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Selected Mature Tree Health and Condition Assessment

Prepared for: St Timothy's Catholic Primary School

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Date Prepared: August 2024

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1. INTRODUCTION

This Tree Health and Condition Assessment has been prepared for St Timothy's Catholic Primary School to assess selected mature trees within the school grounds.

The health and condition of selected mature trees have been assessed and categorised into low, medium and high priority works. This document will provide the findings of the assessment, and recommendations of works categorised into priority.

For accurate analysis of the selected trees, a site inspection was conducted on 13th August 2024 where the location of the trees, conditions of their surroundings and current health/condition was inspected.

This Health and Condition Assessment of selected mature trees contains:

- A site map that identifies the selected mature trees
- Information about selected trees - including species, health, structure and safe life expectancy
- Recommendations of works to complete categorised into priority (low, medium and high)

2. ASSESSMENT OBJECTIVES

The objectives of this audit are to:

1. Identify and Document Tree Health and Condition
To assess and record the health and condition of the subject trees, including their physical structure and vitality.
2. Evaluate Tree and Environment Interaction
To assess the relationship between the trees and their surrounding environment, including soil conditions, nearby structures, and other environmental factors.
3. Review Historical Data
To gather and evaluate any historical information or previous assessments related to the current health and condition of the trees.
4. Provide Management Recommendations
To offer clear recommendations for the ongoing care and management of the trees to ensure their long-term health and minimise any potential risks and hazards.

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3. METHODOLOGY

On 13th August 2024, a comprehensive site inspection was conducted by John Haywood from Arborise Tree Care. The data collected during this visit has been analysed and forms the basis for the recommendations presented in this audit. The tree inspection process follows a systematic approach to assess the health, structure, and safety of the subject trees. The methodology includes the following steps:

1. Visual Assessment: A detailed visual inspection is conducted at ground level to assess the overall health and condition of each tree. This includes examining the canopy, trunk, branches, roots, and surrounding environment for any signs of damage, disease, pest infestation, or structural weaknesses.
2. Tree Identification: Each tree is identified and numbered according to the site map to ensure accurate record-keeping. Relevant data, such as species, size, and age, are also recorded
3. Structural Assessment: The structural integrity of each tree is evaluated by examining the trunk, branches, and root system for any signs of instability, leaning, cracking, or decay. Specific attention is given to the tree's form and growth patterns
4. Health Evaluation: The overall health of the tree is assessed by inspecting the leaves, bark, branches, and roots for signs of disease, pest damage, fungal growth, or other abnormalities. Any abnormalities in growth, such as dieback or crown thinning, are noted
5. Safety Assessment: Potential hazards, such as dead or weak branches, are identified to assess the risk of branch failure or tree collapse. Special attention is given to trees in high-traffic areas or near structures
6. Environmental Considerations: The surrounding environment, including soil conditions, water availability, and exposure to wind or other stressors, is also considered in the evaluation to determine its impact on tree health and stability.
7. Use of Tools and Technology: Where necessary, specialised equipment such as telescopic pruners, tree assessment tools or a climbing inspection will be undertaken to gather more in-depth data, particularly in cases where defects or hidden problems are suspected.
8. Reporting: The findings from the inspection are documented in this report, outlining the health and condition of each tree, identifying any potential risks, and providing recommendations for maintenance or remedial action. These findings are categorised into low, medium and high priority works.

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This methodology ensures a comprehensive and accurate assessment of the trees, considering both their individual health and their interaction with the surrounding environment

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4. LIMITS OF THIS ASSESSMENT

This document is only applicable to the selected mature trees numbered on the site map. The inspections of these trees were made at ground level and tree defects not apparent from the ground based visual inspection are excluded from the scope of this report. The conditions of these trees are only at the time of assessment.

A 'Visual Tree Assessment' (VTA) was conducted for each tree included in this report. A VTA consists of a detailed visual inspection of a tree and its surrounding site, including a complete walk around the tree, looking at the buttress roots, trunk, branches and leaves. The tree is observed from a distance and close up to consider crown shape, landscape context and surroundings.

No invasive tests were conducted, or samples taken and any assessments of decay are qualitative only.

