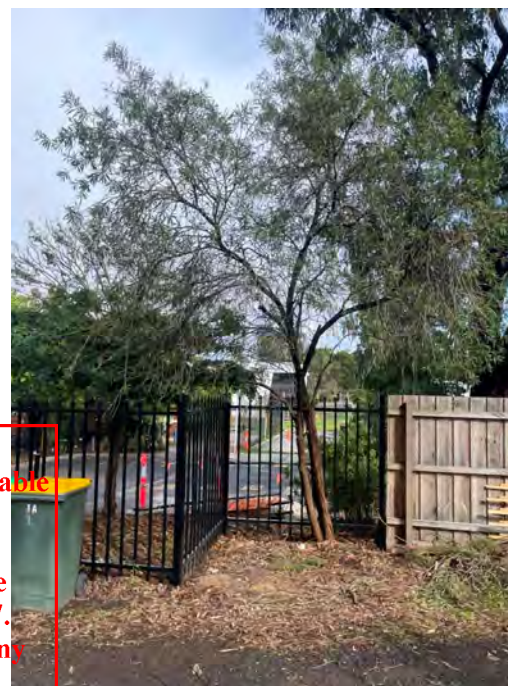
**Tree ID:** 9  
**Botanical Name:** *Eucalyptus leucoxylon*  
**Common Name:** Yellow Gum  
**Origin:** Vic Native  
**Height (m):** 6  
**Spread (m):** 4  
**Health:** Fair-Good  
**Structure:** Fair  
**Age Category:** Semi-Mature  
**ULE (years):** 25+  
**Significance:** Low  
**Arboricultural Value:** Medium  
**Notes:**  
 On train line, higher soil grade on train line side

**Protection Value:** **High**  
**Ownership:** Vic Rail  
**Establishment:** Planted  
**ESO1:** N/A  
**SLO5:** N/A  
**Clause 52.17:** Exempt (Planted)  
**Tree Protection Areas**  
**DBH (cm):** Approx. 15  
**Basal Dia (cm):** 20  
**TPZ (m):** 2.0      **TPZ Area (m2):** 12.6  
**SRZ (m):** 1.7      **TPZ 10% (m):** 1.4  
**Impact Assessment**  
**Encroachment:** 0%  
**Impact Comment:**  
 No Impact - Standard tree protection



**Tree ID:** 10  
**Botanical Name:** *Callistemon 'Harkness'*  
**Common Name:** Harkness Bottlebrush  
**Origin:** Aus Native  
**Height (m):** 4.5  
**Spread (m):** 4  
**Health:** Fair  
**Structure:** Poor  
**Age Category:** Semi-Mature  
**ULE (years):** 5 - 15  
**Significance:** Low  
**Arboricultural Value:** Low  
**Notes:**  
 Split stem

**Protection Value:** **None**  
**Ownership:** Project Site  
**Establishment:** Planted  
**ESO1:** N/A  
**SLO5:** Exempt (Size)  
**Clause 52.17:** N/A  
**Tree Protection Areas**  
**DBH (cm):** 9/11 (14)  
**Basal Dia (cm):** 23  
**TPZ (m):** 2.0      **TPZ Area (m2):** 12.6  
**SRZ (m):** 1.8      **TPZ 10% (m):** 1.4  
**Impact Assessment**  
**Encroachment:** 0%  
**Impact Comment:**  
 Lost - Within works footprint



**ADVERTISED PLAN**

**Impact Assessment document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright**

**Tree ID:** 11  
**Botanical Name:** *Eucalyptus cephalocarpa*  
**Common Name:** Silver-Leaved Stringybark  
**Origin:** Indigenous  
**Height (m):** 12  
**Spread (m):** 14  
**Health:** Good  
**Structure:** Fair  
**Age Category:** Mature  
**ULE (years):** 25+  
**Significance:** High  
**Arboricultural Value:** Medium  
**Notes:**  
 Split crossing stems

**Protection Value:** Moderate  
**Ownership:** Project Site  
**Establishment:** Scattered Tree  
**ESO1:** ESO1  
**SLO5:** SLO5  
**Clause 52.17:** Yes - Small Scattered Tree  
**Tree Protection Areas**  
**DBH (cm):** 31/56/59 (87)  
**Basal Dia (cm):** 118  
**TPZ (m):** 10.4      **TPZ Area (m2):** 339.8  
**SRZ (m):** 3.5      **TPZ 10% (m):** 7.2  
**Impact Assessment**  
**Encroachment:** 13%  
**Impact Comment:**  
 Low - Existing concrete & bitumen. Construct path & garden area at/above grade. Refer to Impact Mitigation.



**Tree ID:** 12  
**Botanical Name:** *Eucalyptus cephalocarpa*  
**Common Name:** Silver-Leaved Stringybark  
**Origin:** Indigenous  
**Height (m):** 5  
**Spread (m):** 4  
**Health:** Fair  
**Structure:** Poor  
**Age Category:** Mature  
**ULE (years):** 5 - 15  
**Significance:** Low  
**Arboricultural Value:** Low  
**Notes:**  
 Lopped stems

**Protection Value:** None  
**Ownership:** Project Site  
**Establishment:** Scattered Tree  
**ESO1:** ESO1  
**SLO5:** SLO5  
**Clause 52.17:** Yes - Small Scattered Tree  
**Tree Protection Areas**  
**DBH (cm):** 35/20 (40)  
**Basal Dia (cm):** 45  
**TPZ (m):** 4.8      **TPZ Area (m2):** 72.4  
**SRZ (m):** 2.4      **TPZ 10% (m):** 3.3  
**Impact Assessment**  
**Encroachment:** 0%  
**Impact Comment:**  
 No Impact - Standard tree protection (if retained)



This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

ADVERTISED PLAN

**Tree ID:** 13 **Protection Value:** None

**Botanical Name:** *Robinia umbraculifera* 'Mopto' **Ownership:** Project Site

**Common Name:** Moptop Robinia **Establishment:** Planted

**Origin:** Exotic **ESO1:** N/A

**Height (m):** 3 **SLO5:** SLO5

**Spread (m):** 2 **Clause 52.17:** N/A

**Health:** Good **Tree Protection Areas**

**Structure:** Fair **DBH (cm):** 21

**Age Category:** Semi-Mature **Basal Dia (cm):** 22

**ULE (years):** 15 - 25 **TPZ (m):** 2.5 **TPZ Area (m2):** 19.6

**Significance:** Low **SRZ (m):** 1.8 **TPZ 10% (m):** 1.7

**Arboricultural Value:** Medium **Impact Assessment**

**Notes:** **Encroachment:** 0%

Low landscape value **Impact Comment:**

No Impact - Standard tree protection (if retained)



