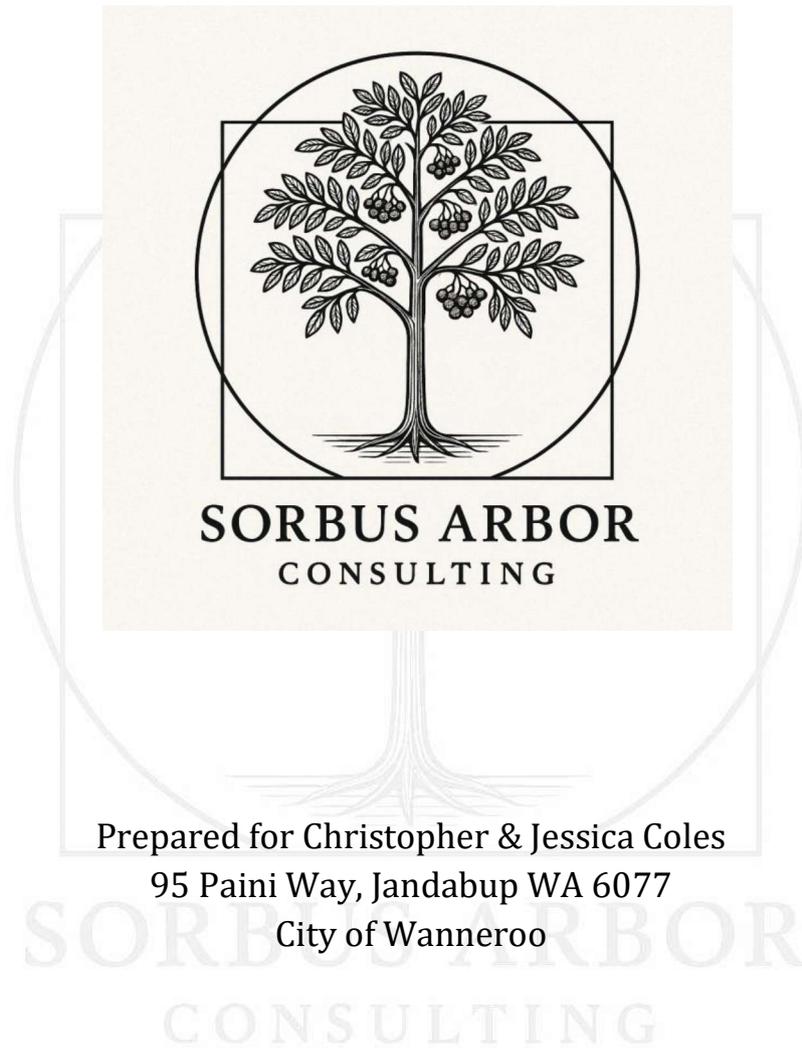


Tree Protection Plan (TPP) and Tree Protection Specifications (TPS)



Prepared for Christopher & Jessica Coles
95 Paini Way, Jandabup WA 6077
City of Wanneroo

Prepared by Rowan Barkey – Consulting Arborist (AQF Level 5, *Dip. Arboriculture*)
Sorbus Arbor Consulting | ABN 98 356 184 454
Date: 13 November 2025



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1.0 PURPOSE

This Tree Protection Plan (TPP) and Tree Protection Specifications (TPS) outline the arboricultural requirements to retain and protect trees at 95 Paini Way, Jandabup. The objective is to ensure all site works comply with AS 4970 : 2025 – Protection of Trees on Development Sites by establishing clear procedures for fencing, ground protection, supervision, pruning, and ongoing maintenance.

2.0 INTRODUCTION

Sorbus Arbor Consulting was engaged by the landowners to prepare a TPP/TPS to support the proposed development and envelope selection at 95 Paini Way. The plan aligns with the City of Wanneroo's canopy and bushfire resilience objectives while prioritising retention of viable native trees.

3.0 LIMITATIONS

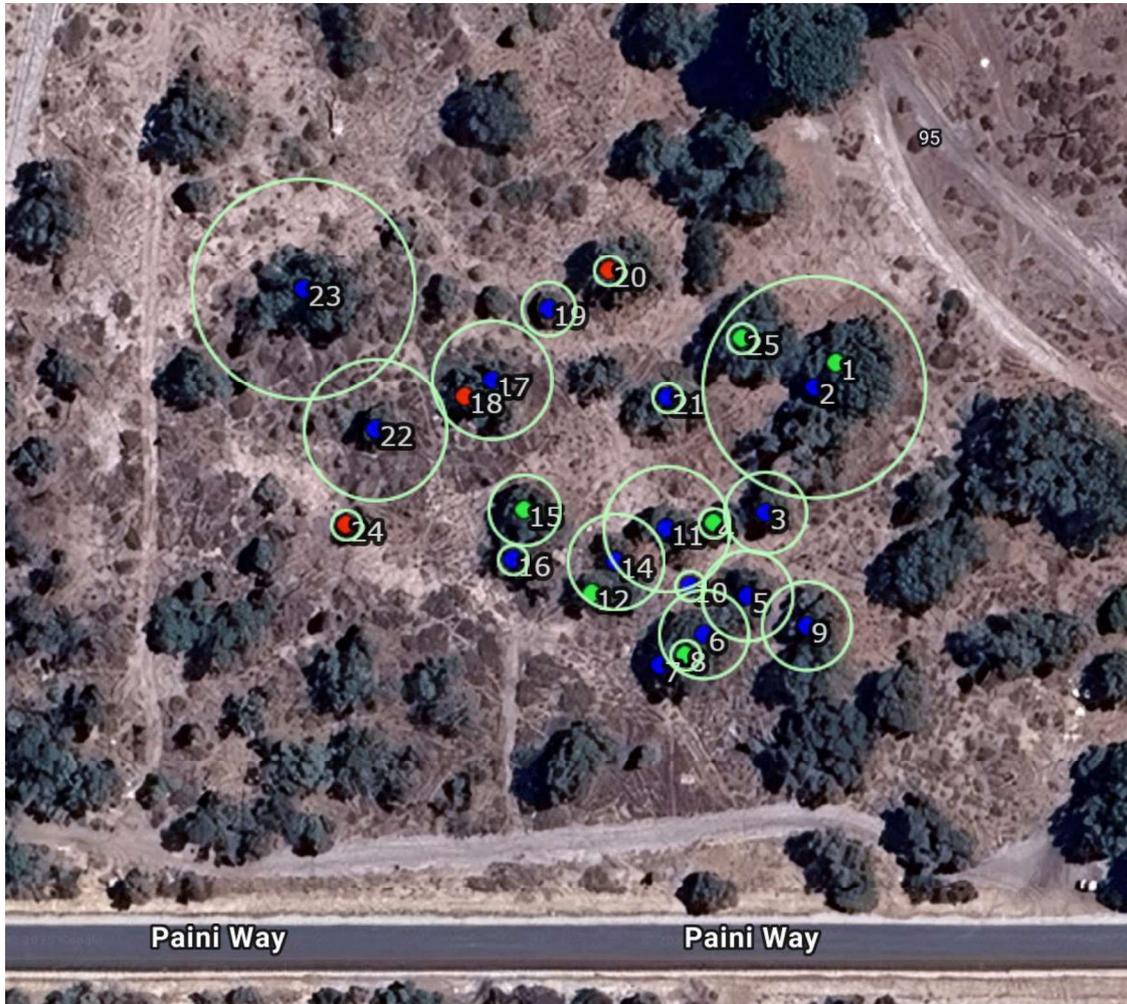
This assessment is based on visual inspection undertaken from ground level without invasive testing. Subsurface root mapping, resistograph, or tomography were not performed. Observations reflect site conditions on the day of inspection and may vary with environmental or construction-related changes. This document provides arboricultural guidance and does not constitute a formal BAL assessment.