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5. SITE MAP - LOCATIONS OF TREES ASSESSED



- HIGH PRIORITY
- MEDIUM PRIORITY
- LOW PRIORITY
- NO WORKS
- CONTINUE TO MONITOR

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Tree Number:	Species Name: Botanical	Species Name: Common	Height (m)	Canopy (m)	DBH (cm)	Age	Health	Structure	Condition	SULE (Safe Useful Life Expectancy)	Audit: August 2024	Suggested Works:	Priority:
1	<i>Grevillea robusta</i>	Southern Silky Oak	6	4	49	Semi - mature	Fair	Fair	Poor	5 - 20 years	Condition has declined since previous audit Heavily lopped by powerlines company Monitor for future removal	Prune/ remove lopped branches in canopy	High
2	<i>Corymbia maculata</i>	Spotted Gum	22	11	93	Mature	Fair	Fair	Fair	5 - 20 years	Deadwood present in canopy Stubs present in canopy Large northern epicormic shoots present Extended eastern lateral branches	Remove deadwood and stubs greater than 40mm in diameter Remove large northwest epicormic back into trunk Replaced support cables Reduce weight to east on extended lateral branches Reduce weight off eastern stem	High
3	<i>Corymbia maculata</i>	Spotted Gum	20	8	43	Semi - mature	Good	Good	Good	21 - 50 years		Lightly reduce weight to south off lowest branch and to east over car park	High
4	<i>Eucalyptus cinerea</i>	Stringy Bark	19	10	96	Early - mature	Poor	Fair	Poor	5 - 20 years	Continue to monitor	Continue to monitor	No Works
5	<i>Eucalyptus saligna</i>	Sydney Blue Gum	15	9	22	Semi - mature	Good	Good	Good	Over 50 years	Eastern branch overhanging car park	Remove lowest eastern branch over car park back into trunk	High
6	<i>Eucalyptus obliqua</i>	Messmate stringbark	11	7	39	Early - mature	Fair	Fair	Fair	5 - 20 years	South east stem is over extended over carpark with a poor union	Remove southeast stem back into trunk	High
7	<i>Eucalyptus obliqua</i>	Messmate stringbark	9	5	23 28	Early - mature	Fair	Fair	Fair	5 - 20 years	Fair health and condition	No works required	No Works
8	<i>Eucalyptus obliqua</i>	Messmate stringbark	11	6	35 50	Early - mature	Fair	Poor	Fair	5 - 20 years	Deadwood present in canopy Large fruiting body at base between main unions showing that there is decay present, potentially indicating decline in health	Remove deadwood greater than 30mm in diameter Monitor for future removal	High
9	<i>Casuarina</i>	Sheoak	8	2	18	Semi - mature	Good	Good	Good	21 - 50 years	Good health and condition	No works required	No Works
10	<i>Ficus benjamina</i>	Weeping Fig									Canopy overhanging adjacent car park	Prune canopy away from car park	Medium
11	<i>Eucalyptus obliqua</i>	Messmate Stringybark	6	4	28	Semi - mature	Fair	Good	Fair	21 - 50 years	Canopy impending adjacent property	Remove lowest western branch over car park back into trunk Reduce southeast branches away from property	High
12	<i>Eucalyptus botryoides</i>	Mahogany Gum	16	7	77	Over - mature	Poor	Fair	Poor	0	Large deadwood present in canopy - circumference greater than 40mm in diameter Dead section off the north west limb	Reduce two extended western branches over car park Remove deadwood greater than 40mm in diameter Remove large dead section off northwest limb	High
13	<i>Corymbia maculata</i>	Spotted Gum	21	8	83	Mature	Good	Fair	Good	21 - 50 years	Cable installed previously	Check support cable between main unions Reduce weight off western stem	High
14	<i>Eucalyptus cornuta</i>	Yate	16	10	112	Over - mature	Fair	Poor	Fair	5 - 20 years	Over extended branches throughout canopy	Replace support cables Reduce extended lateral branches all around tree where required	High
15	<i>Eucalyptus mannifera</i>	Brittle Gum	14	13	107	Mature	Good	Good	Good	21 - 50 years	Deadwood present in canopy Canopy impending on adjacent structures Over extended lateral north limb	Recommend pruning lowest northern limb hard to union Reduce weight on lateral extended branches throughout canopy Remove deadwood and stubs greater than 30mm in diameter Clear canopy away from buildings and fences by minimum of 1m	High
16	<i>Banksia aemula</i>	Banksia	16	12	80	Over - mature	Fair	Fair	Poor	5 - 20 years	Canopy impending on adjacent structures	Clear away from property by 1m Check and replace cables if required Heavy weight reduction on large east stem with potential of removal into trunk	High
17	<i>Corymbia citriodora</i>	Lemon Scented Gum									Located in adjacent childcare Canopy overhanging play area	Recommend weight reduction over school play area to northeast and south	High