This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

**Tree ID:** 14 **Protection Value:** None

**Botanical Name:** *Pyrus calleryana* **Ownership:** Project Site

**Common Name:** Callery Pear **Establishment:** Planted

**Origin:** Exotic **ESO1:** N/A

**Height (m):** 6 **SLO5:** SLO5

**Spread (m):** 4 **Clause 52.17:** N/A

**Health:** Good **Tree Protection Areas**

**Structure:** Fair **DBH (cm):** 23

**Age Category:** Semi-Mature **Basal Dia (cm):** 26

**ULE (years):** 15 - 25 **TPZ (m):** 2.8 **TPZ Area (m2):** 24.6

**Significance:** Low **SRZ (m):** 1.9 **TPZ 10% (m):** 1.9

**Arboricultural Value:** Medium **Impact Assessment**

**Notes:** **Encroachment:** 0%

Acute unions **Impact Comment:**

No Impact - Standard tree protection (if retained)



ADVERTISED PLAN

**Tree ID:** 15  
**Botanical Name:** *Pyrus calleryana*  
**Common Name:** Callery Pear  
**Origin:** Exotic  
**Height (m):** 7  
**Spread (m):** 5  
**Health:** Good  
**Structure:** Fair  
**Age Category:** Semi-Mature  
**ULE (years):** 15 - 25  
**Significance:** Low  
**Arboricultural Value:** Medium  
**Notes:**  
 Acute unions

**Protection Value:** **None**  
**Ownership:** Project Site  
**Establishment:** Planted  
**ESO1:** N/A  
**SLO5:** SLO5  
**Clause 52.17:** N/A  
**Tree Protection Areas**  
**DBH (cm):** 32  
**Basal Dia (cm):** 37  
**TPZ (m):** 3.8      **TPZ Area (m2):** 45.4  
**SRZ (m):** 2.2      **TPZ 10% (m):** 2.6  
**Impact Assessment**  
**Encroachment:** 0%  
**Impact Comment:**  
 No Impact - Standard tree protection (if retained)



**This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright**

**Tree ID:** 16  
**Botanical Name:** *Pyrus calleryana*  
**Common Name:** Callery Pear  
**Origin:** Exotic  
**Height (m):** 7  
**Spread (m):** 7  
**Health:** Good  
**Structure:** Fair  
**Age Category:** Semi-Mature  
**ULE (years):** 15 - 25  
**Significance:** Low  
**Arboricultural Value:** Medium  
**Notes:**  
 Acute unions

**Protection Value:** **None**  
**Ownership:** Project Site  
**Establishment:** Planted  
**ESO1:** N/A  
**SLO5:** SLO5  
**Clause 52.17:** N/A  
**Tree Protection Areas**  
**DBH (cm):** 23/21 (31)  
**Basal Dia (cm):** 26  
**TPZ (m):** 3.7      **TPZ Area (m2):** 43.0  
**SRZ (m):** 1.9      **TPZ 10% (m):** 2.5  
**Impact Assessment**  
**Encroachment:** 0%  
**Impact Comment:**  
 No Impact - Standard tree protection (if retained)



**ADVERTISED PLAN**

**Tree ID:** 17  
**Botanical Name:** *Jacaranda mimosifolia*  
**Common Name:** Jacaranda  
**Origin:** Exotic  
**Height (m):** 4.5  
**Spread (m):** 3.5  
**Health:** Good  
**Structure:** Fair  
**Age Category:** Semi-Mature  
**ULE (years):** 25+  
**Significance:** Low  
**Arboricultural Value:** Medium  
**Notes:**  
 Low landscape value

**Protection Value:** **None**  
**Ownership:** Project Site  
**Establishment:** Planted  
**ESO1:** N/A  
**SLO5:** Exempt (Size)  
**Clause 52.17:** N/A  
**Tree Protection Areas**  
**DBH (cm):** 13  
**Basal Dia (cm):** 15  
**TPZ (m):** 2.0      **TPZ Area (m2):** 12.6  
**SRZ (m):** 1.5      **TPZ 10% (m):** 1.4  
**Impact Assessment**  
**Encroachment:** 0%  
**Impact Comment:**  
 No Impact - Standard tree protection (if retained)



**This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright**

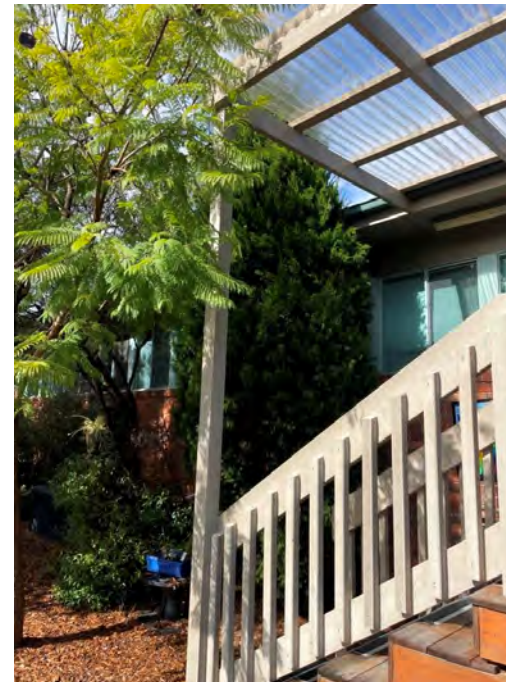
**Tree ID:** 18 (2 TREES)  
**Botanical Name:** *Leptospermum petersonii*  
**Common Name:** Lemon-Scented Tea-Tree  
**Origin:** Aus Native  
**Height (m):** 4  
**Spread (m):** 3  
**Health:** Good  
**Structure:** Fair  
**Age Category:** Semi-Mature  
**ULE (years):** 25+  
**Significance:** Low  
**Arboricultural Value:** Medium  
**Notes:**  
 Group of 2

**Protection Value:** **None**  
**Ownership:** Project Site  
**Establishment:** Planted  
**ESO1:** N/A  
**SLO5:** Exempt (Size)  
**Clause 52.17:** N/A  
**Tree Protection Areas**  
**DBH (cm):** Multi-stem  
**Basal Dia (cm):** Approx. 15  
**TPZ (m):** 2.0      **TPZ Area (m2):** 12.6  
**SRZ (m):** 1.5      **TPZ 10% (m):** 1.4  
**Impact Assessment**  
**Encroachment:** 0%  
**Impact Comment:**  
 No Impact - Standard tree protection (if retained)