4.0 METHODOLOGY

A Visual Tree Assessment (VTA) was undertaken in accordance with *AS 4970 : 2025* and the recognised principles of *Mattheck & Breloer (1994)*. Inspection time: Saturday 8 November 2025 at ~2:00 pm. Weather: hot and sunny. Measurements were obtained using standard arboricultural instruments. TPZ and SRZ were calculated in accordance with *AS 4970 : 2025*.

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5.0 LOCATION AND SITE CONTEXT



Trees surveyed within proposed build envelope with TPZs indicated with green circles

The site is located at 95 Paini Way, Jandabup (City of Wanneroo). Existing firebreaks and vegetated areas influence siting. Envelope 2 positions the dwelling approximately 21 m from the firebreak; the original envelope would be fewer than 5 m from the firebreak.



6.0 TREE ASSESSMENT

Tree ID	Botanical Name	Common Name	DSH (cm)	Height (m)	Canopy Spread (m)	Health	ULE (yrs)	Observation / Recommended Works	Retention Outcome
1	<i>Eucalyptus rudis</i> <i>subsp. rudis</i>	Flooded Gum	30	6-8	8	Fair	21-40	Minor dieback; crown lift to 3 m.	Protect during construction
2	<i>Melaleuca lanceolata</i>	Moonah / Dryland Tea-tree	55	5-8	7	Good	21-40	Sound structure; minimal pruning.	Viable for retention
3	<i>Melaleuca lanceolata</i>	Moonah / Dryland Tea-tree	45	5-7	6	Fair	11-20	Thin canopy; mulch and monitor.	Viable for retention
4	<i>Banksia menziesii</i>	Firewood Banksia	38	6-9	6	Good	21-40	Good vigour; retain and protect.	Protect during construction
5	<i>Eucalyptus rudis</i> <i>subsp. rudis</i>	Flooded Gum	70	10-14	10	Fair	21-40	Minor canopy dieback; prune deadwood.	Protect during construction



6	<i>Melaleuca lanceolata</i>	Moonah / Dryland Tea-tree	48	5-8	7	Poor	11-20	Sparse foliage; monitor health.	Viable for retention
7	<i>Melaleuca lanceolata</i>	Moonah / Dryland Tea-tree	60	5-10	9	Good	21-40	No major defects observed.	Protect during construction
8	<i>Eucalyptus rudis</i> <i>subsp. rudis</i>	Flooded Gum	80	12-15	12	Good	40+	Retain as key canopy tree; install fencing.	Protect during construction
9	<i>Melaleuca lanceolata</i>	Moonah / Dryland Tea-tree	40	5-8	6	Fair	11-20	Fair crown; maintain mulch.	Viable for retention
10	<i>Melaleuca lanceolata</i>	Moonah / Dryland Tea-tree	30	5-7	5	Good	21-40	Good form; minimal intervention.	Protect during construction
11	<i>Banksia menziesii</i>	Firewood Banksia	44	6-9	8	Good	21-40	Healthy specimen; retain.	Protect during construction
12	<i>Melaleuca lanceolata</i>	Moonah / Dryland Tea-tree	65	5-9	8	Poor	11-20	Declining canopy; replacement advised.	Remove
13	<i>Eucalyptus rudis</i>	Flooded Gum	75	10-12	10	Good	40+	Structural roots exposed; mulch	Protect during



									area.	construction
14	<i>Melaleuca subsp. rudis lanceolata</i>	Moonah / Dryland Tea-tree	58	5-8	7	Fair	21-40	Minor tip dieback; prune selectively.	Viable for retention	
15	<i>Melaleuca lanceolata</i>	Moonah / Dryland Tea-tree	52	5-8	7	Poor	11-20	Unbalanced crown; may require removal.	Remove	
16	<i>Eucalyptus rudis subsp. rudis</i>	Flooded Gum	90	14-18	14	Good	40+	Major canopy tree; high amenity value.	Protect during construction	
17	<i>Melaleuca lanceolata</i>	Moonah / Dryland Tea-tree	36	5-8	6	Fair	11-20	Maintain soil moisture and mulch.	Viable for retention	
18	<i>Melaleuca lanceolata</i>	Moonah / Dryland Tea-tree	47	5-8	7	Fair	21-40	Fair structure; retain where possible.	Viable for retention	
19	<i>Banksia menziesii</i>	Firewood Banksia	41	6-9	8	Good	21-40	Good condition; no works required.	Protect during construction	
20	<i>Melaleuca</i>	Moonah / Dryland Tea-tree	50	5-9	8	Fair	21-40	Fair vigour; crown thin	Viable for retention	

7.0 TREE PROTECTION PLAN (TPP)

Purpose: Define measures to retain and safeguard trees during construction. The TPP establishes minimum standards for fencing, access management, root protection, and arboricultural supervision to ensure long-term stability and health.

Protection Zones (AS 4970 : 2025): TPZ = $12 \times \text{DSH (cm)}$; SRZ per Standard formula.

Fencing and Signage: Install 1.8 m chain-mesh or equivalent barriers with 'Tree Protection Zone – Keep Out' signage prior to any works. Fencing is to span as far as reasonably practicable without impeding construction.

Ground Protection: Where access within TPZ is unavoidable, implement 100 mm coarse mulch over geotextile with timber boards/steel plates above to disperse load; retain existing hardstand surfaces intact wherever possible.

Root Barrier (if required): Undertake using non-destructive digging (NDD) methods to ~600 mm depth under AQF Level 5 arborist supervision. Clean-cut roots >30 mm diameter with sterilised tools and backfill promptly.

Pruning: Undertake only selective pruning in accordance with AS 4373 : 2007. No lopping or heading back. Remove hazardous deadwood if present. Maintain mulch and irrigation.

Monitoring and Certification: AQF Level 5 arborist to inspect pre-, mid-, and post-construction and certify compliance with AS 4970 : 2025.

8.0 TREE PROTECTION SPECIFICATIONS (TPS)

Scope: Procedures, materials, and supervision to preserve tree health and structural integrity during works.

Activities excluded from TPZ: excavation, storage, vehicle movement, chemical mixing, refuelling, wash-down, waste disposal, or grade alteration.

Root/Trunk/Branch Protection: No mechanical excavation within SRZ; NDD only in outer TPZ; wrap trunks with hessian/padded battens as required; maintain ~100 mm mulch.

Scaffolding & Services: Place boards/sleepers beneath scaffold footings; use directional drilling/thrust boring ≥ 600 mm below SRZ; NDD for any open trenching under arborist supervision.