18	<i>Hakea</i>	Hakea	5	5	25	Early - mature	Fair	Fair	Fair	Under 5 years	Hanging branches in canopy Western stem overhanging adjacent fence	Remove broken hanging branches Remove western branch over fence back into trunk	High
19	<i>Hakea</i>	Hakea	5	5	17	Early - mature	Fair	Fair	Fair	5 - 20 years	Fair health and condition	No works required	No Works
20	<i>Eucalyptus viminalis</i>	Rough Bark Manna Gum	14	19	75	Mature	Fair	Fair	Fair	21 - 50 years	Deadwood present in canopy Northwestern stem appears to be in decline Dead section in crown of tree	Reduce extended northern branches Remove dead section in crown of tree Remove deadwood greater than 30mm in diameter Potential installation of support cable	High
21	<i>Eucalyptus viminalis</i>	Rough Bark Manna Gum	14	11	64	Mature	Fair	Fair	Fair	21 - 50 years	Deadwood present in canopy Hanging branches in canopy Trees vigour appears to be in decline	Remove deadwood greater than 30mm in diameter Remove hanging branches Uplift canopy to 2.5 m Weight reduce southeast stem - in particular to southeast and south	High
22	<i>Fraxinus</i>	Ash	7	6	34	Semi - mature	Good	Good	Good	21 - 50 years	Deadwood present in canopy Tree appears to be in decline	Remove deadwood greater than 30mm in diameter Monitor for potential future removal	High
23	<i>Fraxinus</i>	Ash	7	6	62	Mature	Poor	Fair	Poor	Under 5 years	Large deadwood present in canopy - circumference greater than 40mm in diameter Tree appears to potentially be in decline - continue to monitor	Reduce height from southwest stem into lower canopy Reduce height from southern stem back into canopy Remove deadwood throughout tree greater than 30mm in diameter Continue to monitor	High
24	<i>Casuarina</i>	Sheoak	18	5	67	Mature	Fair	Fair	Fair	5 - 20 years	Over extended branch to the west	Reduce extended branch to west Slightly reduce weight to north towards play area	Medium
25	<i>Melaleuca quinquenervia</i>	Paper Bark	8	5	62	Mature	Fair	Fair	Fair	5 - 20 years	Fair health and condition	No works required	No Works
26	<i>Casuarina</i>	Sheoak	15	7	71	Mature	Fair	Fair	Fair	5 - 20 years	Tree appears to be showing less vigour Over extended northern limb over seating area	Reduce/remove extended northern limb over seating area with support cable in If stem is retained, replace support cable and reduce end weight Remove extended lateral branch to the west	High
27	<i>Eucalyptus robusta</i>	Swamp Mahogany	9	6	39	Early - mature	Fair	Fair	Fair	5 - 20 years	Long overextended branches to the west and east	Reduce extended lateral branches to west towards oval Remove longest extended branch to east	Medium
28	<i>Eucalyptus nicholii</i>	Narrow leaf Black Peppermint	9	5	107	Early - mature	Fair	Poor	Poor	Under 5 years	Support cables installed - continue to monitor	Check support cables to east over neighbours property Lightly weight reduce canopy to the west	High
29	<i>Lophostemon confertus</i>	Queensland Box	10	5	59	Early - mature	Good	Good	Good	21 - 50 years	Deadwood present in canopy Low canopy Canopy growing into adjacent fence	Remove deadwood greater than 30mm in diameter Remove low eastern branches against fence Uplift canopy to minimum of 2.2m in height	Medium
30	<i>Lophostemon confertus</i>	Queensland Box	9	5	40	Early - mature	Good	Good	Good	21 - 50 years	Good health and condition	No works required	No Works
31	<i>Eucalyptus leucoxylon</i>	Yellow Gum	7	4	22	Early - mature	Good	Good	Good	21 - 50 years	Deadwood present in canopy Over extended lateral branch to the south west	Remove deadwood greater than 30mm in diameter Remove extended south west branch	High
32	<i>Corymbia maculata</i>	Spotted Gum	28	10	90	Mature	Good	Fair	Good	21 - 50 years	Over extended lateral branch to the east	Weight reduction of east limb	High
33	<i>Eucalyptus leucoxylon</i>	Yellow Gum	5	5	33	Early - mature	Good	Good	Good	21 - 50 years	Canopy overhanging neighbours property	Lightly weight reduce canopy to the east Clear canopy from neighbours property	Medium
34	<i>Eucalyptus leucoxylon</i>	Yellow Gum	8	6	39	Early - mature	Good	Poor	Good	21 - 50 years	Deadwood present in canopy	Removed deadwood greater than 30mm in diameter	Low
35	<i>Pittosporum undulatum</i>	Sweet Pittosporum	6	7	68	Early - mature	Fair	Fair	Fair	5 - 20 years	Deadwood present in canopy	Remove low, broken stub Remove deadwood greater than 30mm in diameter	Low
36	<i>Eucalyptus mannifera</i>	Brittle Gum	11	5	43	Early - mature	Good	Good	Good	Over 50 years	Deadwood present in canopy	Remove southern branch closest to antenna Remove low obvious deadwood	Medium