**ADVERTISED PLAN**

<b>Tree ID:</b>	<b>19</b>	<b>Protection Value:</b>	<b>None</b>	
<b>Botanical Name:</b>	<i>Juniperus chinensis 'Spartan'</i>	<b>Ownership:</b>	Project Site	
<b>Common Name:</b>	Conifer Spartan	<b>Establishment:</b>	Planted	
<b>Origin:</b>	Exotic	<b>ESO1:</b>	N/A	
<b>Height (m):</b>	5	<b>SLO5:</b>	Exempt (Size)	
<b>Spread (m):</b>	2	<b>Clause 52.17:</b>	N/A	
<b>Health:</b>	Good	<b>Tree Protection Areas</b>		
<b>Structure:</b>	Fair	<b>DBH (cm):</b>	Multi-stem	
<b>Age Category:</b>	Semi-Mature	<b>Basal Dia (cm):</b>	Approx. 15	
<b>ULE (years):</b>	25+	<b>TPZ (m):</b>	2.0	<b>TPZ Area (m2):</b> 12.6
<b>Significance:</b>	Low	<b>SRZ (m):</b>	1.5	<b>TPZ 10% (m):</b> 1.4
<b>Arboricultural Value:</b>	Medium	<b>Impact Assessment</b>		
<b>Notes:</b>	Low landscape value	<b>Encroachment:</b>	0%	
		<b>Impact Comment:</b>	No Impact - Standard tree protection (if retained)	



This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

<b>Tree ID:</b>	<b>20 (2 TREES)</b>	<b>Protection Value:</b>	<b>None</b>	
<b>Botanical Name:</b>	<i>Leptospermum petersonii</i>	<b>Ownership:</b>	Project Site	
<b>Common Name:</b>	Lemon-Scented Tea-Tree	<b>Establishment:</b>	Planted	
<b>Origin:</b>	Aus Native	<b>ESO1:</b>	N/A	
<b>Height (m):</b>	4	<b>SLO5:</b>	Exempt (Size)	
<b>Spread (m):</b>	3	<b>Clause 52.17:</b>	N/A	
<b>Health:</b>	Good	<b>Tree Protection Areas</b>		
<b>Structure:</b>	Fair	<b>DBH (cm):</b>	8/13 (15)	
<b>Age Category:</b>	Semi-Mature	<b>Basal Dia (cm):</b>	17	
<b>ULE (years):</b>	15 - 25	<b>TPZ (m):</b>	2.0	<b>TPZ Area (m2):</b> 12.6
<b>Significance:</b>	Low	<b>SRZ (m):</b>	1.6	<b>TPZ 10% (m):</b> 1.4
<b>Arboricultural Value:</b>	Medium	<b>Impact Assessment</b>		
<b>Notes:</b>	Group of 2	<b>Encroachment:</b>	0%	
		<b>Impact Comment:</b>	No Impact - Standard tree protection (if retained)	



ADVERTISED PLAN



**Tree ID:** 21  
**Botanical Name:** *Juniperus chinensis* 'Spartan'  
**Common Name:** Conifer Spartan  
**Origin:** Exotic  
**Height (m):** 6  
**Spread (m):** 2  
**Health:** Good  
**Structure:** Fair  
**Age Category:** Semi-Mature  
**ULE (years):** 15 - 25  
**Significance:** Low  
**Arboricultural Value:** Medium  
**Notes:**  
 Low landscape value

**Protection Value:** **None**  
**Ownership:** Project Site  
**Establishment:** Planted  
**ESO1:** N/A  
**SLO5:** Exempt (Size)  
**Clause 52.17:** N/A  
**Tree Protection Areas**  
**DBH (cm):** Multi-stem  
**Basal Dia (cm):** Approx. 15  
**TPZ (m):** 2.0      **TPZ Area (m2):** 12.6  
**SRZ (m):** 1.5      **TPZ 10% (m):** 1.4  
**Impact Assessment**  
**Encroachment:** 0%  
**Impact Comment:**  
 No Impact - Standard tree protection (if retained)



**Tree ID:** 22 (GROUP)  
**Botanical Name:** *Pittosporum tenuifolium*  
**Common Name:** Kohuhu  
**Origin:** Exotic  
**Height (m):** 3  
**Spread (m):** 2  
**Health:** Good  
**Structure:** Fair-Poor  
**Age Category:** Semi-Mature  
**ULE (years):** 15 - 25  
**Significance:** Low  
**Arboricultural Value:** Low  
**Notes:**  
 Group of 4

**Protection Value:** **None**  
**Ownership:** Project Site  
**Establishment:** Planted  
**ESO1:** N/A  
**SLO5:** Exempt (Size)  
**Clause 52.17:** N/A  
**Tree Protection Areas**  
**DBH (cm):** Multi-stem  
**Basal Dia (cm):** 15  
**TPZ (m):** 2.0      **TPZ Area (m2):** 12.6  
**SRZ (m):** 1.5      **TPZ 10% (m):** 1.4  
**Impact Assessment**  
**Encroachment:** 0%  
**Impact Comment:**  
 No Impact - Standard tree protection (if retained)



This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

**ADVERTISED PLAN**

**Tree ID:** 23 (GROUP)  
**Botanical Name:** *Acacia melanoxylon*  
**Common Name:** Blackwood  
**Origin:** Indigenous  
**Height (m):** 7.5  
**Spread (m):** 4  
**Health:** Good  
**Structure:** Fair  
**Age Category:** Semi-Mature  
**ULE (years):** 15 - 25  
**Significance:** Moderate  
**Arboricultural Value:** Medium  
**Notes:**  
 Group of 4

**Protection Value:** Moderate  
**Ownership:** Project Site  
**Establishment:** Planted  
**ESO1:** ESO1  
**SLO5:** SLO5  
**Clause 52.17:** Exempt (Planted)  
**Tree Protection Areas**  
**DBH (cm):** 16  
**Basal Dia (cm):** 23  
**TPZ (m):** 2.0      **TPZ Area (m2):** 12.6  
**SRZ (m):** 1.8      **TPZ 10% (m):** 1.4  
**Impact Assessment**  
**Encroachment:** Up to 100%  
**Impact Comment:**  
 Lost - Within works footprint. Part of group could be retained if NGL maintained.



for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

**ADVERTISED PLAN**

**Tree ID:** 24 (GROUP)  
**Botanical Name:** *Acacia verticillata*  
**Common Name:** Prickly Moses  
**Origin:** Indigenous  
**Height (m):** 4.5  
**Spread (m):** 4  
**Health:** Fair-Poor  
**Structure:** Fair-Poor  
**Age Category:** Semi-Mature  
**ULE (years):** 5 - 15  
**Significance:** Low  
**Arboricultural Value:** Low  
**Notes:**  
 Group of 4 , 3 in poor health

**Protection Value:** None  
**Ownership:** Project Site  
**Establishment:** Planted  
**ESO1:** ESO1  
**SLO5:** Exempt (Size)  
**Clause 52.17:** Exempt (Planted)  
**Tree Protection Areas**  
**DBH (cm):** Multi-stem  
**Basal Dia (cm):** 17  
**TPZ (m):** 2.0      **TPZ Area (m2):** 12.6  
**SRZ (m):** 1.6      **TPZ 10% (m):** 1.4  
**Impact Assessment**  
**Encroachment:** 100%  
**Impact Comment:**  
 Lost - Within works footprint