Maintenance & Monitoring: Maintain fencing/signage/mulch; irrigate to prevent desiccation; manual weed removal; immediate reporting of damage.

Certification & Handover: Final certification confirming compliance with AS 4970 : 2025 and this specification

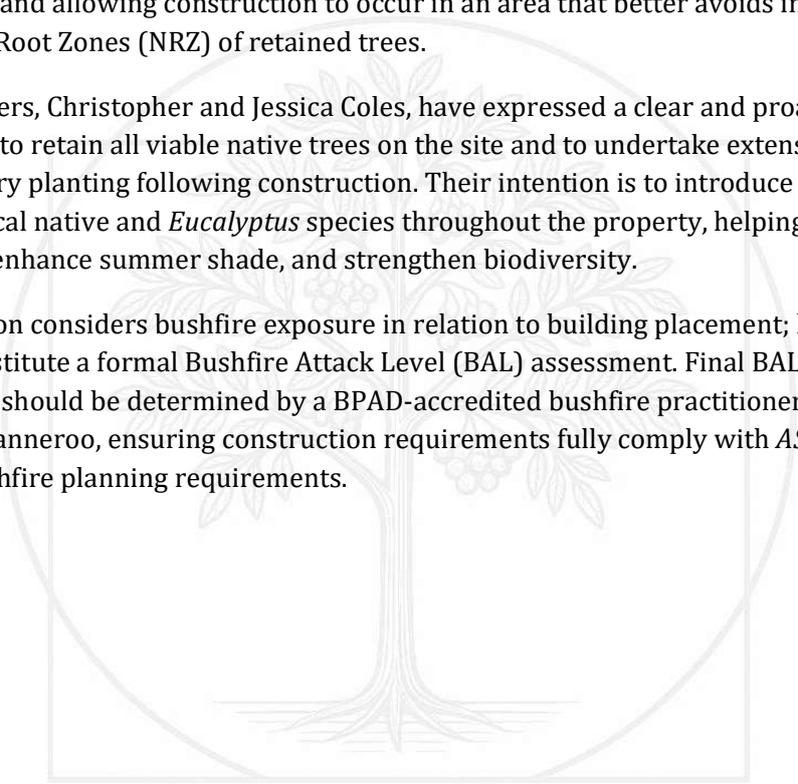
9.0 DISCUSSION

The revised building envelope (Envelope 2) provides a substantially improved outcome when compared with the original envelope positioned less than 5 m from the existing firebreak. The original positioning would have resulted in elevated bushfire exposure, including higher radiant heat levels, ember attack potential, and increased likelihood of canopy disturbance or root-zone impact.

By contrast, Envelope 2 increases the setback to approximately 21 m, reducing bushfire vulnerability and allowing construction to occur in an area that better avoids intrusion into the Notional Root Zones (NRZ) of retained trees.

The landowners, Christopher and Jessica Coles, have expressed a clear and proactive commitment to retain all viable native trees on the site and to undertake extensive supplementary planting following construction. Their intention is to introduce a substantial number of local native and *Eucalyptus* species throughout the property, helping offset canopy loss, enhance summer shade, and strengthen biodiversity.

This discussion considers bushfire exposure in relation to building placement; however, it does not constitute a formal Bushfire Attack Level (BAL) assessment. Final BAL classification should be determined by a BPAD-accredited bushfire practitioner or through the City of Wanneroo, ensuring construction requirements fully comply with *AS 3959 : 2018* and local bushfire planning requirements.



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10.0 RECOMMENDATIONS

Recommendation	Details
10.1 Tree Protection During Works	Establish TPZ/NRZ fencing and signage before construction begins. Keep all machinery, material storage, and soil disturbance outside protected areas.
10.2 Arborist Supervision	Any excavation or construction activity near retained trees should occur under project arborist supervision to avoid unnecessary root damage.
10.3 Crown Lifting	Where practicable, crown-lift retained trees to approximately 3.0 m to improve access, reduce fire risk, and assist in managing ground fuels beneath the canopy.
10.4 Mulching & Watering	Apply coarse mulch within the dripline of retained trees and maintain periodic watering during hot, dry periods to support recovery from site disturbance.
10.5 Root Management	If excavation is required near a tree, use non-destructive digging (air-spade, hydro-vac or hand tools). Root pruning must be clean and comply with accepted pruning standards.
10.6 Tree Removal	Trees assessed as unsuitable for retention should be removed carefully to prevent disturbance to the root zones of adjacent retained trees. Grind stumps shallowly where root systems overlap.
10.7 Grasstree Relocation	Existing <i>Xanthorrhoea preisii</i> are to be lifted and rehomed by Grass Trees Australia using appropriate specialist techniques.
10.8 Replanting	The clients intend to implement extensive re-planting with native and <i>Eucalyptus</i> species. This approach is supported and will assist with offsetting canopy loss and increasing shade over time.
10.9 Post-Construction Inspection	After major works are completed, a follow-up inspection should be conducted to confirm tree condition and identify any required remedial work.

Appendix A – TreePlotter Report

12/11/2025, 10:23

Tree Summary Report (1)

Flooded Gum Tree ID #1 95 Paini Way	
Tree Details	Tree Location
Tree Id: 1	Longitude: 115.866937
Botanical Name: Eucalyptus rudis subsp. rudis	Latitude: -31.746467
Common Name: Flooded Gum	Address: 95 Paini Way
Genus:	City: Jandabup
Health: Fair	Photos Street View Map View
Status: Alive	 <p>20251108_140106.jpg 08/11/2025</p>
Number of Stems (Multi Calc): 1	
DBH [cm]:	
DBH Range: N/A	
Height Range: 5-10 Metres	
Priority of Works: Moderate	
Canopy Spread [m]: 15	
Useful Life Expectancy: 21-40 years	
Observation Comments: Retain and protect during construction	
Recommended Works: Reduction Prune	
Last Modified: 08/11/2025	
Last Modified User: Rowan	
QTRA Risk Category:	

<u>Moonah, Dryland Tea-tree Tree ID #2</u> 95 Paini Way	
Tree Details	Tree Location
Tree Id: 2	Longitude: 115.866906
Botanical Name: Melaleuca lanceolata	Latitude: -31.746498
Common Name: Moonah, Dryland Tea-tree	Address: 95 Paini Way
Genus:	City: Jandabup
Health: Fair	Photos Street View <u>Map View</u>
Status: Alive	
Number of Stems (Multi Calc): 1	
DBH [cm]: 150	
DBH Range: >75cm	
Height Range: 5-10 Metres	
Priority of Works: Moderate	
Canopy Spread [m]: 15	
Useful Life Expectancy: 11-20 years	
Observation Comments: Tree showing signs of natural decline	
Recommended Works: Asset Clearance, Reduction Prune	
Last Modified: 08/11/2025	
Last Modified User: Rowan	
QTRA Risk Category:	