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7. TREE PHOTOS



T1: *Grevillea robusta*



T2: *Corymbia maculata*



T3: *Corymbia maculata*



T4: *Eucalyptus cinerea*

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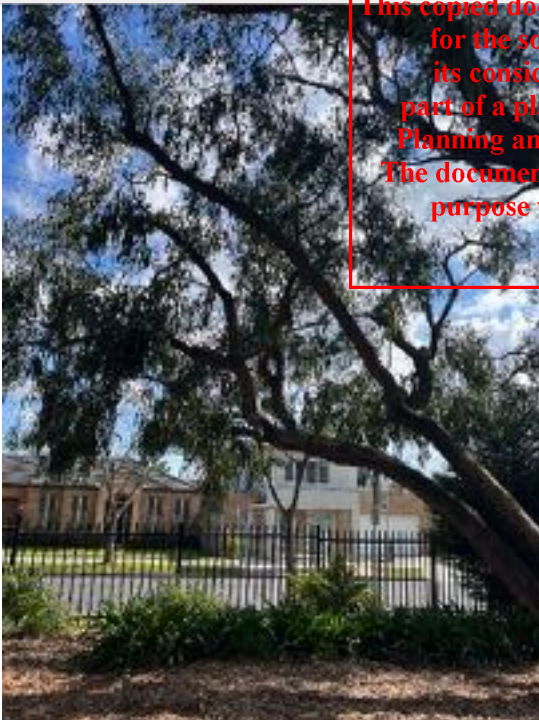


T5: *Eucalyptus cinerea*



T6: *Eucalyptus obliqua*

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T7: *Eucalyptus obliqua*



T8: *Eucalyptus obliqua*

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T9: *Casuarina*



T10: *Ficus benjamina*

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T11: *Eucalyptus obliqua*



T12: *Eucalyptus botryoides*

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T13: *Corymbia maculata*



T14: *Eucalyptus cornuta*

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T15: *Eucalyptus mannifera*



T16: *Banksia aemula*

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T17: *Corymbia citriodora*



T18: *Hakea*

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T19: *Hakea*



T20: *Eucalyptus viminalis*

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T21: *Eucalyptus viminalis*



T22: *Fraxinus*

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T23: *Fraxinus*



T24: *Casuarina*

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T25: *Melaleuca quinquenervia*



T26: *Casuarina*

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T27: *Eucalyptus robusta*



T28: *Eucalyptus nicholii*

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T29: *Lophostemon confertus*



T30: *Lophostemon confertus*

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T31: *Eucalyptus leucoxylon*



T32: *Corymbia maculata*

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T33: *Eucalyptus leucoxylon*