**Tree ID:** 25 (2 TREES) **Protection Value:** None

**Botanical Name:** *Acacia melanoxylon* **Ownership:** Project Site

**Common Name:** Blackwood **Establishment:** Planted

**Origin:** Indigenous **ESO1:** ESO1

**Height (m):** 6.5 **SLO5:** Exempt (Size)

**Spread (m):** 3.5 **Clause 52.17:** Exempt (Planted)

**Health:** Good **Tree Protection Areas**

**Structure:** Fair **DBH (cm):** 13

**Age Category:** Semi-Mature **Basal Dia (cm):** 16

**ULE (years):** 15 - 25 **TPZ (m):** 2.0 **TPZ Area (m2):** 12.6

**Significance:** Low **SRZ (m):** 1.5 **TPZ 10% (m):** 1.4

**Arboricultural Value:** Medium **Impact Assessment**

**Notes:** **Encroachment:** 3%

Group of 2 **Impact Comment:**

Low - Minor Encroachment. Standard tree protection (if retained)



**This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright**

**Tree ID:** 26 **Protection Value:** High

**Botanical Name:** *Corymbia maculata* **Ownership:** Project Site

**Common Name:** Spotted Gum **Establishment:** Planted

**Origin:** Vic Native **ESO1:** ESO1

**Height (m):** 17 **SLO5:** SLO5

**Spread (m):** 6.5 **Clause 52.17:** Exempt (Planted)

**Health:** Good **Tree Protection Areas**

**Structure:** Fair-Good **DBH (cm):** 45

**Age Category:** Mature **Basal Dia (cm):** 58

**ULE (years):** 25+ **TPZ (m):** 5.4 **TPZ Area (m2):** 91.6

**Significance:** High **SRZ (m):** 2.6 **TPZ 10% (m):** 3.7

**Arboricultural Value:** High **Impact Assessment**

**Notes:** **Encroachment:** 100%

**Impact Comment:**

Lost - Within works footprint



**ADVERTISED PLAN**

**Tree ID:** 27  
**Botanical Name:** *Pinus pinaster*  
**Common Name:** Maritime Pine  
**Origin:** Exotic  
**Height (m):** 19  
**Spread (m):** 13  
**Health:** Fair  
**Structure:** Fair-Good  
**Age Category:** Mature  
**ULE (years):** 15 - 25  
**Significance:** High  
**Arboricultural Value:** Medium  
**Notes:**  
 Thin canopy

**Protection Value:** Moderate  
**Ownership:** Project Site  
**Establishment:** Planted  
**ESO1:** N/A  
**SLO5:** SLO5  
**Clause 52.17:** N/A  
**Tree Protection Areas**  
**DBH (cm):** 79  
**Basal Dia (cm):** 87  
**TPZ (m):** 9.5      **TPZ Area (m2):** 283.5  
**SRZ (m):** 3.1      **TPZ 10% (m):** 6.5  
**Impact Assessment**  
**Encroachment:** 100%  
**Impact Comment:**  
 Lost - Within works footprint



**Tree ID:** 28  
**Botanical Name:** *Eucalyptus cephalocarpa*  
**Common Name:** Silver-Leaved Stringybark  
**Origin:** Indigenous  
**Height (m):** 13  
**Spread (m):** 10  
**Health:** Good  
**Structure:** Fair  
**Age Category:** Mature  
**ULE (years):** 25+  
**Significance:** High  
**Arboricultural Value:** Medium  
**Notes:**  
 Acute unions

**Protection Value:** Moderate  
**Ownership:** Project Site  
**Establishment:** Scattered Tree  
**ESO1:** ESO1  
**SLO5:** SLO5  
**Clause 52.17:** Yes - Large Scattered Tree  
**Tree Protection Areas**  
**DBH (cm):** 34/34/49/58 (90)  
**Basal Dia (cm):** 86  
**TPZ (m):** 10.8      **TPZ Area (m2):** 366.4  
**SRZ (m):** 3.1      **TPZ 10% (m):** 7.4  
**Impact Assessment**  
**Encroachment:** 100%  
**Impact Comment:**  
 Lost - Within works footprint



**Impact Assessment document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright**

**ADVERTISED PLAN**

**Tree ID:** 29  
**Botanical Name:** *Eucalyptus gonicalyx*  
**Common Name:** Long-Leaved Box  
**Origin:** Indigenous  
**Height (m):** 14  
**Spread (m):** 9  
**Health:** Good  
**Structure:** Fair  
**Age Category:** Mature  
**ULE (years):** 25+  
**Significance:** High  
**Arboricultural Value:** Medium  
**Notes:**  
 Lopped stem, epicormic growth

**Protection Value:** Moderate  
**Ownership:** Project Site  
**Establishment:** Scattered Tree  
**ESO1:** ESO1  
**SLO5:** SLO5  
**Clause 52.17:** Yes - Large Scattered Tree  
**Tree Protection Areas**  
**DBH (cm):** 79  
**Basal Dia (cm):** 122  
**TPZ (m):** 9.5      **TPZ Area (m2):** 283.5  
**SRZ (m):** 3.6      **TPZ 10% (m):** 6.5  
**Impact Assessment**  
**Encroachment:** 100%  
**Impact Comment:**  
 Lost - Within works footprint



**Tree ID:** 30  
**Botanical Name:** *Pyrus calleryana*  
**Common Name:** Callery Pear  
**Origin:** Exotic  
**Height (m):** 7  
**Spread (m):** 2  
**Health:** Fair-Good  
**Structure:** Fair  
**Age Category:** Semi-Mature  
**ULE (years):** 15 - 25  
**Significance:** Low  
**Arboricultural Value:** Medium  
**Notes:**  
 Low landscape value

**Protection Value:** None  
**Ownership:** Project Site  
**Establishment:** Planted  
**ESO1:** N/A  
**SLO5:** SLO5  
**Clause 52.17:** N/A  
**Tree Protection Areas**  
**DBH (cm):** Approx. 15  
**Basal Dia (cm):** Approx. 17  
**TPZ (m):** 2.0      **TPZ Area (m2):** 12.6  
**SRZ (m):** 1.6      **TPZ 10% (m):** 1.4  
**Impact Assessment**  
**Encroachment:** 0%  
**Impact Comment:**  
 No Impact - Standard tree protection (if retained)



This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

**ADVERTISED PLAN**

**Tree ID:** 31  
**Botanical Name:** *Pyrus calleryana*  
**Common Name:** Callery Pear  
**Origin:** Exotic  
**Height (m):** 8  
**Spread (m):** 4  
**Health:** Good  
**Structure:** Fair  
**Age Category:** Semi-Mature  
**ULE (years):** 15 - 25  
**Significance:** Moderate  
**Arboricultural Value:** Medium  
**Notes:**  
 Lopped branches