<u>Moonah, Dryland Tea-tree Tree ID #3</u> 95 Paini Way	
Tree Details	Tree Location
Tree Id: 3	Longitude: 115.866837
Botanical Name: Melaleuca lanceolata	Latitude: -31.746650
Common Name: Moonah, Dryland Tea-tree	Address: 95 Paini Way
Genus:	City: Jandabup
Health: Good	Photos Street View Map View
Status: Alive	 <p>17625822202322649877904343611489.jpg 08/11/2025</p>
Number of Stems (Multi Calc): Multiple Stems	
DBH [cm]: 46.1	
DBH Range: 46-60cm	
Height Range: <5 Metres	
Priority of Works: Moderate	
Canopy Spread [m]: 5	
Useful Life Expectancy: 11-20 years	
Observation Comments: Tree to be removed for construction	
Recommended Works: Removal	
Last Modified: 12/11/2025	
Last Modified User: Rowan	
QTRA Risk Category:	

<u>Flooded Gum Tree ID #4</u> 95 Paini Way	
Tree Details	Tree Location
Tree Id: 4	Longitude: 115.866763
Botanical Name: Eucalyptus rudis subsp. rudis	Latitude: -31.746663
Common Name: Flooded Gum	Address: 95 Paini Way
Genus:	City: Jandabup
Health: Good	Photos Street View Map View
Status: Alive	 <p>17625823498846713102482664803754.jpg 08/11/2025</p>
Number of Stems (Multi Calc):	
DBH [cm]: 15	
DBH Range: 8-16cm	
Height Range: <5 Metres	
Priority of Works: Moderate	
Canopy Spread [m]: 4	
Useful Life Expectancy: 40+ years	
Observation Comments: Remove sucker for construction	
Recommended Works: Removal, Grind Stump	
Last Modified: 08/11/2025	
Last Modified User: Rowan	
QTRA Risk Category:	



<u>Moonah, Dryland Tea-tree Tree ID #5</u> 95 Paini Way	
Tree Details	
Tree Id:	5
Botanical Name:	Melaleuca lanceolata
Common Name:	Moonah, Dryland Tea-tree
Genus:	
Health:	Poor
Status:	Alive
Number of Stems (Multi Calc):	Multiple Stems
DBH [cm]:	50.99
DBH Range:	46-60cm
Height Range:	5-10 Metres
Priority of Works:	Moderate
Canopy Spread [m]:	10
Useful Life Expectancy:	11-20 years
Observation Comments:	Approx 50% crown necrotic
Recommended Works:	Removal
Last Modified:	08/11/2025
Last Modified User:	Rowan
QTRA Risk Category:	
Tree Location	
Longitude:	115.866812
Latitude:	-31.746752
Address:	95 Paini Way
City:	Jandabup
Photos Street View Map View	
Empty space for photos, street view, and map view content	

<u>Moonah, Dryland Tea-tree Tree ID #6</u> 95 Paini Way	
Tree Details	Tree Location
Tree Id: 6	Longitude: 115.866749
Botanical Name: Melaleuca lanceolata	Latitude: -31.746798
Common Name: Moonah, Dryland Tea-tree	Address: 95 Paini Way
Genus:	City: Jandabup
Health: Poor	Photos Street View Map View
Status: Alive	 <p>17625829819056090696263752849330.jpg 08/11/2025</p>
Number of Stems (Multi Calc): 1	
DBH [cm]: 50	
DBH Range: 46-60cm	
Height Range: <5 Metres	
Priority of Works:	
Canopy Spread [m]: 5	
Useful Life Expectancy: 11-20 years	
Observation Comments: Poor health and form	
Recommended Works: Removal	
Last Modified: 12/11/2025	
Last Modified User: Rowan	
QTRA Risk Category:	

<u>Moonah, Dryland Tea-tree Tree ID #7</u> 95 Paini Way	
Tree Details	Tree Location
Tree Id: 7	Longitude: 115.866686
Botanical Name: Melaleuca lanceolata	Latitude: -31.746837
Common Name: Moonah, Dryland Tea-tree	Address: 95 Paini Way
Genus:	City: Jandabup
Health: Good	Photos Street View Map View
Status: Alive	 <p>17625831627533835191453921810449.jpg 08/11/2025</p>
Number of Stems (Multi Calc):	
DBH [cm]:	
DBH Range: N/A	
Height Range: N/A	
Priority of Works:	
Canopy Spread [m]:	
Useful Life Expectancy: 21-40 years	
Observation Comments: Retain and protect during construction	
Recommended Works:	
Last Modified: 08/11/2025	
Last Modified User: Rowan	
QTRA Risk Category:	

<u>Flooded Gum Tree ID #8</u> 95 Paini Way	
Tree Details	Tree Location
Tree Id: 8	Longitude: 115.866723
Botanical Name: Eucalyptus rudis subsp. rudis	Latitude: -31.746824
Common Name: Flooded Gum	Address: 95 Paini Way
Genus:	City: Jandabup
Health: Good	Photos Street View Map View
Status: Alive	 <p>17625832570583935209447189524231.jpg 08/11/2025</p>
Number of Stems (Multi Calc): 1	
DBH [cm]: 15	
DBH Range: 8-16cm	
Height Range: <5 Metres	
Priority of Works:	
Canopy Spread [m]: 5	
Useful Life Expectancy: 40+ years	
Observation Comments: Retain and protect during construction	
Recommended Works:	
Last Modified: 08/11/2025	
Last Modified User: Rowan	
QTRA Risk Category:	

<u>Moonah, Dryland Tea-tree Tree ID #9</u> 95 Paini Way	
Tree Details	
Tree Id:	9
Botanical Name:	Melaleuca lanceolata
Common Name:	Moonah, Dryland Tea-tree
Genus:	
Health:	Good
Status:	Alive
Number of Stems (Multi Calc):	1
DBH [cm]:	50
DBH Range:	46-60cm
Height Range:	5-10 Metres
Priority of Works:	Moderate
Canopy Spread [m]:	6
Useful Life Expectancy:	11-20 years
Observation Comments:	Remove prior to construction
Recommended Works:	Removal
Last Modified:	08/11/2025
Last Modified User:	Rowan
QTRA Risk Category:	

Tree Location	
Longitude:	115.866895
Latitude:	-31.746789
Address:	95 Paini Way
City:	Jandabup

<u>Photos</u>	Street View	Map View
		
<p>17625834490431355861173963533415.jpg 08/11/2025</p>		

<u>Moonah, Dryland Tea-tree Tree ID #10</u> 95 Paini Way	
Tree Details	
Tree Id:	10
Botanical Name:	Melaleuca lanceolata
Common Name:	Moonah, Dryland Tea-tree
Genus:	
Health:	Good
Status:	Alive
Number of Stems (Multi Calc):	1
DBH [cm]:	5
DBH Range:	0-8cm
Height Range:	<5 Metres
Priority of Works:	
Canopy Spread [m]:	1.5
Useful Life Expectancy:	40+ years
Observation Comments:	Protection not required
Recommended Works:	
Last Modified:	08/11/2025
Last Modified User:	Rowan
QTRA Risk Category:	
Tree Location	
Longitude:	115.866730
Latitude:	-31.746739
Address:	95 Paini Way
City:	Jandabup
Photos Street View Map View	
 <p>17625837561895254879701219809328.jpg 08/11/2025</p>	