T34: *Eucalyptus leucoxylon*

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T35: *Pittosporum undulatum*



T36: *Eucalyptus mannifera*

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8. EXPLANATION OF TERMS

PRIORITY RATING:

Category:	Description:
Low	Low work priorities are those that are not concerned with conditions that affect the immediate health and safety of trees (or people and property) and/or trees that are not considered valuable enough to warrant immediate attention. These works are mostly removal of small branches lodged in the tree crown or removal of branch stubs. It is recommended that these works be carried out optionally and when convenient over the next 24 months. Tree work priorities may be increased to Medium on subsequent inspections if required.
Medium	Medium work priorities are specified if the work will improve the tree's health, safety and/or aesthetics or the safety of the area (people or property) if carried out in the short term. These works are often specified for trees with larger broken lodged branches and occupying a high profile position or frequently used area within the landscape. Tree removals in this category are those that do not pose high-risk danger to persons or property. It is recommended that these works be carried out within the next 6 to 12 months.
High	High work priorities are specified where a tree condition poses a potential safety hazard to people or property or the tree and works are considered significant enough to warrant immediate attention. Trees requiring high priority work will include those with large broken lodged branches or damaged structures (crown, trunk or roots) that are likely to lead to failure causing property damage, injury or death. Works in this classification should be carried out within 3 months or sooner if budgets and convenience allow.

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Health Ratings	
Category:	Description:
Good	The tree is demonstrating good or exceptional growth. The tree should exhibit a full canopy of foliage, and be free of and/or only minor pest or disease problems
Fair	The tree is in reasonable condition and is growing well. The tree should exhibit an adequate canopy of foliage. There may be some deadwood present in the crown. Some grazing by possums or insects may be present.
Poor	The tree is not growing to its full capacity. Extension growth of the lateral branches is minimal. The canopy may be thinning or sparse. Large amounts of deadwood may be evident throughout the crown. Significant pest and disease problems may be evident or symptoms of stress indicating tree decline

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Structure Ratings	
Category:	Description:
Good	The tree has a well-defined and balanced crown. Branch unions appear to be strong with no defects evident in the trunk or branches. Major limbs are well defined and the tree is considered a good example of the species.
Fair	The tree has some minor problems in the structure of the crown. The crown may be slightly out of balance and some unions may be exhibiting minor structural faults. If the tree is single trunked, it may be on a slight lean or exhibit minor defects.
Poor	The tree may have a poorly structured crown. The crown may be unbalanced or exhibit large gaps. Major limbs may not be well defined and branches may be running or crossing over. Branch unions may be poor or faulty at the point of attachment and the tree may have suffered major root damage.

Condition Ratings	
Category:	Description:
Good	Both health and structure of the trees are good. The tree is an excellent example of the species and requires little or no work to improve health or structure.
Fair	The tree is an average example of the species and may require work to improve health and structure.
Poor	Health and/or structure is less than average for the species. The tree is considered below average condition and may require significant work or removal.

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Safe Useful Life Expectancy	
Category:	Description:
0	Tree is dead or nearly dead and/or considered unsafe for the location.
Under 5 years	The tree under normal circumstances and without extra stress should be safe and have value for up to five years but will need to be replaced. During this period, normal inspections and maintenance will be required. Replacement trees should be planted if possible.
5 - 20 years	The tree under normal circumstances and without extra stress should be safe and have value for up to twenty years. During this period, normal inspections and maintenance will be required.
21 - 50 years	The tree is likely to provide useful amenity for between 21 - 50 years under normal circumstances and without extra stress. During this period, normal inspections and maintenance will be required.
Over 50 years	The tree is likely to provide useful amenity for greater than 50 years under normal circumstances and without extra stress. During this period, normal inspections and maintenance will be required.

	Life Stages
Category:	Description:
Young	Sapling tree and/or recently planted. Approx. 5 years or less in location
Semi-mature	Tree increasing in size and yet to achieve expected size in situation. Primary developmental state
Early-mature	Tree established, generally growing vigorously, 50% of attainable age/size
Mature	Specimen approaching expected size in situation, reduced incremental growth
Overmature	Mature full size with a retrenching crown. Tree is senescent and in decline. Significant decay generally present.