**Protection Value:** **Moderate**  
**Ownership:** Project Site  
**Establishment:** Planted  
**ESO1:** N/A  
**SLO5:** SLO5  
**Clause 52.17:** N/A  
**Tree Protection Areas**  
**DBH (cm):** 19/11 (22)  
**Basal Dia (cm):** 26  
**TPZ (m):** 2.6      **TPZ Area (m2):** 21.2  
**SRZ (m):** 1.9      **TPZ 10% (m):** 1.8  
**Impact Assessment**  
**Encroachment:** 0%  
**Impact Comment:**  
 No Impact - Maintain NGL in TPZ. Standard tree protection



**Tree ID:** 32  
**Botanical Name:** *Robinia umbraculifera* 'Mopto  
**Common Name:** Moptop Robinia  
**Origin:** Exotic  
**Height (m):** 3.5  
**Spread (m):** 3  
**Health:** Fair  
**Structure:** Fair  
**Age Category:** Semi-Mature  
**ULE (years):** 15 - 25  
**Significance:** Low  
**Arboricultural Value:** Medium  
**Notes:**  
 Low landscape value

**Protection Value:** **None**  
**Ownership:** Project Site  
**Establishment:** Planted  
**ESO1:** N/A  
**SLO5:** SLO5  
**Clause 52.17:** N/A  
**Tree Protection Areas**  
**DBH (cm):** 15  
**Basal Dia (cm):** 18  
**TPZ (m):** 2.0      **TPZ Area (m2):** 12.6  
**SRZ (m):** 1.6      **TPZ 10% (m):** 1.4  
**Impact Assessment**  
**Encroachment:** 0%  
**Impact Comment:**  
 No Impact - Standard tree protection (if retained)



This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

**ADVERTISED PLAN**

## 8. APPENDICES

### 8.1 SURVEY METHODOLOGY AND DESCRIPTORS

Site observations and tree data was recorded on site at the date noted within Section 2 (Introduction). This report is based upon the condition of the trees and the site conditions noted on the inspection date(s) only. The characteristics of each tree or group of trees of similar characteristics have been undertaken in accordance with the Visual Tree Assessment (VTA) methodology (Mattheck & Breloer, 1998).

The data is included in this report in a detailed table, located in Section 7.1. Tree Location (existing conditions) and Development Impact (proposed development) Plans are provided in Section 7.2 where relevant. Site photographs (if relevant) are provided in Section 7.3.

The survey identifies all trees or groups of trees within the project site over 2 metres in height and on adjoining lands (neighbouring properties and or Council or other regulatory body or Crown land) where their projected Tree Protection Zones (TPZs) extend to within the project site and may be affected by the proposed buildings and or works. The assessment is undertaken from a visual inspection from ground level only. No individual tree or trees were climbed and no samples of soil, plant material or pest and disease infestation (if present) were taken for analysis. Defects not apparent from this ground-based visual inspection are excluded from the discussion within this report. This report is not a risk assessment and no other assessment methodologies have been used.

This assessment is based on an improved and modified version of current industry best practice. 'Retention Value' is not used as the primary driver for any recommendations. The primary driver for the recommendations within the report is the characteristic of 'Protection Value'. Protection value is derived from a combination of the physical arboricultural characteristics and life expectancy recorded as the 'Arboricultural Value' in conjunction with the landscape significance or amenity value, ownership, and relevant regulatory controls.

The following data is recorded on site:

- **Tree Identification Number (Tree No.)** – This is a sequential numeric numbering system used to identify each tree on the attached site map. These numbers may also relate to tags placed on each tree in the field if required. Any deviation of the numbering system will be specifically noted within the report.
- **Genus/ Species (Botanical Name)** – Species identification is considered as common and made using species characteristics observed on site or sampled and researched off site. Specific cultivar or subspecies details are omitted unless where known. No samples have been taken to the National Herbarium of Victoria for accurate analysis and identification unless specifically noted within the report.
- **Common Name** – This is the typical common name assigned to the tree species. For many trees, there is likely to be numerous common names that could be used. The common name provided should only be seen as a secondary identification tool.
- **Origin** – Relates to the species natural origin (i.e. if the tree would have been found in the local environment, pre-European settlement). Origin is recorded based on the following categories:

Category	Description
Exotic	May be planted or self-sown, Originates from outside of Australia.
Aus Native	May be planted or self-sown, Originates from Australia, but does not originate from Victoria.
Vic Native	May be planted or self-sown, Naturally found within Victoria but <u>not</u> originating from within the Local Government area
Indigenous	May be planted or self-sown, Originates from within the Local Government area of the site

**ADVERTISED  
PLAN**

**This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright**

- DBH (cm)** – this is the Diameter at Breast Height (DBH) measured using a diameter tape at approximately 1.4 metres from natural ground level. Where the trunk diameter at this point may be affected by natural growth such as a major union point, the DBH will be measured just below this union point. For multiple stemmed trees, the measurements are provided for up to 4 stems (at 1.4 metres from natural ground level). These will be recorded, and the combined or total diameter will be calculated in accordance with the Australian Standard AS 4970-2009-Protection of Trees on Development Sites using the formula below:

## ADVERTISED PLAN

$$\text{Total DBH} = \sqrt{(\text{DBH}_1)^2 + (\text{DBH}_2)^2 + (\text{DBH}_3)^2 + (\text{DBH}_4)^2}$$

This is represented in the tree data as “Stem1/Stem2/Stem3/Stem4 (Calculated DBH)”, i.e. 15/28/34/19 (60.3). The calculated DBH of the stems is used to determine the Tree Protection Zone. For trees with more than 1 stem, the DBH (cm) measurement is recorded as ‘Multi-stemmed’ or similar. In instances where ‘Multi-stemmed’ is recorded, the Tree Protection Zone will be based on a basal measurement. For neighbouring property trees and where access is limited, an approximate DBH (cm) will be provided.

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright.