<p><u>Moonah, Dryland Tea-tree Tree ID #11</u> 95 Paini Way</p>	
<p>Tree Details</p>	
Tree Id:	11
Botanical Name:	Melaleuca lanceolata
Common Name:	Moonah, Dryland Tea-tree
Genus:	
Health:	Fair
Status:	Alive
Number of Stems (Multi Calc):	Multiple Stems
DBH [cm]:	70.71
DBH Range:	60-75cm
Height Range:	<5 Metres
Priority of Works:	
Canopy Spread [m]:	10
Useful Life Expectancy:	11-20 years
Observation Comments:	Remove prior to construction
Recommended Works:	Removal
Last Modified:	08/11/2025
Last Modified User:	Rowan
QTRA Risk Category:	

<p>Tree Location</p>	
Longitude:	115.866695
Latitude:	-31.746670
Address:	95 Paini Way
City:	Jandabup

<p><u>Photos</u> Street View Map View</p>
<p>17625839167653271337501934448294.jpg 08/11/2025</p>

Flooded Gum Tree ID #12 95 Paini Way	
Tree Details	
Tree Id:	12
Botanical Name:	Eucalyptus rudis subsp. rudis
Common Name:	Flooded Gum
Genus:	
Health:	Poor
Status:	Alive
Number of Stems (Multi Calc):	1
DBH [cm]:	
DBH Range:	N/A
Height Range:	N/A
Priority of Works:	
Canopy Spread [m]:	
Useful Life Expectancy:	0 years
Observation Comments:	Suckering stump - remove
Recommended Works:	Removal
Last Modified:	08/11/2025
Last Modified User:	Rowan
QTRA Risk Category:	
Tree Location	
Longitude:	115.866590
Latitude:	-31.746749
Address:	95 Paini Way
City:	Jandabup
Photos Street View Map View	
	
17625840615487896463309385460248.jpg 08/11/2025	

<u>Moonah, Dryland Tea-tree Tree ID #14</u> 95 Paini Way	
Tree Details	
Tree Id:	14
Botanical Name:	Melaleuca lanceolata
Common Name:	Moonah, Dryland Tea-tree
Genus:	
Health:	Fair
Status:	Alive
Number of Stems (Multi Calc):	Multiple Stems
DBH [cm]:	53.85
DBH Range:	46-60cm
Height Range:	<5 Metres
Priority of Works:	
Canopy Spread [m]:	12
Useful Life Expectancy:	11-20 years
Observation Comments:	Remove prior to construction
Recommended Works:	Removal
Last Modified:	08/11/2025
Last Modified User:	Rowan
QTRA Risk Category:	
Tree Location	
Longitude:	115.866623
Latitude:	-31.746710
Address:	95 Paini Way
City:	Jandabup
Photos Street View Map View	
 <p>17625841450367429837200378476467.jpg 08/11/2025</p>	

Flooded Gum Tree ID #15 95 Paini Way	
Tree Details	
Tree Id:	15
Botanical Name:	Eucalyptus rudis subsp. rudis
Common Name:	Flooded Gum
Genus:	
Health:	Good
Status:	Alive
Number of Stems (Multi Calc):	
DBH [cm]:	40
DBH Range:	30-45cm
Height Range:	5-10 Metres
Priority of Works:	Moderate
Canopy Spread [m]:	10
Useful Life Expectancy:	40+ years
Observation Comments:	Cluster of suckers
Recommended Works:	Removal
Last Modified:	08/11/2025
Last Modified User:	Rowan
QTRA Risk Category:	
Tree Location	
Longitude:	115.866493
Latitude:	-31.746648
Address:	95 Paini Way
City:	Jandabup
Photos Street View Map View	
 <p>17625846589635164367753383662007.jpg 08/11/2025</p>	

<u>Moonah, Dryland Tea-tree Tree ID #16</u> 95 Paini Way	
Tree Details	
Tree Id:	16
Botanical Name:	Melaleuca lanceolata
Common Name:	Moonah, Dryland Tea-tree
Genus:	
Health:	Poor
Status:	Alive
Number of Stems (Multi Calc):	1
DBH [cm]:	10
DBH Range:	8-16cm
Height Range:	<5 Metres
Priority of Works:	
Canopy Spread [m]:	10
Useful Life Expectancy:	6-10 years
Observation Comments:	Cluster of suckers
Recommended Works:	Removal
Last Modified:	12/11/2025
Last Modified User:	Rowan
QTRA Risk Category:	

Tree Location	
Longitude:	115.866478
Latitude:	-31.746707
Address:	95 Paini Way
City:	Jandabup

<u>Photos</u>	Street View	Map View
		
<p>17625847860788008145163581645077.jpg 08/11/2025</p>		

<u>Moonah, Dryland Tea-tree Tree ID #17</u> 95 Paini Way	
Tree Details	
Tree Id:	17
Botanical Name:	Melaleuca lanceolata
Common Name:	Moonah, Dryland Tea-tree
Genus:	
Health:	Good
Status:	Alive
Number of Stems (Multi Calc):	Multiple Stems
DBH [cm]:	67.08
DBH Range:	60-75cm
Height Range:	>40 Metres
Priority of Works:	
Canopy Spread [m]:	12
Useful Life Expectancy:	11-20 years
Observation Comments:	
Recommended Works:	Removal
Last Modified:	08/11/2025
Last Modified User:	Rowan
QTRA Risk Category:	
Tree Location	
Longitude:	115.866447
Latitude:	-31.746489
Address:	95 Paini Way
City:	Jandabup
Photos Street View Map View	
	
<p>17625850239087458674157195184797.jpg 08/11/2025</p>	

Firewood Banksia Tree ID #18 95 Paini Way	
Tree Details	Tree Location
Tree Id: 18	Longitude: 115.866409
Botanical Name: Banksia mensiezii	Latitude: -31.746509
Common Name: Firewood Banksia	Address: 95 Paini Way
Genus:	City: Jandabup
Health: Good	
Status: Alive	
Number of Stems (Multi Calc): 1	Photos Street View Map View
DBH [cm]:	
DBH Range: N/A	
Height Range: N/A	
Priority of Works:	
Canopy Spread [m]:	
Useful Life Expectancy: 11-20 years	
Observation Comments:	
Recommended Works: Removal, Grind Stump	
Last Modified: 12/11/2025	
Last Modified User: Rowan	
QTRA Risk Category:	
	17625851232529107620756193341330.jpg 08/11/2025

<u>Moonah, Dryland Tea-tree Tree ID #19</u> 95 Paini Way	
Tree Details	
Tree Id:	19
Botanical Name:	Melaleuca lanceolata
Common Name:	Moonah, Dryland Tea-tree
Genus:	
Health:	Good
Status:	Alive
Number of Stems (Multi Calc):	1
DBH [cm]:	30
DBH Range:	30-45cm
Height Range:	<5 Metres
Priority of Works:	
Canopy Spread [m]:	4
Useful Life Expectancy:	21-40 years
Observation Comments:	
Recommended Works:	
Last Modified:	12/11/2025
Last Modified User:	Rowan
QTRA Risk Category:	
Tree Location	
Longitude:	115.866529
Latitude:	-31.746402
Address:	95 Paini Way
City:	Jandabup
<u>Photos</u> Street View Map View	
	