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9. TERMS AND CONDITIONS

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4. The contents of this report/assessment represents the professional opinion of the consultant
5. Sketches, diagrams and photographs are intended as visual aids and are not to scale unless stated to be so and must not be constructed as engineering or architectural reports or as surveys
6. The information in this report/assessment covers only the items that were examined and reflects the condition of those items at the time of inspection only
7. This document overrides all prior discussions and representations between the author and the client

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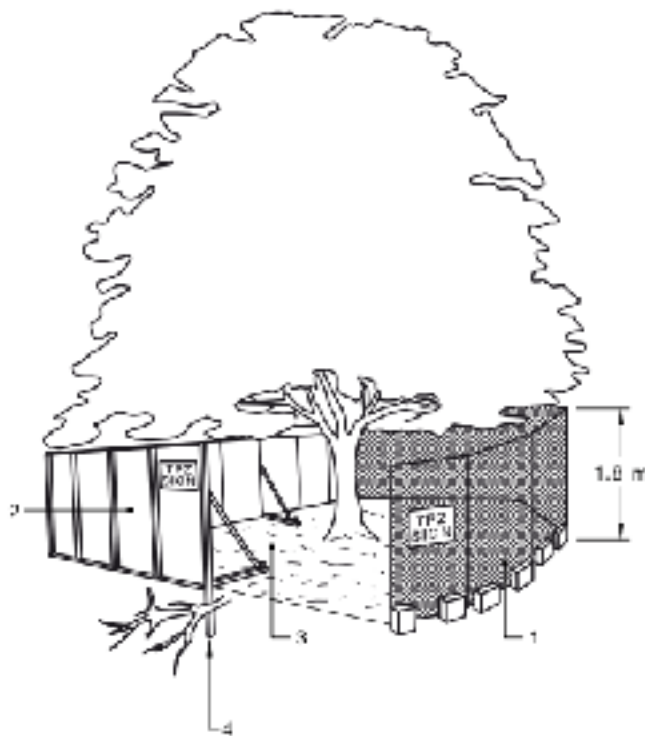
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APPENDIX 1: DETAILED TREE PROTECTION MEASURES

1.1 TREE PROTECTION FENCING

Protective fencing is used to delineate the TPZ and acts as a physical barrier to protect the tree. The fencing is to be installed prior to any works commencing, including before any machinery/materials are brought onto site. Once the fencing is installed, it is not to be removed or entered without approval by the Project Arborist. The TPZ should be secured to prevent access. Existing perimeter fencing and other structures may be suitable as part of the protective fencing. If protective fencing is impractical (across a driveway etc), other tree protection measures are to be utilised as per Project Arborist’s recommendations.

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LEGEND:

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

Figure 1: Tree Protection Fencing

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1.2 SIGNAGE

Clear signage is to be used to communicate that the area is a Tree Protection Zone and are to be visible from the construction site - see Figure .