- Basal Dia (cm)** – this is the diameter of the tree at the trunk base (including multiple stemmed trees) at a level above the trunk basal flare. This is used to determine the Structural Root Zone (SRZ). In some cases, this will be noted as being ‘Multi -stemmed’ and the SRZ will be estimated using an approximate basal diameter. For neighbouring property trees and where access is limited, an approximate Basal Diameter (cm) will be provided.
- Height (m)** – this is the approximate height of the canopy of the tree or the largest canopy height of a group of trees. This is an approximated height based on known landscape reference points. In cases of large significant trees where accurate height measurements are required (as height will directly affect the outcome or recommendations of the report), a Nikon Forestry Pro Laser Range finder will be used. Where measured heights have been used, this will be noted within the report data and detailed within the report.
- Spread (m)** – this is the approximate canopy spread of the tree on the widest axis. This is given as a single measure and is provided as a guide to show overall canopy spread within the landscape. Where multiple canopy dimensions are required (i.e. proximity to buildings and or severely asymmetric canopy growth) as it may affect the outcome of tree protection, these will be noted within the report data and detailed in the Development Impact Assessment.
- Health** - relates to the tree vigour and canopy density. The characteristic assigned to the tree may be represented as a combination of any of these categories (e.g. Fair to Poor or Fair-Poor). In these instances, there may be a combination of the characteristics listed below or the foliage density is at the upper or lower scale of each category. In some cases, ‘Health’ may be noted as being ‘Very Good’ which indicates an optimal condition or ‘Very Poor’ which indicates that the tree is of such poor health and is unlikely to recover. In some cases, the ‘Health’ condition will be provided as ‘Dead’. In this case, there is no observable indication that the tree is alive at the time of inspection. Health is rated according to the following categories:

Category	Description
Good	Foliage density / bud formation (Deciduous) is greater than 75% at optimal growth. There is less than 10% canopy dieback present and foliage has no or very minor tip dieback. Tree may also have visible extension growth if it is in active growth and is showing no signs of nutrient deficiency (i.e. chlorosis) or active pest or disease presence. The tree may also have good wound wood development.
Fair	Foliage density / bud formation (Deciduous) is between 50-75% at optimal growth for the species. There may be 10-30% canopy dieback present and foliage may have minor tip dieback. Tree maybe showing signs of normal growth, but it is not consistent throughout the crown. Some foliage discolouration may be present from possible nutrient deficiency or other cause (i.e. pest or disease).
Poor	Canopy may be asymmetrical (not typical for the species and affecting vigour) and or canopy may be suppressed. There may be greater than 30% canopy dieback present and foliage density is below 50%. Stunted growth through leaf size or petiole extension and discolouration of the leaf may be present. Tree may be producing epicormic shoots as a stress response. Nutrient deficiency, lack of resources (water, light etc) or pathogens may be the causal agent in the tree’s decline.



- Structure** - relates to the physical form of the tree, including the trunk(s), main scaffold branches and roots. Structure includes the attributes that may influence the probability of trunk, limb, or root plate failure. The characteristic assigned to the tree may be represented as a combination of any of these categories (e.g. Fair to Poor or Fair to Good). In these instances, there may be a combination of the characteristics listed below. In some cases, 'Structure' may be noted as being 'Very Good' which indicates an optimal condition or 'Very Poor' which indicates that the tree has major structural defects and may be of a relatively high risk of failure of the identified tree part. Structure is rated according to the following categories:

## ADVERTISED PLAN

Category	Description
Good	The form of the tree is excurrent or decurrent and typical of the species characteristics and exhibits good symmetrical form. Major limbs are well formed with acceptable branch taper and unions appear to be strong with no signs of major defects. The tree has minimal defects or decay throughout the trunk and limbs. There is no signs of root plate heave or damage to the root system (mechanical or other). The tree is unlikely to suffer major branch or trunk failure under normal environmental (weather) conditions.
Fair	The form of the tree is excurrent or decurrent and typical of the species characteristics and has a fairly symmetrical form. Tree may exhibit minor structural defects that may be managed through formative/remedial/restorative or structural pruning. Only minor wounds and or areas of decay are present that do not affect the overall stability or structural integrity of any major parts of the tree. Minor root damage may have occurred in the past. Defects present are likely to cause only minor branch failure under normal environmental (weather) conditions.
Poor	Tree has a poorly formed crown that is not symmetrical. Branch and or trunk taper may be unacceptable and scaffold limbs may be overextended. Branch unions may exhibit significant defects that cannot be managed through formative pruning. There is likely to be decay in parts of the tree that may result in branch or trunk failure. Major root damage may have occurred and there may be evidence of root plate heave. Defects that are present may result in major failure of branches or trunk under normal environmental (weather) conditions.

- Age Class** - is given as a guide to the current life stage of the tree. Ultimately, the level of maturity that a tree may reach is dependent on the growing environment. The 'Mature' age class may extend for many years and is given only as an indication of the maturity of the tree based on the conditions of the local environment. Age Class is rated according to the following categories:

Category	Description
New Planting	Planted within approximately 2 years
Juvenile	Estimated as between 2 - 10 years old
Semi-mature	Estimated at between 10 - 20 years old, however, this may be species dependant
Mature	Estimated at over 25 years old or in a life stage that is considered at the peak of growth for the species.
Senescent	In the declining phase of the tree's lifespan
Dead	Tree has no live foliage and is no longer viable.

- Landscape Significance** - Landscape Significance only relates to the size of the tree relative to the immediate local area and its visual presence. Landscape significance should not be considered as the only factor in determining if a tree is worthy of retention. Landscape significance is rated according to the following categories:

Category	Description
None	Tree is dead and provides no value in the landscape from a visual amenity perspective
Low	Tree is less than 8 metres in height and spread and is not easily seen from outside of the site from within the public realm
Moderate	Tree is generally between 8 - 12 metres in height and can be easily viewed from within 50 metres of the site from the public realm
High	Tree is generally over 12 metres in height and can be viewed from over 50 metres away from the site and from adjoining streets

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

- **Arboricultural Value** - is rated according to the overall health, structure, and estimated life expectancy of the tree (often referred to as 'Useful Life Expectancy -ULE'). Often the life expectancy or ULE of a tree may be difficult to quantify as there are too many variables and therefore it is not directly recorded as a characteristic in the report. ULE has traditionally been used to guide future replanting and tree population heuristics.

The 'Arboricultural Value' takes into account the overall condition and life expectancy of the tree however it does not take into account the landscape or environmental status or suitability of the tree in the landscape. This rating is not a 'Retention Value' or 'Protection Value', it is only a rating of the overall condition of the physical characteristics of the tree and its expected longevity (based on growing conditions). For example, a tree of a semi mature or younger age class may be given a medium or high arboricultural value based on its condition, however it may be given no protection value based on its current size and low landscape significance and or amenity value. The arboricultural value is rated based on the following categories:

Category	Description
Low	A tree of low arboricultural value may be considered to be in poor condition overall with a low life expectancy (less than 10 years). The tree may be showing signs of poor health and or structure. The tree may either have a poor health rating and it is unlikely to recover or a poor structure that cannot be remedied through normal arboricultural pruning practices.
Medium	A tree of medium arboricultural value may be considered to be in fair condition overall. This tree may be considered as an average tree that provides average benefits to the site and local area with an estimated longevity of between 10 – 20 years. The tree may have evidence of fair to poor health that may be improved through cultural practices. The tree may have some structural defects that can be remedied through normal arboricultural pruning practices.
High	A tree of high arboricultural value may be considered to be of good overall health and structure. The tree is considered to have a life expectancy of greater than 20 years. Under normal maintenance practices this tree is expected to perform well in the landscape in the long term.