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Firewood Banksia Tree ID #20 95 Paini Way		Tree Location	
Tree Details		Longitude: 115.866614	
Tree Id:	20	Latitude: -31.746355	
Botanical Name:	Banksia mensiezii	Address: 95 Paini Way	
Common Name:	Firewood Banksia	City: Jandabup	
Genus:			
Health:	Good		
Status:	Alive		
Number of Stems (Multi Calc):	1		
DBH [cm]:	15		
DBH Range:	8-16cm		
Height Range:	5-10 Metres		
Priority of Works:			
Canopy Spread [m]:	5		
Useful Life Expectancy:	11-20 years		
Observation Comments:	Protect during construction		
Recommended Works:			
Last Modified:	12/11/2025		
Last Modified User:	Rowan		
QTRA Risk Category:			
		Photos Street View Map View	
			
		<p>17625856081381433433907149326575.jpg 08/11/2025</p>	

<u>Moonah, Dryland Tea-tree Tree ID #21</u> 95 Paini Way	
Tree Details	
Tree Id:	21
Botanical Name:	Melaleuca lanceolata
Common Name:	Moonah, Dryland Tea-tree
Genus:	
Health:	Good
Status:	Alive
Number of Stems (Multi Calc):	1
DBH [cm]:	15
DBH Range:	8-16cm
Height Range:	5-10 Metres
Priority of Works:	
Canopy Spread [m]:	10
Useful Life Expectancy:	11-20 years
Observation Comments:	Cluster of suckers
Recommended Works:	
Last Modified:	08/11/2025
Last Modified User:	Rowan
QTRA Risk Category:	
Tree Location	
Longitude:	115.866697
Latitude:	-31.746510
Address:	95 Paini Way
City:	Jandabup
Photos Street View Map View	
 <p>17625856710668243094922195997910.jpg 08/11/2025</p>	

<u>Moonah, Dryland Tea-tree Tree ID #22</u> 95 Paini Way	
Tree Details	
Tree Id:	22
Botanical Name:	Melaleuca lanceolata
Common Name:	Moonah, Dryland Tea-tree
Genus:	
Health:	Very Poor
Status:	Alive
Number of Stems (Multi Calc):	1
DBH [cm]:	80
DBH Range:	>75cm
Height Range:	5-10 Metres
Priority of Works:	
Canopy Spread [m]:	12
Useful Life Expectancy:	0 years
Observation Comments:	Tree has failed approx 2.5m
Recommended Works:	Removal
Last Modified:	08/11/2025
Last Modified User:	Rowan
QTRA Risk Category:	
Tree Location	
Longitude:	115.866281
Latitude:	-31.746549
Address:	95 Paini Way
City:	Jandabup
Photos Street View Map View	
	
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<u>Moonah, Dryland Tea-tree Tree ID #23</u> 95 Paini Way	
Tree Details	
Tree Id:	23
Botanical Name:	Melaleuca lanceolata
Common Name:	Moonah, Dryland Tea-tree
Genus:	
Health:	Fair
Status:	Alive
Number of Stems (Multi Calc):	Multiple Stems
DBH [cm]:	162.48
DBH Range:	>75cm
Height Range:	10-20 Metres
Priority of Works:	
Canopy Spread [m]:	15
Useful Life Expectancy:	11-20 years
Observation Comments:	Protect during construction
Recommended Works:	
Last Modified:	12/11/2025
Last Modified User:	Rowan
QTRA Risk Category:	
Tree Location	
Longitude:	115.866180
Latitude:	-31.746378
Address:	95 Paini Way
City:	Jandabup
Photos Street View Map View	
	
17625861030925317132896280955087.jpg 08/11/2025	

Firewood Banksia Tree ID #24 95 Paini Way		Tree Location	
Tree Details		Longitude:	115.866240
Tree Id:	24	Latitude:	-31.746665
Botanical Name:	Banksia mensiezii	Address:	95 Paini Way
Common Name:	Firewood Banksia	City:	Jandabup
Genus:			
Health:	Good		
Status:	Alive		
Number of Stems (Multi Calc):	1	Photos	Street View
DBH [cm]:	10		Map View
DBH Range:	8-16cm	 <p>17625862045837293425731929189562.jpg 08/11/2025</p>	
Height Range:	<5 Metres		
Priority of Works:			
Canopy Spread [m]:	3		
Useful Life Expectancy:	11-20 years		
Observation Comments:			
Recommended Works:	Removal		
Last Modified:	08/11/2025		
Last Modified User:	Rowan		
QTRA Risk Category:			

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Tree Summary Report (1)

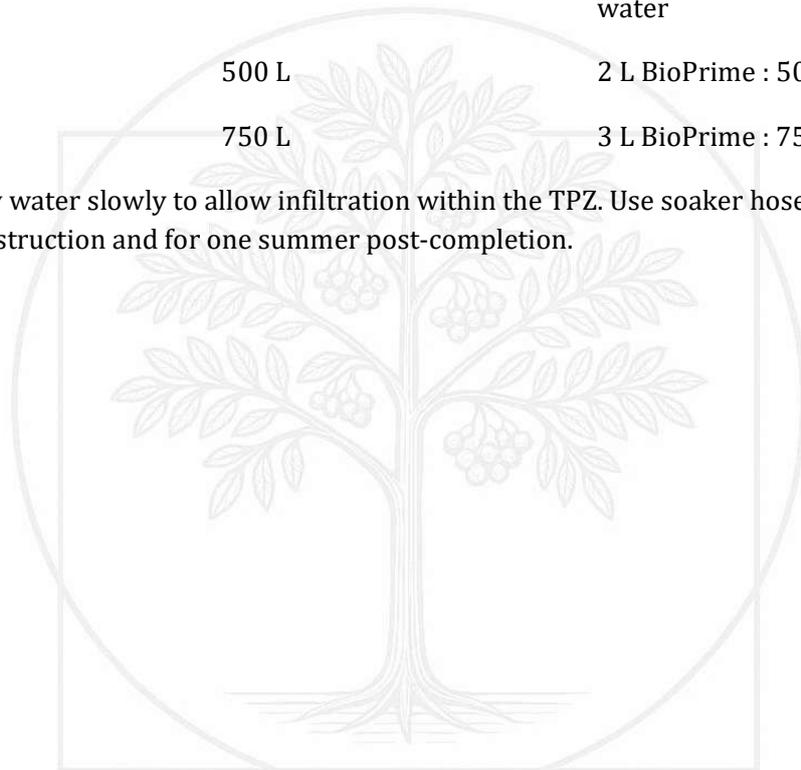
Flooded Gum Tree ID #25 95 Paini Way	
Tree Details	
Tree Id:	25
Botanical Name:	Eucalyptus rudis subsp. rudis
Common Name:	Flooded Gum
Genus:	
Health:	Good
Status:	Alive
Number of Stems (Multi Calc):	1
DBH [cm]:	15
DBH Range:	8-16cm
Height Range:	5-10 Metres
Priority of Works:	
Canopy Spread [m]:	20
Useful Life Expectancy:	40+ years
Observation Comments:	Cluster of suckers - 1 melaleuca within cluster
Recommended Works:	
Last Modified:	08/11/2025
Last Modified User:	Rowan
QTRA Risk Category:	
Tree Location	
Longitude:	115.866803
Latitude:	-31.746438
Address:	95 Paini Way
City:	Jandabup
Photos Street View Map View	
	
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Appendix B – Watering and Soil Health Program

Tree Height Range	Water Volume (Weekly)	BioPrime Treatment (Bi-monthly)
<5 m	200 L	1 L BioPrime : 250 L water
5–10 m	300 L	1.5 L BioPrime : 375 L water
10–20 m	500 L	2 L BioPrime : 500 L water
>20 m	750 L	3 L BioPrime : 750 L water

Notes: Apply water slowly to allow infiltration within the TPZ. Use soaker hoses. Continue through construction and for one summer post-completion.



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Appendix C – TPZ Signage / Fencing

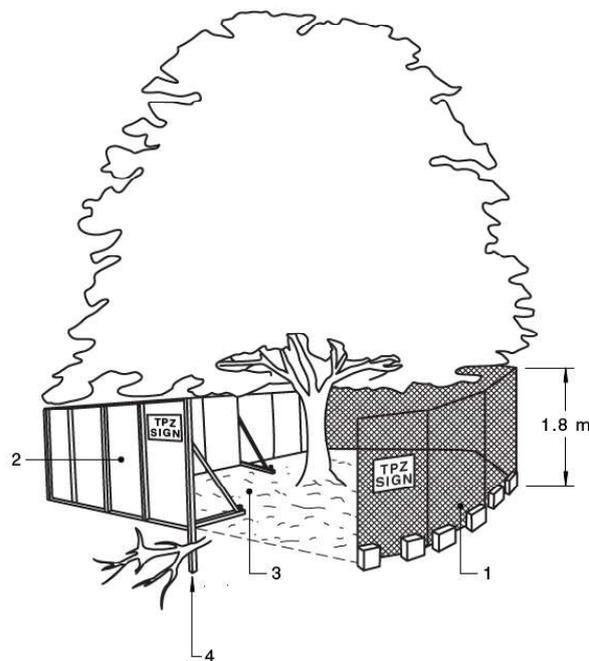
AS 4970:2025

18

Figure 4 indicates an example of protective fences.

4.4 Signs

Signs identifying the TPZ should be placed around the edge of the TPZ and be visible from within the development site, as shown in Figure 4. The lettering on the sign should conform to AS 1319. Appendix C provides an example of a suitable TPZ sign.



KEY:

- 1 Chain wire mesh panels that are held in place with concrete feet.
- 2 Alternatively, plywood or wooden paling fence panels may be used. This fencing material also prevents building materials or soil from entering the TPZ.
- 3 Mulch installation across the surface of the TPZ (as detailed in the TPS). No excavation, construction activity grade changes, surface treatment or storage of materials of any kind is permitted within the TPZ other than those indicated in the TPS.
- 4 Bracing may be used within the TPZ. Installation of posts or supports should avoid damaging roots.

Figure 4 — Protective fences

Appendix C (informative)

Tree Protection Zone sign

C.1 Sign example

A TPZ sign provides clear and readily accessible information to indicate that a TPZ has been established. [Figure C.1](#) provides an example of a suitable sign. The sign should be minimum A3 size.



Figure C.1 — Tree Protection Zone sign

Appendix D – Glossary of Arboricultural Terminology

Term	Definition
DSH (Diameter at Standard Height)	Trunk diameter measured at 1.4 m above ground level, replacing “DBH” in AS 4970 : 2025.
DAB (Diameter Above Buttress)	Diameter measured above basal flare where buttress roots distort the DSH reading.
NRZ (Notional Root Zone)	A notional circular area extending $12 \times \text{DSH (cm)}$ from the trunk centre, indicating the minimum root protection radius as defined in AS 4970 : 2025. Supersedes “TPZ”.
SRZ (Structural Root Zone)	The area required for mechanical anchorage of the tree. Derived from DSH using the AS 4970 : 2025 formula: $\text{SRZ} = (\text{DSH} \times 50)^{0.42} \times 0.64$.
Canopy Spread	The horizontal width of the crown, measured from dripline to dripline across the widest axis.
ULE (Useful Life Expectancy)	Estimated timeframe a tree is likely to remain healthy and structurally sound in its current setting, assuming reasonable management.
Epicormic Growth	Shoots developing from dormant or adventitious buds, often produced in response to canopy stress, pruning, or disturbance.
Dieback	Progressive death of shoots and branches from the tips inward, typically due to physiological decline, pathogens, or environmental stress.
Canker	Localised necrotic lesion on a stem or branch, often caused by fungal or bacterial infection.
Soil Compaction	Compression of soil particles that reduces aeration, water infiltration, and root growth potential.
Root Plate	The mass of primary structural roots and attached soil providing tree stability and anchorage.
Adventitious Roots	Roots that develop from non-root tissue such as stems, branches, or wounded areas—commonly stress-induced.



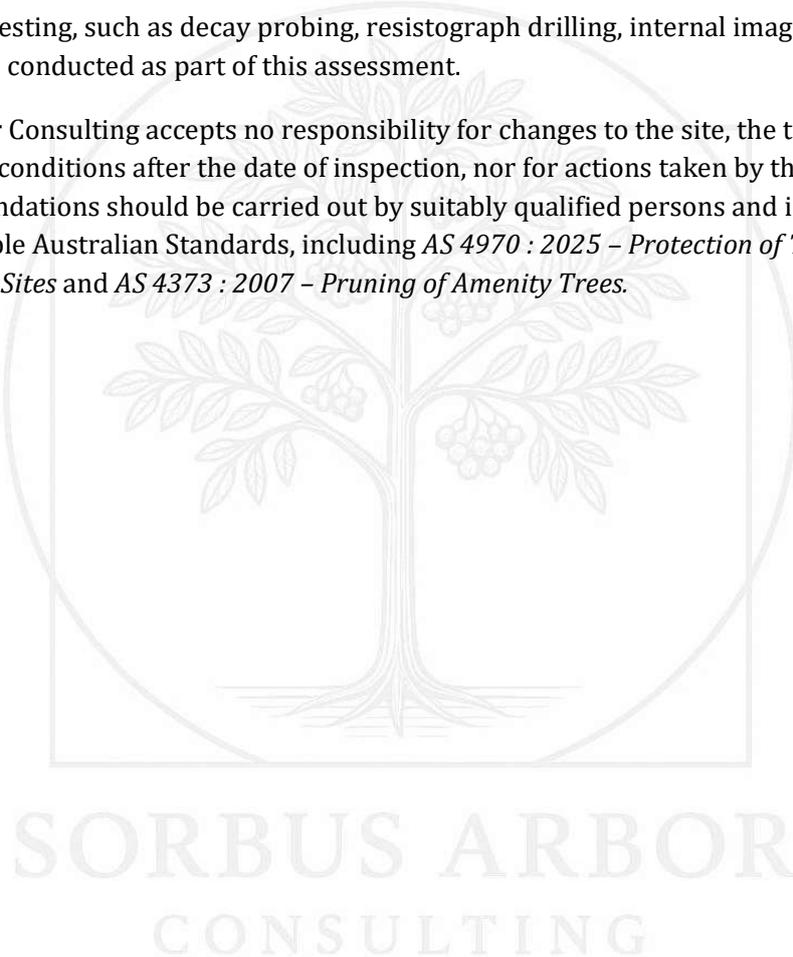
Term	Definition
Mycorrhizae	Beneficial fungi forming symbiotic associations with roots, enhancing nutrient and water uptake.
Mulch (AS 4454)	Composted or uncomposted organic material applied to the soil surface to conserve moisture, moderate temperature, and improve structure.
VTA (Visual Tree Assessment)	A systematic approach for evaluating tree condition based on external indicators of mechanical stress and vitality (Mattheck & Breloer, 1994).
Encroachment	Any physical intrusion or activity within the NRZ (e.g. excavation, compaction, or material storage) that may damage roots or soil structure.
Non-Destructive Digging (NDD)	Excavation using air-spade, hydro-vac, or hand tools to expose roots safely without mechanical injury.
Formative Pruning (AS 4373 : 2007)	Pruning of juvenile trees to improve structure, form, and branch distribution.
Remedial Pruning (AS 4373 : 2007)	Pruning to remove or reduce defective, dead, or damaged parts to improve safety, health, or structure.
Selective Pruning (AS 4373 : 2007)	Targeted pruning of specific branches for clearance, crown balance, or health reasons.
QTRA (Quantified Tree Risk Assessment)	Structured method that quantifies the likelihood of tree failure against the probability of impacting a target.
Retention Value	Arborist's assessment of a tree's importance for retention, factoring in health, longevity, species value, and site constraints.

Appendix E – Disclaimer

This report has been prepared exclusively for the client and the proposed development at 95 Paini Way, Jandabup. The information contained herein is based on the site inspection undertaken by Sorbus Arbor Consulting on the nominated date and reflects the condition of the trees at that time. Tree condition can change due to weather events, seasons, construction impacts, pests, disease, and natural growth processes.

No warranty or guarantee is offered regarding the future condition or structural stability of any tree. Arboricultural assessments are visual in nature unless otherwise stated. No exploratory testing, such as decay probing, resistograph drilling, internal imaging, or root mapping was conducted as part of this assessment.

Sorbus Arbor Consulting accepts no responsibility for changes to the site, the trees, or surrounding conditions after the date of inspection, nor for actions taken by third parties. All recommendations should be carried out by suitably qualified persons and in accordance with applicable Australian Standards, including *AS 4970 : 2025 – Protection of Trees on Development Sites* and *AS 4373 : 2007 – Pruning of Amenity Trees*.



Appendix F – Author Qualifications / Experience

Rowan Barkey has over 15 years of experience in the arboricultural industry, working across local government, private development, residential consulting, and large-scale construction environments. His work includes tree risk assessment, development impact assessments, Tree Protection Plans (TPP/TPS), Visual Tree Assessments (VTA), root investigation, and project supervision around high-value trees.

He has extensive experience interpreting and applying *AS 4970 : 2025 – Protection of Trees on Development Sites* and *AS 4373 : 2007 – Pruning of Amenity Trees*, and regularly liaises with councils, builders, planners, engineers, and landowners to achieve reasonable, practical tree-retention outcomes.

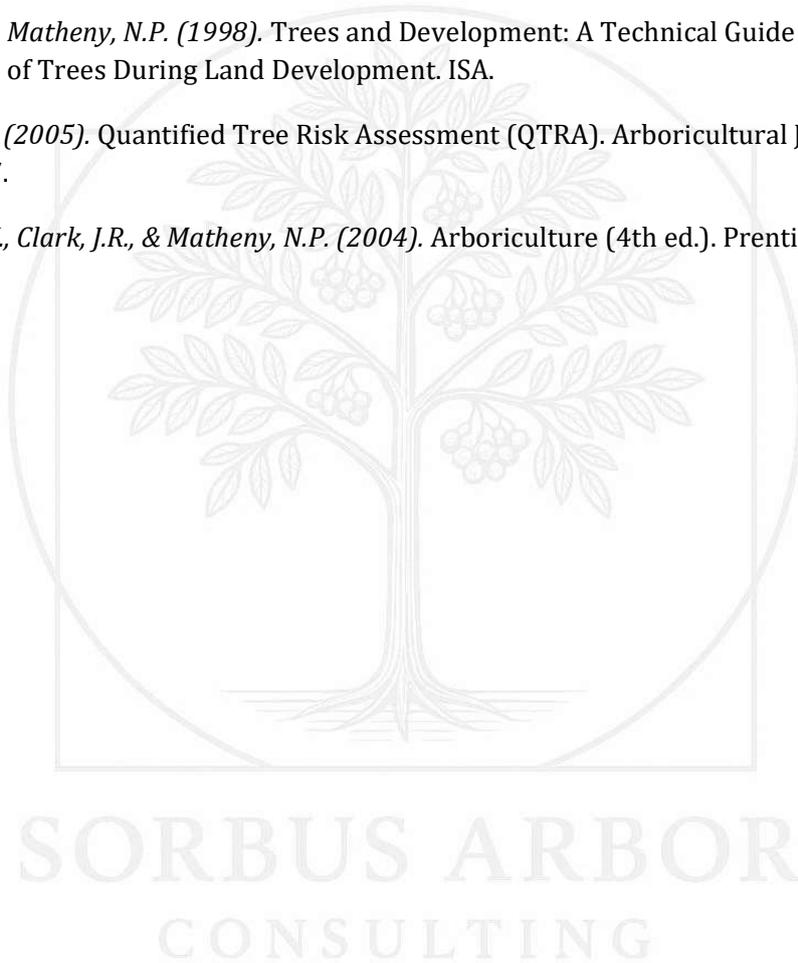
Rowan is a current member of ArbWest, Arboriculture Australia, and the International Society of Arboriculture (ISA).





Appendix G – References

- *Standards Australia (2025). AS 4970 : 2025 – Protection of Trees on Development Sites.*
- *Standards Australia (2007). AS 4373 : 2007 – Pruning of Amenity Trees.*
- Mattheck, C. & Breloer, H. (1994). *The Body Language of Trees.* HMSO, London.
- *Lonsdale, D. (1999). Principles of Tree Hazard Assessment and Management.* HMSO, London.
- *Clark, J.R. & Matheny, N.P. (1998). Trees and Development: A Technical Guide to Preservation of Trees During Land Development.* ISA.
- *Ellison, M.J. (2005). Quantified Tree Risk Assessment (QTRA). Arboricultural Journal, 28(2), 77–97.*
- *Harris, R.W., Clark, J.R., & Matheny, N.P. (2004). Arboriculture (4th ed.).* Prentice Hall.



Appendix H – Arborist Sign-Off Sheet

Stage	Date	Arborist Signature	Notes / Actions
Pre-Construction – TPZ fencing installed, signage in place, induction of site crew.			
Stage 1 – Site clearing and preliminary earthworks outside TPZ. Arborist to confirm no encroachment or damage.			
Stage 2 – Excavation and footing installation near TPZ. Arborist to supervise and record any root pruning or soil management.			
Stage 3 – Structural works within proximity of retained trees. Arborist to confirm TPZ fencing intact and watering program ongoing.			
Stage 4 – Post-construction completion check. Arborist to inspect tree health, soil condition, and recommend remedial works if required.			
Stage 5 (Optional) – 6-month and 12-month monitoring inspections post-construction.			

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