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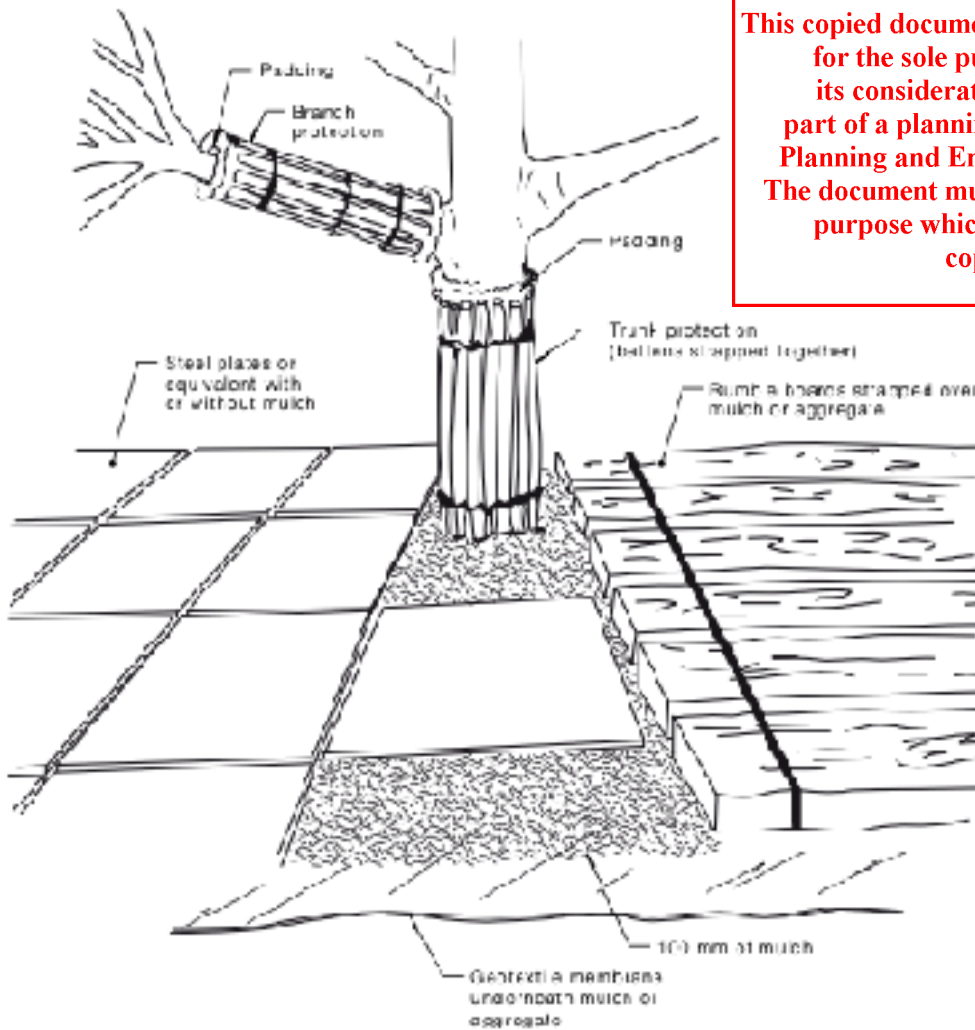
Figure 2: Example of signage to be clearly visible on the TPZ protective fencing

1.3 GROUND PROTECTION

If temporary access to the TPZ is required, or TPZ fencing is unable to be utilised, ground protection methods will be required to prevent root damage and minimise soil compaction within the TPZ. Measures may include a permeable such as geotextile fabric beneath a layer of mulch or crushed rock below rumble boards - see Figure 3.

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NOTES:

- 1 For trunk and branch protection use boards and padding that will prevent damage to bark. Boards are to be strapped to tree, not nailed or screwed.
- 2 Rumble boards should be of a suitable thickness to prevent soil compaction and root damage.

Figure 3: Example of ground protection methods and trunk and branch protection

1.4 TRUNK AND BRANCH PROTECTION

Where necessary, trunk and branch protections are to be installed by the Project Arborist as per AS4970: 2009 Protection of Trees on Development Sites to protect the tree from mechanical damage (see Figure 3). The tree's trunk and/or branches are to be wrapped in padding and then secured with batons. Any protective measures are to be attached by methods outlined in AS4970 - nails, screws, temporary powerlines, stays and guys are not to be used.

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1.5 RESTRICTIONS IN THE TREE PROTECTION ZONE

The following activities are to be excluded from being carried out within the TPZ:

1. Machine excavation (including trenching of underground services)
2. Site sheds are NOT to be placed within the TPZ.
3. Excavation for still fencing
4. Soil cultivation
5. Storage of all building materials
6. Preparation of chemicals - including preparation of cement products
7. Parking of vehicles and plant
8. Refuelling of machinery
9. Dumping of waste and/or building debris
10. Wash down and cleaning of plant and equipment
11. Placement of fill
12. Soil level changes

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1.6 UNDERGROUND SERVICES

Underground services within Tree Protection Zones need to be assessed by the Project Arborist prior to commencement of works - ideally in the design stage.

All underground services should be located outside the Tree Protections Zones of protected trees.

Any underground services planned to go through an established TPZ area, should be installed by direct boring with the top of the bore minimum depth of 600mm below the existing grade. Bore pits should be located outside of the TPZ or manually excavated under direct supervision of the Project Arborist.