- **Ownership** – the ownership is noted as this may affect the 'Protection Value' of a tree or group of trees. Generally, trees and or vegetation that are located on adjoining lands that are not of the ownership of the project site may be subject to permission for removal and or works within the tree protection zone. Traditionally, this may be referred to as 'Third Party Ownership'. Adjoining lands may be owned by private property owners and this is noted as being in the category 'Neighbours'. Trees located on road reserves, nature strips or adjoining parklands/ open spaces are often owned or managed by the local Responsible Authority and are given the ownership category of 'Council'. Where known, ownership may be noted as being 'Crown' or another regulatory body (e.g. Melbourne Water). In some cases, the ownership will be noted as 'Other' and this will be explained in the 'Site Analysis' section of the report.
- **Protection Value** - is determined based on a combination of the Arboricultural Value, the ownership/ location of the tree, the landscape/ ecological and or cultural / heritage significance of the tree. The Protection Value also takes into account the suitability of the tree in the current and future landscape and the species status (i.e. identified weed species). The tree may also be protected under any relevant Planning or Local Law regulations which is also taken into account under Protection Value. Protection Value is rated according to the following categories:

**ADVERTISED PLAN**

Category	Description
None	A tree or group of trees of 'No' protection value may be considered to be in poor condition overall and is assigned a low arboricultural value and is within the project site. The tree may be of medium or high arboricultural value, however, if it is a known weed species, is doing considerable infrastructure damage or is not suitable to the site (based on its physical characteristics) it is considered to be of no protection value. The tree may be a juvenile to young specimen that can easily be replaced with new tree planting that will provide a greater amenity in the next 5 – 10 years. This tree may have a low landscape significance in terms of its height and mass within the landscape (i.e. generally less than 8 metres in height and spread). Trees that are located on adjoining land may be given a rating of 'None' if they are found to be dead or extremely hazardous and do not have any regulatory protection and or habitat value. In such instances this will be defined within the report.

**This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright**

Moderate	<p>A tree or group of trees of 'Moderate' protection value may be considered to be in fair to good condition overall and is located within the project site. The tree may be of medium or high arboricultural value, however, it may or may not be suitable to the site in the long term (based on its physical characteristics) for greater than 20 years. The tree may provide a moderate level of landscape significance or amenity and be of moderate individual significance. The tree may be in a semi mature to early mature life stage.</p> <p>Ideally any future development should consider a moderate protection value to be retained and incorporated into the design. However, if the retention and or adequate protection of this tree cannot be achieved with a reasonable design footprint then consideration should be given to the removal of the tree and replacement with a new tree suitable to the landscape and available space.</p> <p>Only trees within the project site may be given a rating of 'Moderate'. Trees that are located on adjoining land are not given a rating of 'Moderate'.</p>
High	<p>A tree or group of trees of 'High' protection value may be considered to be in good condition overall and is suitably located within the project site (i.e. within the front setback). The tree (if within the project site) will be of high arboricultural value and should have a life expectancy of greater than 20 years if protected and managed. The tree may provide a moderate to high level of landscape significance or amenity and be of moderate to high individual significance. The tree will be in a mature life stage but not beginning senescence. Ideally any future development should consider a high protection value to be retained and incorporated into the design when the tree is located on the site. The design should have regard to the adequate protection of this tree throughout any development on the project site. This tree may have a high landscape significance in terms of its height and mass within the landscape (I.e. generally greater than 12 metres in height and spread)</p> <p>Trees located on adjoining lands, not of the ownership of the project site, are given a high protection value, regardless of their overall condition (Arboricultural Value), the environmental / landscape significance and or cultural / heritage significance (i.e. historic or remnant old veteran trees) unless they are Dead and do not have any regulatory protection and or habitat value. High protection value may also be assigned to known weed species, however this will be noted within the report.</p> <p>The tree(s) may or may not be subject to any local Planning or other regulatory control (i.e. Local Law).</p>

- **SRZ (m)** - The Structural Root Zone (SRZ) (referenced from *Australian Standard AS4970-2009 - Protection of Trees on Development Sites*) is the calculated distance based on Basal Dia (cm). The SRZ identifies the minimum radius at which the root plate should not be disturbed. This measure only relates to the trees' stability and does not take into account the implications of a decline in health. The measurement is given in metres in a radius from the centre of the tree trunk.
- **TPZ (m)** - The Tree Protection Zone (TPZ) (referenced from *Australian Standard AS4970-2009 - Protection of Trees on Development Sites*) is the calculated distance based on the DBH of the tree. The TPZ addresses the physiological implications by retaining an ideal area around the tree to survive in the landscape on a long-term basis. The measurement is given in metres in a radius from the centre of the trunk.
- **TPZArea (m2)** - is the tree protection zone in square metres (m<sup>2</sup>) around the trunk.
- **TPZ10% (m)** - identifies the 10% encroachment radial distance into the tree protection zone on one side of the tree only (Minor Encroachment).
- **Encroach (%)** - is the level of encroachment into the TPZ of the tree from the excavation/ buildings and works.
- **Notes/ Comments** - The general notes/ comments provide additional support where required for the tree data collected in the field.

**ADVERTISED  
PLAN**

**This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright**

## 8.2 GLOSSARY OF COMMONLY USED TERMS

### Amenity

Although difficult to quantify, the term as used in this report relates to the contribution given to the landscape or streetscape in terms of visual aesthetics. It may also relate to the contribution in terms of shade or protection from the elements.

### Bifurcation

A stem or branch forked or divided into two or more parts or branches. Used to describe a union point. A bifurcation may have different characteristics dependant on the load distribution on the union and the size of the branches or stems that arise from the union point.

### Branch Bark Ridge

Swelling of bark tissue on the upper side of the branch junction or union. Considered the normal pattern of development in contrast to included bark (from Matheny & Clark, 1994).

### Branch collar

Trunk tissue that forms around the base of a branch between the main stem and the branch. As the branch decreases in vigour or begins to die, the branch collar becomes more pronounced (AS4373).

### Chlorotic

Discolouration of the leaves, yellow in colour resulting from a lack of chlorophyll

### Codominant

Generally, relates to trunks/ stems (although it may relate to scaffold branches within the crown) of two or more and of equal or similar size and relative importance (Matheny & Clark, 1994).

### Compartmentalisation

Physiological process which creates the chemical and mechanical boundaries that act to limit the spread of disease and decay organisms (Matheny & Clark, 1994).

### Decay

Degeneration and de-lignification of plant tissue, including wood, by pathogens or micro-organisms (AS4373).

### Epicormic Shoots

Shoots which arise from adventitious or latent buds (usually dormant). They are generally produced in response to environmental stress.