1.7 SCAFFOLDING

Scaffolding required should be installed outside a Tree Protection Zone, however if it is essential to have scaffolding within a TPZ, branch removal should be minimised and undertaken by a qualified arborist. Ground below where the scaffolding is located should be protected by boarding and where access required, a board walk should be installed to minimise soil compaction (see Figure 4). Boarding is to be placed over a layer of mulch and sheeting and needs to be kept in place until the scaffolding is to be removed.

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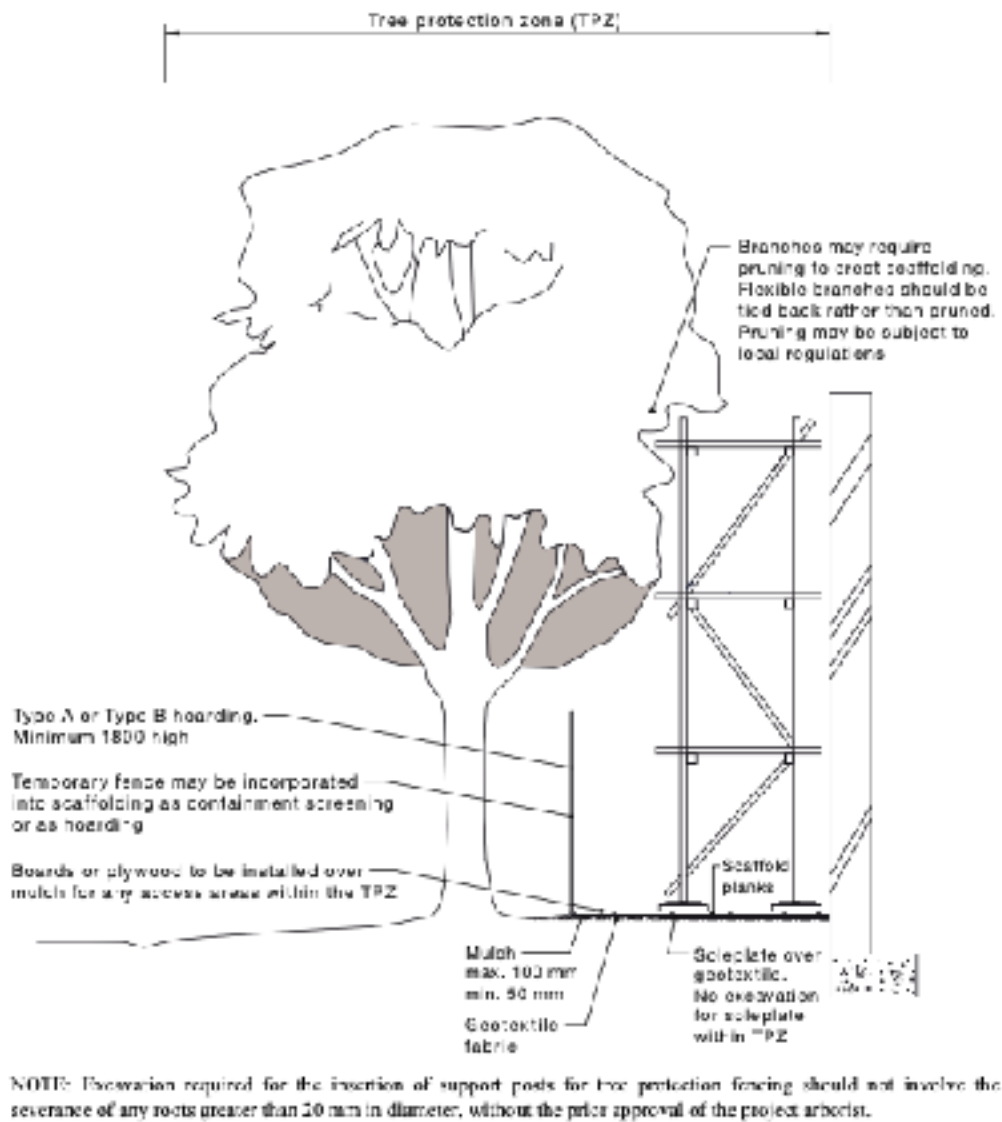


Figure 4: Scaffolding in a Tree Protection Zone

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