### Included Bark

The pattern of development at a branch union where bark is turned inward rather than outward or pushed out. Relates to the branch bark ridge and bifurcations. (Matheny & Clark, 1994)

### Live Crown Ratio (LCR)

Relative proportion of healthy crown in proportion to overall tree height. Often not used in isolation due to the different natural forms of many species and growing conditions. Generally, an LCR of less than 30% may result in a poor structural rating, however, when this is used and noted within this report, it is based on potential changes to the environment where this condition may have an effect on long term protection value.

### Lateral

A branch arising from another branch or stem (AS4373)

### Lopping

Cutting back a limb or stem at any point with no regard to natural target pruning. Random cutting of branches or stems between branch unions or at internodes on young trees. Not considered an acceptable practice as part of the *Australian Standard AS4373-2007 - Pruning of Amenity Trees*.

**This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright**

**ADVERTISED  
PLAN**

**Senescence or Senescent**

The organic process of age and the deterioration of tissue within the tree.

**Wound wood/ Reaction Wood**

Lignified, partially differentiated tissue which develops from the callus associated with wound or pruning cuts.

**8.3 BIBLIOGRAPHY AND CITED REFERENCES**

**Coder, K.D., 1996**, *Construction Damage Assessments: Trees and Sites*, The University of Georgia, SC, USA.

**Harris, R.W. Clark, J.R. & Matheny, N.P., 1999**, *Arboriculture, Integrated Management of Landscape Trees, Shrubs and Vines*, 3<sup>rd</sup> Edn. Prentice-Hall, Inc, USA.

**Helliwell, D.R., 1985**, *Trees on Development Sites*, Arboricultural Association, Romsey, England

**Matheny, N.P. & Clark, J.R., 1994**, *Evaluation of Hazard Trees in Urban Areas*, 2<sup>nd</sup> Edn., ISA Publications

**Mattheck, C. & Breloer, H., 1998**, *The Body Language of Trees – A Handbook for Failure Analysis*, The Stationary Office, Norwich, London.

**Standards Australia 2007**, *Australian Standard AS4373-2007, Pruning of Amenity Trees*, 14 March 2007.

**Standards Australia 2009**, *Australian Standard AS4970-2009, Protection of Trees on Development Sites*, 31 July 2009.

**This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright**

**8.4 TREE PROTECTION GUIDELINES****8.4.1 BACKGROUND**

Arbor Survey Pty Ltd assesses individual tree protection requirements based upon the *Australian Standard AS4970-2009 - Protection of Trees on Development Sites*. Tree protection requirements are calculated based upon trunk diameter of the tree at breast height. These calculations produce what is referred to in this report as the Tree Protection Zone (TPZ) and is provided as a measurement in metres in a radius from the centre of the trunk.

The TPZ is the zone in which protective measures should be applied in order to protect the tree(s) whilst maintaining the current levels of health and vigour.

Determination of the structural root zone or the zone of rapid taper is provided as the Structural Root Zone (SRZ). The structural root zone calculations (may also be referred to as the Root Plate Radius (RPR)) of the tree, based upon the *Australian Standard AS4970-2009*. The SRZ determines the minimum distance around the tree in which the structural stability of the tree should be able to be maintained.

It is important to note that the SRZ only determines the root plate area or the zone of rapid taper. Excavation within this area will not only cause a decline in tree vigour but may also cause catastrophic tree failure (Coder, 1996).

Often it is difficult to protect the entire TPZ due to site constraints. In such events it is imperative that condition and species tolerance to disturbance are evaluated in conjunction with the site characteristics. Helliwell (1985) and Harris (1999) identified that a healthy tree may tolerate removal of up to one-third of its roots and possibly up to 50% in some cases, although stability may be compromised at this level.

In situations where the TPZ of a tree to be retained will be in close proximity to a proposed development or where there will be encroachment into the TPZ of a tree, a specific tree management plan should be developed. This plan provides prescriptive measures to protect trees on development sites

**ADVERTISED  
PLAN**

## 8.4.2 GENERAL TREE PROTECTION REQUIREMENTS

The following requirements are only provided only for basic guidance, these guidelines do not constitute a specific tree management and protection plan.

- A tree protective fence should be installed at the recommended distance allocated for each tree to be retained. The fence should be located at the TPZ distance provided where possible.
- The protection fence should be rigid (chain link or similar) and should not be less than 1.8 metres in height. Fencing should be firmly attached to a removable concrete or similar base. Alternatively, star pickets (1.5 metre spacing) and para-webbing may be used to define the tree protection area. Fencing should be in accordance with the *Australian Standard for Temporary Fencing AS4687*.
- In cases where the TPZ cannot be entirely fenced, it is recommended that ground protection is used. Specific ground protection requirements will form part of a tree protection plan that should be developed for all trees to be retained.
- No soil levels must be altered within the fenced TPZ area, no heavy machinery should be allowed to pass within this area and no spoil, chemicals, building materials or refuse should be stored within this area. Nothing whatsoever should be attached to the tree (excluding tape to identify a tree to be protected).
- The area within the tree protection fence should be covered with a layer of organic mulch (mixed particle sized woodchip) to a depth of 100mm prior to the commencement of the project. Mulch material should comply with *Australian Standard AS4454*.
- The tree protective fencing should be installed prior to any works (including demolition) commencing on site and should remain in place until all site development work is completed. The protective fencing should be located at the prescribed TPZ distance where possible and clearly signed **TREE PROTECTION ZONE**. The sign should be similar to the attached image (as recommended by the *Australian Standard AS4970-2009*) and should be of a size no smaller than 400mm x 300mm:
- An area should be designated on site, outside of any tree protection zone, where all building materials, chemicals etc. can be stored throughout the proposed development.
- Open trenching for underground services located within the recommended tree protection zone (TPZ) must be avoided. Should there be no alternative for service location; the services must be bored underneath the TPZ or a non-destructive root investigation (NDRI) should be undertaken. No trenching with machinery should be used to install services within the protected area.
- Soil moisture during construction should be maintained at not less than 50% of field capacity (usually 10 litres of water per 10mm of each tree DBH per week). Irrigation may be applied by hand, automatic or manual irrigation system, or by fine spray from water tanker located outside the fenced area. Water is to be applied at a volume and frequency required so as to maintain turgor and leaf retention and encourage healthy root development. The Project Arborist should discuss variations to the amount of water to be supplied with the site or Project Manager.
- Remedial pruning works recommended to be undertaken on the project trees must be carried out to *Australian Standard AS4373-2007 - Pruning of Amenity Trees*, by a qualified Arborist (Minimum AQF Level 3). If pruning works are to be undertaken, then these works should be carried out prior to any construction works beginning on site.
- Documentation should be provided to the site manager by the Project Arborist for each inspection during the development process which details the consultant Arborist name, date and time of inspection, the stage of development, and provides comments of what actions are required.



## 8.5 TERMS AND CONDITIONS

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

**ADVERTISED  
PLAN**

**This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright**