Arboricultural Impact Assessment for a proposed subdivision at No's 51, 134 & 146 Station Lane, Lochnivar NSW

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Revision	Details	Date	Amended By
A	AIA (Final Draft)	05/05/2022	John Whyte
A	AIA (Final)	06/05/2022	John Whyte

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Signed: 

Date: .....6th of May 2022

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REPORT TERMINOLOGY

DBH - An acronym for bole or trunk **Diameter** at **Breast Height** (1.4 m from ground level).

DGL- An acronym for bole or trunk **Diameter** at **above basal flare "ground"**

SRZ- An acronym for Structural Root Zone

TPZ- An acronym for Tree Protection Zone

Health - An indication of the vigour of a tree and is determined by the observed crown colour, density, presence of insect attack, the percentage of dead or dying branches and the amount of epicormic growth. The health of the canopy and that of the root system is interdependent and significant loss of tree vigour can result through both root and canopy (pruning, suppression) damage.

Suppressed, unhealthy trees have reduced ability to initiate internal defence systems (by the process of compartmentalisation) thus predisposing them to attack by insects and pathogenic decay organisms which increase the potential to drop dangerous branches.

Cambium - The part of the tree situated between the bark and the true wood of a tree. This area is where the tree transports water, nutrients, and waste products to and from the roots and leaves. It is this area that is targeted when "ring-barking" a tree to disrupt the nutrient transport system of the tree and cause its death.

Condition - An evaluation of the structural integrity of a tree, including defects that may affect the useful life of an otherwise healthy individual. Such influencing factors include cavities and decay, weak unions between branches or trunks and faults of form or habit.

Fungal Attack - Many fungi have evolved to break down wood and return its nutrients to the biocycle of the environment. Fungi usually gain access to the wood through the actions of borers, or from physical damage resulting in exposed wood. Trees suffering from fungal attack may be severely weakened on a structural basis but may not show any external signs of the weakness. This can result in a catastrophic structural failure of a branch or trunk when subjected to stress such as a windy day.

Kino - A dark reddish exudate, rich in polyphenols (tannins), developed in the cambial region of eucalypts often as a result of injury; incorrectly called gum (Boland *et.al.* 1992).

Deadwood - The mature crown of a eucalypt maintains itself by the continual production of new crown units, which die in turn. Thus, there will always be some dead branches in a healthy mature crown (Florence, 1996). Minor deadwood refers to dead branchlets; Major deadwood refers to main branches from the trunk.

1. Introduction

Enviro Ecology have been engaged by Mr Jeffrey Bretag of McCloy Project Management Pty Ltd C-/O McCloy Station Lane Pty Ltd to carry out an Arboricultural impact assessment (AIA). This AIA has been prepared in support of a subdivision (Figure 1-1) at No's 51, 134 & 146 Station Lane, Lochnivar NSW, within Maitland LGA, hereafter referred to as the study area (Figure 1-1).

This report provides an assessment of the current and potential health of trees located within the location of proposed development (Figure 1-3, Figure 1-4, Figure 1-5 & Figure 1-6).

All tree species that fall within and adjacent to the development area have been assessed in this report.

Priority for retention of trees within the development has been considered in accordance with the following:

- Impacts of proposed site works
- Safe Use Life Expectancy (SULE)
- The presence of fauna habitat e.g., foraging, hollows and their frequency
- Safety
- Connectivity of the tree to surrounding bushland

1.1 Site Description

The planning and cadastral details of the study area are provided in (Table 1-1). The study area is bordered by residential development to the north, east by Station Lane, west by Lochinvar Creek and to the south by rural residential (Figure 1-2).

Table 1-1 Site details

Location	No 51 (Lot 3 DP 564631), No 134 (Lot 4 DP 634523) & 146 (Lot 2 DP 634523) Station Lane, Lochinvar NSW
Topographic Map	Maitland 1:25000
LGA	Maitland
Elevation	32-43m AHD
Aspect	North-south
Vegetation	Remnant Open Forest & Cleared land with scattered trees

Figure 1-1 Proposed development

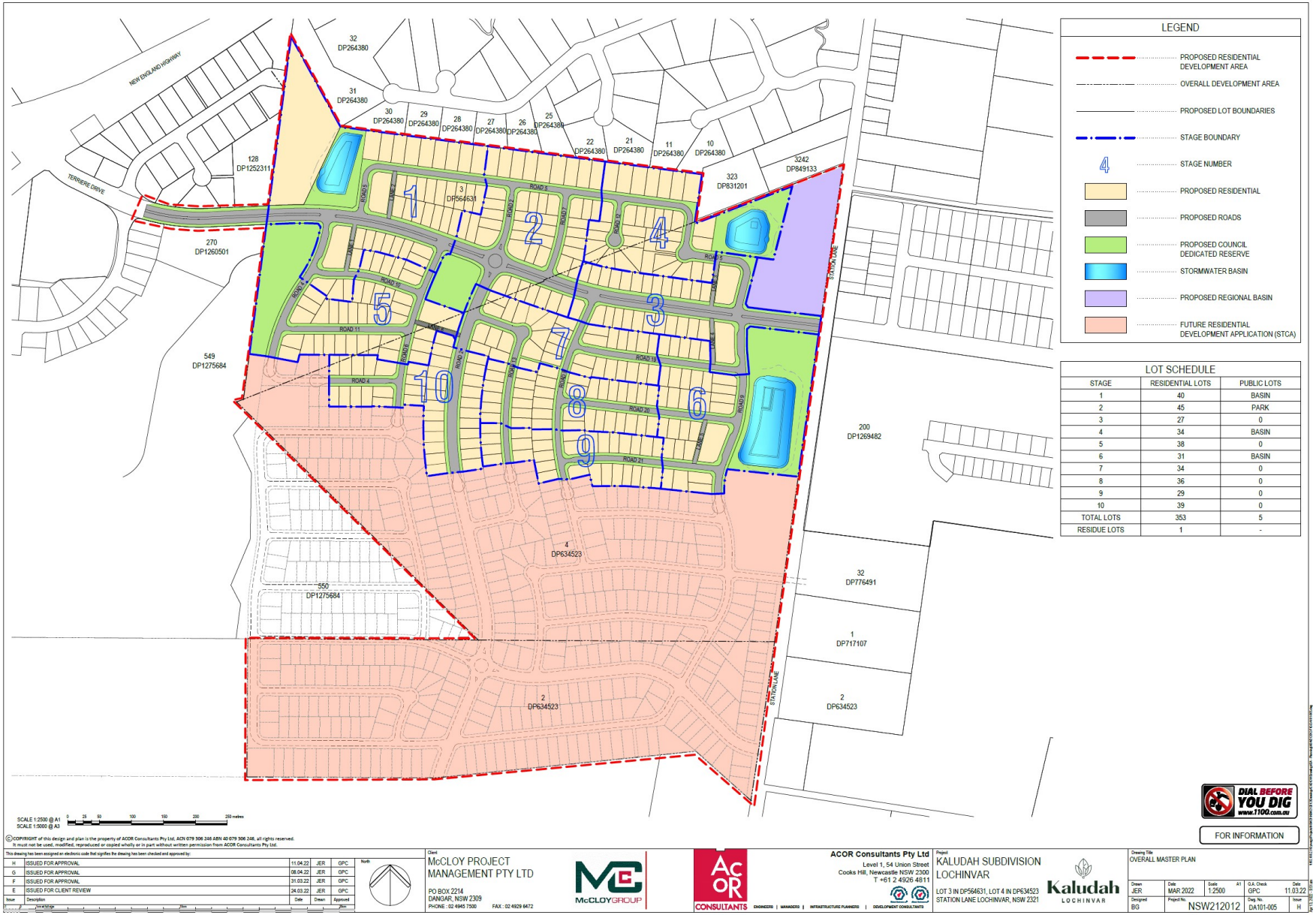

Figure 1-2 Study Area

0 50 100 150 200 250 300 600 Meters

Scale: 1:3,800

SITE : Terriere Drive. Lochinvar. NSW

Study Area	DATE : 05/05/2022	Map Version : 1_1	WiZarDTech Spatial Services
Study Area	Projected Coordinate System : GDA 2020 Zone 56		
	Subject Site . Lot boundaries imported from CAD file. For illustration purposes only. Aerial Imagery: Nearmap - 04/04/2022 Although all care has been taken - WiZarDTech accepts no responsibility from the use or inaccuracies of this map and spatial data. Copyright © WiZarDTech Spatial Services 2022.		

Figure 1-3 Proposed development & Tree survey locations

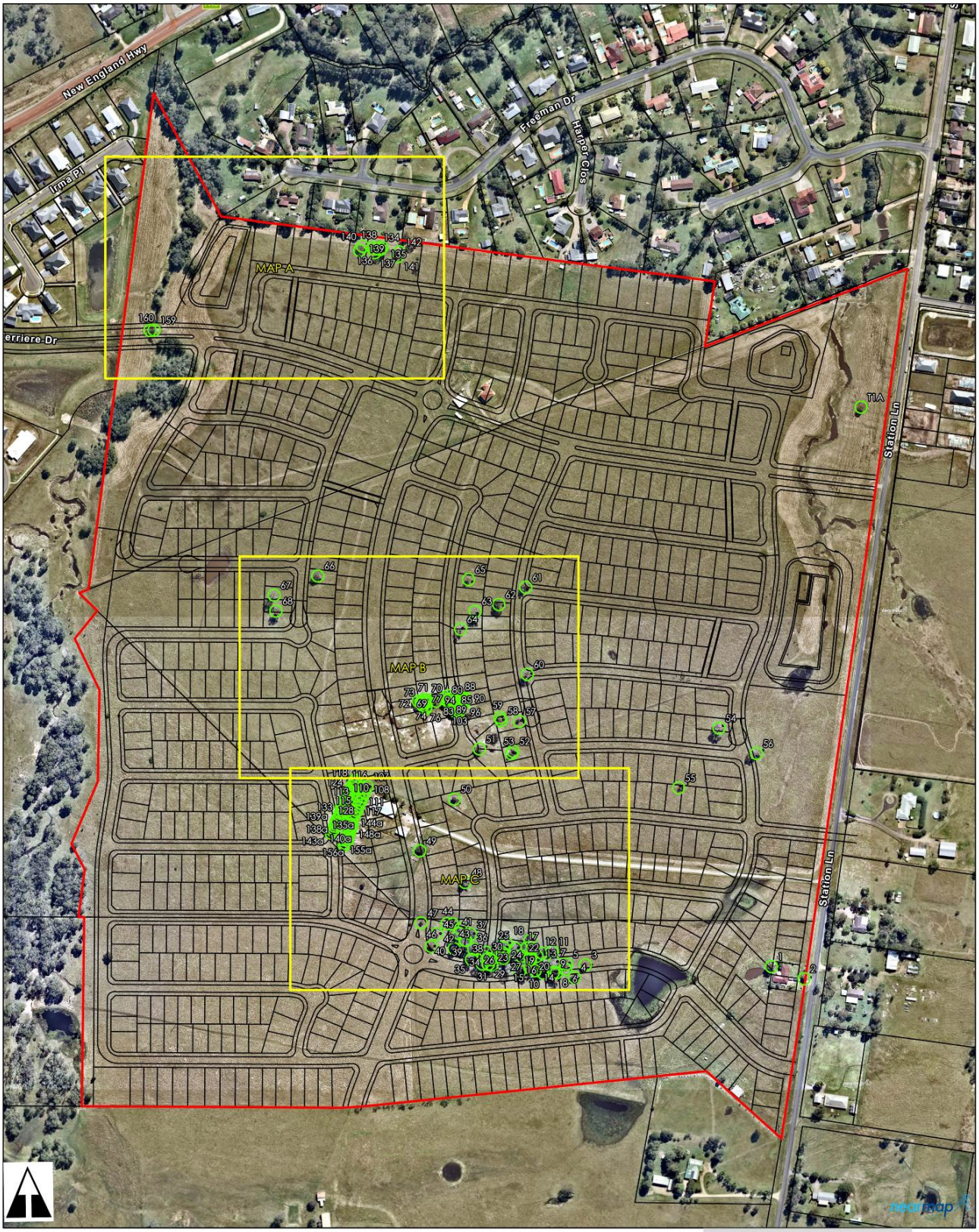

Figure 1-4 Proposed development & Tree survey locations

0 20 40 60 80 100 200 Meters

Scale: 1:1,000

SITE : Terriere Drive. Lochinvar. NSW

Tree Survey - MAP A

- Subject Site
- Lot Boundaries
- Tree Survey Location

DATE : 05/05/2022 | Map Version : 1_2

Projected Coordinate System : GDA 2020 Zone 56

Subject Site , Lot boundaries imported from CAD file. For illustration purposes only.
Aerial Imagery: Nearmap - 04/04/2022
Although all care has been taken - WiZarDTech accepts no responsibility from the use or inaccuracies of this map and spatial data.

WiZarDTech
Spatial Services

Figure 1-5 Proposed development & Tree survey locations

Figure 1-6 Proposed development & Tree survey locations

2. Methodology

This Tree assessment was based on the results of a desktop review and site inspections on the 27th of February 2022 by Mr Stephen McKay (Arborist) & Mr John Whyte (Ecologist/Arborist).

The assessment of the trees is based upon a visual inspection of the trees from ground level using Visual Tree Assessment (VTA) approach (Mattheck & Breloer 1994).

The inspection was limited to visual inspection of the trees without dissection, probing or coring. No aerial inspection of the trees was carried out and the assessment did not include woody tissue or root investigation.

Trees assessed were surveyed and placed onto Figure 1-3, Figure 1-4, Figure 1-5 and Figure 1-6.

The tree heights and canopy spreads were estimated and expressed in metres and the tree diameters at breast height (DBH) were measures with a standard metal tape at approximately 1.4 metres above ground level and expressed in millimetres.

The tree assessment data is provided within Appendix A, the location and number of each tree is shown on the Figures below and SULE Rating assessment provided in Appendix B.

If trees are to be retained on-site, the management requirements of maintaining safe trees (pruning, thinning etc.) was also considered in determining the health rating, therefore health ratings given to trees within this report assumes that appropriate maintenance will be provided by a qualified arborist during the life of the assessed trees. The lack of tree maintenance can significantly accelerate tree decline and increase hazard potential.

2.1 Nomenclature

Names of trees used in this document follow Harden (Harden 2002) with updates from PlantNet (Royal Botanic Gardens 2022). Scientific names are used in this report for species of plant. Scientific and common names of plants are listed in Tables 4-1, 4-2 and Appendix A.

2.2 Desktop and literature review

This assessment included a review of:

- Topographic map
- Aerial photographs
- Safe Use Life Expectancy (SULE) (Barrell 1996)

3. Survey Results

A total of one hundred & seventy-two (172) trees with a DBH greater than 150 centimetres were assessed within and adjacent to the proposal area see (Appendix A).

3.1 Health and Condition of trees within the proposal area

The trees on site are mostly endemic (naturally occurring local native) species: *Eucalyptus crebra* (Thin-leaved Ironbark), *Eucalyptus moluccana* (Grey Box), *Eucalyptus tereticornis* (Forest Red Gum), *Angophora floribunda (Rough-barked Apple) & Casuarina glauca* (Swamp Oak). The following species have been planted within the study area: *Corymbia maculata* (Spotted Gum), *Melaleuca linarifolia* (Snow In Summer), *Eucalyptus robusta* (Swamp Mahogany), *Grevillea robusta* (Silky Oak), *Cupressus sp* (Cupressus) *& Morus alba* (Mulberry). A full list of tree species can be found at Appendix A.

In general, the trees on the site consist of scattered mature or semi-mature specimens within an open forest/cleared land with scattered trees community. Tree health for most specimens *Eucalyptus* specimens observed on-site were generally fair to good.

The assessment of the dominant significant *Eucalypt & Angophora* trees was generally in fair-good health or condition. In general, poor tree health and condition within the subject site is likely to be associated with competition / suppression with other trees, senescence, prior disturbance / damage (fire), or hydrological changes.

Suppressed *Eucalypt & Angophora* trees in nature are generally naturally thinned; suppressed Eucalypt trees in a residential situation can be dangerous due to their natural decline and associated branch loss (Florence, 1996).

4. Trees on site

One hundred & seventy-two (172) trees have been assessed in preparing this report. A summary of the trees, their dimensions, condition, Safe Use Life Expectancy (SULE) and Landscape Significance is attached in Appendix B. The SULE categories identified in Appendix B follow those of Barrell (1996).

The tree numbers in Appendix B correspond with the tree numbers marked on the site and Figure 1-2 & Figure 1-3 above.

The trees that have been assessed on the site are summarised in Table 4-1.

Table 4-1 Summary of species assessed, number and height range

Genus, Species (Common Name)	No Present	Height (m)
Angophora floribunda (Rough-barked Apple)	6	5-11
Casuarina glauca (Swamp Oak)	26	5.5-13
Corymbia maculata (Spotted Gum)	11	8-12
Cupressus sp (Cupressus)	1	4
Dead	2	7-8
Eucalyptus crebra (Thin-leaved Ironbark)	61	5-20
Eucalyptus moluccana (Grey Box)	43	4.5-22
Eucalyptus robusta (Swamp Mahogany)	4	5-7
Eucalyptus tereticornis (Forest Red Gum)	6	7-18
Grevillea robusta (Silky Oak)	1	15
Melaleuca linarifolia (Snow In Summer)	10	3-5
Morus alba (Mulberry)	1	7

4.1 Tree Protection Zones

A number of methods to determine the likely extent of root zones and appropriate setbacks for tree protection zones for trees on development sites have been developed in the past. The key criteria used in determining setbacks is the tree's trunk diameter at breast height (DBH) in conjunction with other factors including the sensitivity of the species in question to environmental disturbance/change, the age of the tree and the tree's health and vigour at the time.

The Australian Standard AS 4970-2009 Protection of Trees on Construction Sites also identified a 'Tree Protection Zone' (TPZ) of 12 times the tree's DBH. The Australian Standard also provides a formula for calculating the 'Structural Root Zone' of trees on development sites.

The tree protection zones identified above have been calculated using Australian Standard AS 4970-2009 Protection of Trees on Construction Sites and are the optimum setback from trees where disturbance (e.g., soil level changes, compaction, excavation etc) should be minimised to reduce potential impacts on the long-term health of trees. Preferably, no more than 10% of the root protection zone should be disturbed with compensation made by extension of other areas of the TPZ to compensate for the area(s) disturbed.

Where greater than 10% of the tree protection zone is potentially disturbed the tree's, viability needs to be investigated and demonstrated by the project

arborist. The structural root zone is the area where disturbance of any sort should be avoided as it is the areas required for tree stability.

4.2 Trees identified as a priority for retention/protection

The identification of trees as priorities for retention based upon a number of factors including species, dimensions, health, maturity, Safe Use and Life Expectancy (SULE) and Landscape Significance.

Following assessment of the one hundred & seventy-two (172) trees within and adjacent to the site one (1) tree has been identified for retention protection with protection measures.

Table 4-2 Trees identified as a priority for consideration for retention and protection

Tree No	Genus, Species (Common Name)	Age Class	Health	Dead Wood	SULE	Comments	TPZ (m)	SRZ (m)
1a	*Eucalyptus moluccana (Grey Box)*	sm	g	2%	1a	codominant stem at ground level	4.2	2.2

4.3 Trees identified for removal

Following assessment of the one hundred & seventy-two (172) within and adjacent to the subject works it is considered the following one hundred & seventy-one (171) trees should be considered for removal from the site due to poor/declining health and/or structural condition and/or unsuitability to the site.

Table 4-3 Trees identified for removal

Tree No	Genus, Species (Common Name)	Age Class	Health	Dead Wood	SULE	Comments	Reason for removal	TPZ (m)	SRZ (m)
1	*Eucalyptus tereticornis (Forest Red Gum)*	m	f	5%	2a	located on road reserve, only fair form.	Located within proposed lot	5.28	2.4
2	*Grevillea robusta (Silky Oak)*	sm	g	1%	2a		Located within proposed lot	5.76	2.5
3	*Eucalyptus moluccana (Grey Box)*	sm	g	2%	2a	minor deadwood	Within future road	3.12	2
4	*Eucalyptus moluccana (Grey Box)*	sm	f	5%	3a	white fungi noted at base	Within future road	3	2
5	*Eucalyptus moluccana (Grey Box)*	m	p	10%	3a	small branch collar habitat hollows and large scaffold hollows, thinning canopy.	Within future road	10.8	3.2
6	*Eucalyptus moluccana (Grey Box)*	om	p	10%	4a	several wood decay brackets mid trunk, potential habitat hollow in failed 300mm diameter stem.	Within future road	9.24	3.2
7	*Eucalyptus moluccana (Grey Box)*	m	p	10%	3a	sparse canopy, deadwood to 120mm. large scaffold failures noted. small branch collar habitat hollows	Within future road	8.04	3
8	*Eucalyptus tereticornis (Forest Red Gum)*	m	f	5%	3b	trunk lean 45 degrees to SE, wound and cavity at base likely to increase failure potential.	Within road batter	6	2.7
9	*Eucalyptus tereticornis (Forest Red Gum)*	m	f	5%	3b	large open cavity mid trunk	Within road batter	5.04	2.6

Tree No	Genus, Species (Common Name)	Age Class	Health	Dead Wood	SULE	Comments	Reason for removal	TPZ (m)	SRZ (m)
10	*Eucalyptus moluccana (Grey Box)*	om	p	50%	4a	secondary stem at ground level has failed and died. habitat potential in failed stem.	Within road batter	10.92	3.7
11	*Eucalyptus moluccana (Grey Box)*	dead	dead	100%	4a	large habitat hollows	Located within proposed lot	12	3.4
12	*Eucalyptus moluccana (Grey Box)*	m	g	5%	2a	deadwood to 100m diameter	Located within proposed lot	9.84	3.3
13	*Eucalyptus moluccana (Grey Box)*	m	f	5%	3a	small habitat hollows , se several large branch failures noted	Located within proposed lot	8.88	3.1
14	*Eucalyptus tereticornis (Forest Red Gum)*	m	f	5%	3a	limited canopy development	Within future road	5.28	2.6
15	*Eucalyptus moluccana (Grey Box)*	om	f	10%	2b	secondary stem has failed and died. habitat potential in failed stem. Multiple large wounds in major scaffolds	Within future road	9.72	3.3
16	*Eucalyptus tereticornis (Forest Red Gum)*	om	p	10%	3b	large basal cavity in root crown. increased likelihood of failure	Located within proposed lot	7.32	47
17	*Eucalyptus moluccana (Grey Box)*	m	f	5%	3a	thinning canopy. several wounds and potential small habitat hollows.	Located within proposed lot	7.68	3
18	*Eucalyptus moluccana (Grey Box)*	m	f	10%	3a	dead leader with ha itat hollow.	Located within proposed lot	7.68	2.9
19	*Eucalyptus moluccana (Grey Box)*	m	g	5%	2b	habitat hollow at junction of codominant leaders may create a structurally weak junction	Located within proposed lot	6.12	2.7
20	*Eucalyptus moluccana (Grey Box)*	m	f	5%	3a	poor form , multiple branch failures noted	Located within proposed lot	7.68	3.1
21	*Eucalyptus tereticornis (Forest Red Gum)*	om	p	10%	3a	sparse canopy, deadwood to 120mm	Within future road	7.2	2.9
22	*Eucalyptus moluccana (Grey Box)*	m	g	5%	2a	codominant stems at 3m. habitat hollow in failed dead scaffold mid canopy.	Located within proposed lot	14.04	3.6
23	*Eucalyptus moluccana (Grey Box)*	m	f	5%	2b	habitat hollow at junction of codominant stems may create a structurally weak junction	Located within proposed lot	11.16	3.4
24	*Eucalyptus moluccana (Grey Box)*	m	g	5%	2a	3 deadwood branches 100mm to 150mm diameter	Located within proposed lot	8.64	2.9
25	*Eucalyptus moluccana (Grey Box)*	m	f	5%	2a	distorted trunk form	Located within proposed lot	5.16	2.7
26	*Eucalyptus moluccana (Grey Box)*	m	p	5%	3a	cavity mid trunk. potential habitat hollow, deadwood to 150mm diameter.	Located within proposed lot	8.64	3.3
27	*Eucalyptus moluccana (Grey Box)*	m	f	5	3a	thinning canopy. large cavity in lower trunk. potential habitat hollow	Located within proposed lot	6.36	2.8
28	*Eucalyptus moluccana (Grey Box)*	m	f	5%	3a	deadwood branches to 100mm diameter, several failed branches noted.	Within future road	9.96	3.2
29	*Eucalyptus moluccana (Grey Box)*	om	p	5%	3b	secondary stem has failed and died. habitat potential in failed stem.	Within future road	5.64	2.9

Tree No	Genus, Species (Common Name)	Age Class	Health	Dead Wood	SULE	Comments	Reason for removal	TPZ (m)	SRZ (m)
30	*Eucalyptus moluccana (Grey Box)*	m	p	10%	3b	45 degree trunk lean to NE, wood decay bracket mid trunk and at trunk base.	Within future road	6.72	2.9
31	*Eucalyptus moluccana (Grey Box)*	om	p	10%	4a	multiple small habitat hollows, deadwood up to 150mm diameter.	Within future road	8.64	3.1
32	*Eucalyptus moluccana (Grey Box)*	m	p	5%	3a	secondary stem has failed and died. habitat potential in failed stem.	Within future road	4.32	2.3
33	*Eucalyptus moluccana (Grey Box)*	m	f	5%	3a	poor form and structure	Within future road	5.64	2.6
34	*Eucalyptus moluccana (Grey Box)*	m	f	5%	3b	habitat hollows over 100mm diam, several large splits and wounds in scaffolds and secondary stem	Within future road	8.88	3.2
35	*Eucalyptus moluccana (Grey Box)*	om	p	15%	4a	upper leaders and vertical scaffolds have died. deadwood up to 150mm diameter	Within road batter	8.16	2.9
36	*Eucalyptus moluccana (Grey Box)*	m	f	5%	3a	thinning canopy, deadwood up to 120mm diameter. potential habitat hollows	Located within proposed lot	8.76	3.1
37	*Eucalyptus moluccana (Grey Box)*	m	f	5%	3a	thinning canopy, one of three upper leaders has split. Remove this section if tree to be retained	Located within proposed lot	8.88	3.2
38	*Eucalyptus moluccana (Grey Box)*	m	f	5%	3a	thinning canopy arching to NE	Located within proposed lot	7.8	3
39	*Eucalyptus moluccana (Grey Box)*	m	p	10%	3a	potential habitat hollow lower trunk	Located within proposed lot	5.4	2.6
40	*Eucalyptus moluccana (Grey Box)*	om	p	15%	4a	50% trunk diameter is dead and partly hollow	Located within proposed lot	8.4	3.1
41	*Eucalyptus moluccana (Grey Box)*	m	g	5%	2a	habitat hollow lower trunk	Located within proposed lot	9.96	3.4
42	*Eucalyptus moluccana (Grey Box)*	m	g	5%	2a	partially dead leader	Located within proposed lot	7.8	3.2
43	*Eucalyptus moluccana (Grey Box)*	m	p	15%	4a	sparse canopy, bees nest noted	Located within proposed lot	5.4	2.5
44	*dead*	dead	dead	100	4b	trunk spout hollow, large hollows. basal cavity	Located within proposed lot	7.08	3.1
45	*dead*	dead		100%	4a	habitat hollows over 100mm diam	Located within proposed lot	6.24	2.8
46	*Eucalyptus moluccana (Grey Box)*	m	g	<2%	2a	tight stem attachments	Located within proposed lot	3.6	2.3
47	*Eucalyptus moluccana (Grey Box)*	sm	g	<2%	2a	insect defoliation of canopy	Within future road	2.04	1.8
48	*Eucalyptus crebra (Thin-leaved Ironbark)*	om	p	30%	4a	extensive canopy dieback.	Located within proposed lot	6.6	2.9
49	*Morus alba (Mulberry)*	m	g	5%	2a		Within future road	4.2	2.3
50	*Eucalyptus moluccana (Grey Box)*	sm	g	<2%	1a	minor insect damage to canopy	Located within proposed lot	3.6	2.3

Tree No	Genus, Species (Common Name)	Age Class	Health	Dead Wood	SULE	Comments	Reason for removal	TPZ (m)	SRZ (m)
51	*Angophora floribunda (Rough-barked Apple)*	m	f	10%	3a	new canopy growth due to recent rain	Located within proposed lot	6.72	2.9
52	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	<2%	1a		Located within proposed lot	3	2.2
53	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	<2%	1a		Located within proposed lot	3.12	2.1
54	*Eucalyptus crebra (Thin-leaved Ironbark)*	m	f	10%	3a	dead to 200mm diameter	Located within proposed lot	8.4	3.2
55	*Eucalyptus moluccana (Grey Box)*	sm	f	5%	3a	partial defoliation by insect,2 stems at ground level. regrowth stems from cut stump	Located within proposed lot	2.4	1.9
56	*Eucalyptus crebra (Thin-leaved Ironbark)*	om	f	10%	3b	poor form. possibly struck by lightning, spiral wound extends to ground, fissure hollows noted	Located within proposed lot	9.84	3.2
57	*Angophora floribunda (Rough-barked Apple)*	sm	p	25%	4a	sparse canopy	Located within proposed lot	2.88	2
58	*Angophora floribunda (Rough-barked Apple)*	sm	f	5%	3a	low vigour	Located within proposed lot	2.88	2
59	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	2%	2a	minor twig dieback	Located within proposed lot	3.36	2.1
60	*Eucalyptus crebra (Thin-leaved Ironbark)*	om	p	15%	3a	minor epicormics from trunk	Within future road	7.8	3
61	*Eucalyptus crebra (Thin-leaved Ironbark)*	m	f	10%	3b	part failure of upper stem in the past, poor structural form	Within future road	5.64	1
62	*Eucalyptus crebra (Thin-leaved Ironbark)*	m	g	5%	2b	multiple scaffold failures in canopy	Located within proposed lot	9.6	3.2
63	*Eucalyptus crebra (Thin-leaved Ironbark)*	om	p	20%	4a	sparse canopy, deadwood to 120mm	Located within proposed lot	9.12	3.3
64	*Eucalyptus crebra (Thin-leaved Ironbark)*	om	p	60%	4b	codominant stem at 5m is dead, dead scaffolds are dismantling	Located within proposed lot	7.2	3
65	*Eucalyptus crebra (Thin-leaved Ironbark)*	om	f	5%	3b	poor structure, trunk has failed at 4.5m, potential habitat fissure at failure point	Located within proposed lot	7.08	2.9
66	*Eucalyptus crebra (Thin-leaved Ironbark)*	m	f	10%	3b	poor form, regrowth from upper trunk failure arching to nth, 100mm diam branch collar hollow	Located within proposed lot	5.52	2.5
67	*Eucalyptus crebra (Thin-leaved Ironbark)*	om	p	20%	4a	substantial dead cambium. Termite activity, microbat potential under lifted bark	Located within proposed lot	8.4	3
68	*Eucalyptus crebra (Thin-leaved Ironbark)*	om	p	10%	4a	deadwood to 120mm diameter, no obvious habitat hollows	Located within proposed lot	7.2	2.9
69	*Eucalyptus crebra (Thin-leaved Ironbark)*	om	p	20%	3b	root plate displays uplift on Sth side, deadwood to 300mm diam. potential habitat hollows 50 mm to 100mm diameter	Located within proposed lot	9.6	3.2
70	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	<2%	2a	part of copse trees	Located within proposed lot	2.88	1.9

Tree No	Genus, Species (Common Name)	Age Class	Health	Dead Wood	SULE	Comments	Reason for removal	TPZ (m)	SRZ (m)
71	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	<2%	2a	part of copse trees	Located within proposed lot	2.64	2.1
72	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	2%	2a	part of copse trees	Located within proposed lot	2.76	2
73	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	<2%	2a	part of copse trees	Located within proposed lot	2.64	2
74	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	<2%	2a	part of copse trees	Located within proposed lot	3.36	2.1
75	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	<2%	2a	part of copse trees	Located within proposed lot	2.52	1.9
76	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	<2%	2a	part of copse trees	Located within proposed lot	2.4	2
77	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	2%	2a	part of copse trees	Located within proposed lot	3.48	2.3
78	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	2%	2a	part of copse trees	Located within proposed lot	2.16	1.9
79	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	5%	2a	part of copse trees	Located within proposed lot	2.88	2.1
80	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	2%	2a	part of copse trees	Located within proposed lot	2.76	2.1
81	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	2%	2a	part of a copse of trees	Located within proposed lot	3.12	2.1
82	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	2%	2a	part of a copse of trees	Located within proposed lot	2.04	1.8
83	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	2%	2a	part of a copse of trees	Located within proposed lot	2.04	1.8
84	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	<2%	2a	part of a copse of trees	Located within proposed lot	3	2
85	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	f	10%	3a	part of a copse of trees	Within future road	2.04	1.8
86	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	f	5%	3a	minor mistletoe	Within future road	2.04	1.8
87	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	<5%	2a	part of a copse of trees	Within future road	2.88	1.9
88	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	2%	2a	part of a copse of trees	Located within proposed lot	2.28	1.9
89	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	2%	2a	part of a copse of trees	Located within proposed lot	2.76	1.8
90	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	<2%	2a	part of a copse of trees	Located within proposed lot	2.16	1.8
91	*Angophora floribunda (Rough-barked Apple)*	m	g	5%	2a	part of a copse of trees	Located within proposed lot	5.04	2.5
92	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	f	5%	3a	low vigour, sparse canopy	Located within proposed lot	1.8	1.6
93	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	<5%	2a	part of a copse of trees	Located within proposed lot	2.64	1.8
94	*Eucalyptus crebra (Thin-leaved*	sm	g	5%	2a	part of a copse of trees	Located within proposed lot	2.76	1.9

Tree No	Genus, Species (Common Name)	Age Class	Health	Dead Wood	SULE	Comments	Reason for removal	TPZ (m)	SRZ (m)
	Ironbark)								
95	*Eucalyptus crebra (Thin-leaved Ironbark)*	m	g	2%	2a	part of a copse of trees	Located within proposed lot	3.12	2.1
96	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	f	2%	2a	part of a copse of trees	Located within proposed lot	1.92	1.6
97	*Eucalyptus crebra (Thin-leaved Ironbark)*	m	g	2%	2a	part of a copse of trees	Located within proposed lot	3.12	2
98	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	2%	3a	trunk has failed at 3metres	Located within proposed lot	2.4	1.8
99	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	2%	2a	part of a copse of trees	Within future road	1.8	1.6
100	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	2%	2a	part of a copse of trees	Within future road	2.16	1.9
101	*Angophora floribunda (Rough-barked Apple)*	m	g	5%	2a	part of a copse of trees	Within future road	2.64	1.8
102	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	2%	2a	part of a copse of trees	Within future road	2.4	1.8
103	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	5%	2a	part of a copse of trees	Within future road	2.64	1.8
104	*Eucalyptus crebra (Thin-leaved Ironbark)*	m	g	2%	2a	part of a copse of trees	Within future road	3.48	2.2
105	*Eucalyptus crebra (Thin-leaved Ironbark)*	m	g	2%	2a	part of a copse of trees	Within future road	3.12	2.1
106	*Angophora floribunda (Rough-barked Apple)*	m	g	5%	2a	part of a copse of trees	Within future road	5.64	2.8
107	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	2%	2a	part of a copse of trees	Located within proposed lot	3.24	2.1
107	*Corymbia maculata (Spotted Gum)*	m	g	<2%	1a	planted row	Located within proposed lot	5.4	2.5
108	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	2%	2a	part of a copse of trees	Located within proposed lot	2.52	1.9
108	*Corymbia maculata (Spotted Gum)*	m	g	2%	1a	planted row	Located within proposed lot	4.68	2.2
109	*Corymbia maculata (Spotted Gum)*	m	g	<2%	2a	partial included stems at 4 and 5m	Located within proposed lot	4.8	2.5
110	*Corymbia maculata (Spotted Gum)*	m	g	<2%	1a	planted row	Located within proposed lot	5.4	2.6
111	*Corymbia maculata (Spotted Gum)*	m	g	2%	1a	planted row	Located within proposed lot	4.92	2.6
112	*Corymbia maculata (Spotted Gum)*	m	g	<2%	1a	planted row	Located within proposed lot	5.52	2.7
113	*Eucalyptus robusta (Swamp Mahogany)*	m	f	5%	3a	planted row	Located within proposed lot	5.28	2.4
114	*Eucalyptus robusta (Swamp Mahogany)*	dead	dead	100%	4a	planted row	Located within proposed lot	2.16	2.1
115	*Eucalyptus robusta (Swamp Mahogany)*	dead	dead	100%	4a	planted row	Located within proposed lot	3.96	2.3
116	*Eucalyptus robusta (Swamp Mahogany)*	440	p	90%	4a	90% dead, planted row	Located within proposed lot	0	2.1

Tree No	Genus, Species (Common Name)	Age Class	Health	Dead Wood	SULE	Comments	Reason for removal	TPZ (m)	SRZ (m)
117	*Corymbia maculata (Spotted Gum)*	m	g	2%	1a	planted row	Located within proposed lot	4.68	2.3
118	*Casuarina glauca (Swamp Oak)*	m	g	2%	1a	planted row	Located within proposed lot	3.96	2.3
119	*Casuarina glauca (Swamp Oak)*	m	g	2%	1a	planted row	Located within proposed lot	3.48	2.3
120	*Casuarina glauca (Swamp Oak)*	m	g	2%	1a	planted row	Located within proposed lot	2.64	1.8
121	*Casuarina glauca (Swamp Oak)*	m	g	2%	1a	planted row	Located within proposed lot	4.44	1.1
122	*Casuarina glauca (Swamp Oak)*	sm	g	2%	1a	planted row	Located within proposed lot	0.96	1.9
123	*Casuarina glauca (Swamp Oak)*	m	g	2%	1a	planted row	Located within proposed lot	3.84	2.3
124	*Casuarina glauca (Swamp Oak)*	m	g	2%	1a	planted row	Located within proposed lot	2.16	1.9
125	*Casuarina glauca (Swamp Oak)*	m	g	2%	1a	planted row	Located within proposed lot	2.52	2
126	*Casuarina glauca (Swamp Oak)*	m	g	2%	1a	planted row	Located within proposed lot	4.92	2.5
127	*Casuarina glauca (Swamp Oak)*	m	g	2%	1a	planted row	Located within proposed lot	3.84	2.2
128	*Casuarina glauca (Swamp Oak)*	m	g	2%	1a	planted row	Located within proposed lot	2.52	2
129	*Casuarina glauca (Swamp Oak)*	m	g	2%	1a	planted row	Located within proposed lot	2.76	2.3
130	*Casuarina glauca (Swamp Oak)*	m	g	2%	1a	planted row	Located within proposed lot	3.48	2.3
131	*Casuarina glauca (Swamp Oak)*	m	g	2%	1a	planted row	Located within proposed lot	3.48	2.2
132	*Casuarina glauca (Swamp Oak)*	m	g	2%	1a	planted row	Located within proposed lot	3.12	2.2
133	*Casuarina glauca (Swamp Oak)*	m	g	2%	1a	planted row	Located within proposed lot	3.24	2
134	*Eucalyptus crebra (Thin-leaved Ironbark)*	m	g	5%	2a	reduced canopy density, large wound in upper scaffold	Within future lot	7.8	2.9
135	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	5%	2a		Within future lot	2.04	1.7
136	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	5%	2a		Within future lot	1.8	1.7
137	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	5%	2a		Within future lot	2.4	1.9
138	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	5%	2a		Within future lot	1.8	1.6
139	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	5%	2a		Within future lot	2.28	1.8
140	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	5%	2a	codominant stems at ground level	Within future lot	2.16	2.1
141	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	<2%	1a		Within future lot	1.56	1.5
142	*Eucalyptus crebra (Thin-leaved Ironbark)*	sm	g	<2%	1a		Within future lot	2.64	2.3

Tree No	Genus, Species (Common Name)	Age Class	Health	Dead Wood	SULE	Comments	Reason for removal	TPZ (m)	SRZ (m)
159	*Eucalyptus moluccana (Grey Box)*	m	f	5%	3a	through road tree, part canopy defoliation from insects	Within future road	4.92	2.6
160	*Eucalyptus moluccana (Grey Box)*	m	f	5%	3a	through road tree, part canopy defoliation from insects	Within future road	4.32	2.7
134a	*Casuarina glauca (Swamp Oak)*	m	g	<2%	1a	planted row	Located within proposed lot	1.92	1.8
135a	*Casuarina glauca (Swamp Oak)*	m	g	<2%	1a	planted row	Located within proposed lot	2.16	1.8
136a	*Casuarina glauca (Swamp Oak)*	m	g	<2%	1a	planted row	Located within proposed lot	3.12	2.1
137a	*Casuarina glauca (Swamp Oak)*	m	g	<2%	1a	planted row	Located within proposed lot	3	2.2
138a	*Casuarina glauca (Swamp Oak)*	m	g	<2%	1a	planted row	Located within proposed lot	3	2.2
139a	*Casuarina glauca (Swamp Oak)*	m	g	<2%	1a	planted row	Located within proposed lot	3	2.2
140a	*Casuarina glauca (Swamp Oak)*	m	g	<2%	1a	planted row	Located within proposed lot	4.08	2.5
141a	*Casuarina glauca (Swamp Oak)*	m	g	<2%	1a	planted row	Within future road	4.2	2.3
142a	*Casuarina glauca (Swamp Oak)*	m	g	<2%	1a	planted row	Within future road	2.28	1.8
143a	*Casuarina glauca (Swamp Oak)*	m	g	<2%	1a	planted row	Within future road	3	1.9
144a	*Corymbia maculata (Spotted Gum)*	m	g	<2%	1a	planted row	Located within proposed lot	3.96	2.3
145a	*Corymbia maculata (Spotted Gum)*	m	g		2a	planted row	Located within proposed lot	5.76	2.8
146a	*Corymbia maculata (Spotted Gum)*	m	g		1a	planted row	Located within proposed lot	5.16	2.6
147a	*Corymbia maculata (Spotted Gum)*	m	g		1a	planted row	Located within proposed lot	4.32	2.4
148a	*Cupressus sp (Cupressus)*	sm	f	2	3a	leader dying, low landscape significance	Located within proposed lot	2	1.9
149a	*Melaleuca linarifolia (Snow In Summer)*	m	g		2a	planted row	Located within proposed lot	2.4	1.8
150a	*Melaleuca linarifolia (Snow In Summer)*	m	g		2a	planted row	Located within proposed lot	3	1.8
151a	*Melaleuca linarifolia (Snow In Summer)*	m	g		2a	planted row	Located within proposed lot	2.16	1.8
152a	*Melaleuca linarifolia (Snow In Summer)*	m	g		2a	planted row	Located within proposed lot	2.64	1.8
153a	*Melaleuca linarifolia (Snow In Summer)*	m	g		2a	planted row	Located within proposed lot	3.84	2.1
154a	*Melaleuca linarifolia (Snow In Summer)*	m	g		2a	planted row	Located within proposed lot	3.72	35
155a	*Melaleuca linarifolia (Snow In Summer)*	m	g		2a	planted row	Located within proposed lot	2.16	1.8
156a	*Melaleuca linarifolia (Snow In Summer)*	m	g	<2%	2a	Bee swarm	Located within proposed lot	1.56	1.8
157a	*Melaleuca linarifolia (Snow In Summer)*	m	g		2a	planted row	Located within proposed lot	5.64	2.5
158a	*Melaleuca linarifolia (Snow In Summer)*	m	g		2a	planted row	Located within proposed lot	3.12	1.9

5. Tree Protection Measures

The following protection measures are recommended to assist in minimising potential impacts that may arise during the construction and clearance of native vegetation.

5.1 Measures to be implemented prior to the commencement of any works on the site

1. All trees identified for retention with protection (Table 4-2) are to be clearly identified by signage as protected trees and the appropriate tree protection fencing installed.
2. The Tree Protection Zone of trees identified for protection (Table 4-2) are to be protected by fencing during the entire construction period except for specific areas directly required to achieve construction works.
3. The tree protection fence shall be constructed of galvanised pipe at 2.4 metre spacing and connected securely attached chain mesh fencing to a minimum height of 1.8 metres and shall be installed prior to work commencing.
4. All trees not nominated for retention are to be removed prior to any construction activity or bulk earthworks. Approved tree removal operations in the vicinity of retained trees are to be undertaken in a manner that avoids canopy damage and soil compaction. Such works are to be supervised by a qualified Arborist.

5.2 Measures to be implemented and maintained during the life of construction works on the site.

5. Construction works, development (Including utilities) or soil level changes within structural root zones of trees identified for protection shall be avoided or, if unavoidable shall be restricted to pier and beam style or suspended slab construction.
6. Any excavation within the tree protection zones of trees identified for protection (Table 4-2) shall be carried out by hand to minimise disturbance to tree roots. Roots greater than 30mm are not to be damaged or severed without prior assessment by an arborist to determine likely level of impact and the restorative actions required to minimise the impacts of root damage.
7. Tree roots between 10mm and 30mm diameter, severed during excavation, shall be cut cleanly by hand and tree subsequently treated with a root growth hormone and wetting agent, by an experienced Arborist/Horticulturalist with a minimum qualification of the Horticulture Certificate or Tree Surgery Certificate.
8. To prevent soil compaction or contamination no storage or mixing of construction materials shall be allowed within the tree protection zones of trees identified for retention/protection.

9. Machinery is to avoid *tree protection zones* during all operations.
10. TPZ fencing should be inspected on a regular basis and maintained in good condition.
11. Canopy pruning of trees identified for protection which is necessary to accommodate approved building works shall be undertaken by an experienced Horticulturalist/ Arborist, with a minimum qualification of the Horticulture Certificate or Tree Surgery Certificate and in accordance with Australian Standard 4373-2007 'Pruning of Amenity Trees'.
12. Any trenching or construction works undertaken within *tree protection zones* should be witnessed, supervised, and recorded (photographed + documented) by a qualified arborist or ecologist.

5.3 Measures to be implemented following completion of all works on the site

13. The tree protection root zone of trees identified for protection are to be mulched with 100mm of clean woodchip and monitored during the construction period and for 6 months following completion of works to ensure adequate soil moisture is available to assist in the tree's recovery.
14. / Arborist, with a minimum qualification of the Horticulture Certificate or Tree Surgery Certificate and in accordance with Australian Standard 4373-2007 'Pruning of Amenity Trees'.
15. Any trenching or construction works undertaken within *tree protection zones* should be witnessed, supervised, and recorded (photographed + documented) by a qualified arborist or ecologist.

5.4 Measures to be implemented following completion of all works on the site

16. The tree protection root zone of trees identified for protection are to be mulched with 100mm of clean woodchip and monitored during the construction period and for 6 months following completion of works to ensure adequate soil moisture is available to assist in the tree's recovery.

6. Use of trees by wildlife

During the site inspection trees on the site were checked for signs of use by wildlife. Some of trees exhibited signs of usage by wildlife such as scratch marks on their trunks or scats under their canopies that would indicate usage by sensorial arboreal mammals such as the Common Brushtail Possum (*Trichosurus vulpecular*) & Common Ringtail Possum (*Pseudocheirus peregrines*).

Nearly all large significant trees assessed within the proposal area would be utilised by native fauna at various times for food (Canopy Blossoms), and roosting purposes and the retention of numerous trees on the site will retain this opportunity.

7. Conclusions and Recommendations

Of the one hundred & seventy-two (172) trees that were assessed within and adjacent to the proposed development one (1) trees has been identified for retention (Appendix A) with protection measures within the site.

In addition to the above, one hundred & seventy-one (171) trees have been identified removal, due to declining health, structural issues or unsuitability to the site.

General protection measures are recommended in section 4 of this report to minimise potential impacts to the trees to be retained.

Inspections of retained trees should be conducted at 3, 6, 9, and 12 months and annually for 3 years after development completion. Other maintenance activities deemed necessary are to be undertaken over the same time period and undertake management of trees (predominantly pruning following *Australian Standard (AS 4373*) by a suitably qualified person when required.

8. References

Australian Standards Association (2009) AS 4790-2009 – Australian Standard 4790 – 2009 "Protection of trees on development sites"

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Appendix A

SULE Assessment

Table 8-1 SULE Assessment

Tree No	Genus, Species (Common Name)	Height (m)	Canopy (m)	DBH (mm)	DGL (mm)	Age Class	Health	Dead Wood	SULE	Comments	Retain Y or N	Reason for removal	TPZ (m)	SRZ (m)	Protection measures
1	*Eucalyptus tereticornis (Forest Red Gum)*	14	7	440	450	m	f	5%	2a	located on road reserve, only fair form.	N	Located within proposed lot	5.28	2.4	
1a	*Eucalyptus moluccana (Grey Box)*	6	7	240, 250	250,280	sm	g	2%	1a	codominant stem at ground level	Y		4.2	2.2	Y
2	*Grevillea robusta (Silky Oak)*	15	5	480	500	sm	g	1%	2a		N	Located within proposed lot	5.76	2.5	
3	*Eucalyptus moluccana (Grey Box)*	7	7	260	310	sm	g	2%	2a	minor deadwood	N	Within future road	3.12	2	
4	*Eucalyptus moluccana (Grey Box)*	7	6	250	300	sm	f	5%	3a	white fungi noted at base	N	Within future road	3	2	
5	*Eucalyptus moluccana (Grey Box)*	20	14	900	900	m	p	10%	3a	small branch collar habitat hollows and large scaffold hollows, thinning canopy.	N	Within future road	10.8	3.2	
6	*Eucalyptus moluccana (Grey Box)*	20	16	770	900	om	p	10%	4a	several wood decay brackets mid trunk, habitat hollow, failed 300mm diameter stem.	N	Within future road	9.24	3.2	
7	*Eucalyptus moluccana (Grey Box)*	18	10	670	770	m	p	10%	3a	sparse canopy, deadwood to 120mm. large scaffold failures noted. small branch collar habitat hollows	N	Within future road	8.04	3	
8	*Eucalyptus tereticornis (Forest Red Gum)*	12	8	500	600	m	f	5%	3b	trunk lean 45 degrees to SE, wound and cavity at base likely to increase failure potential.	N	Within road batter	6	2.7	
9	*Eucalyptus tereticornis (Forest Red Gum)*	7	5	420	580	m	f	5%	3b	large open cavity mid trunk	N	Within road batter	5.04	2.6	
10	*Eucalyptus moluccana (Grey Box)*	18	8	730,550	1300	om	p	50%	4a	secondary stem at ground level has failed and died. habitat potential in failed stem.	N	Within road batter	10.92	3.7	
11	*Eucalyptus moluccana (Grey Box)*	14	8	1000	1100	dead	dead	100%	4a	large habitat hollows	N	Located within proposed lot	12	3.4	
12	*Eucalyptus moluccana (Grey Box)*	20	15	820	970	m	g	5%	2a	deadwood to 100m diameter	N	Located within proposed lot	9.84	3.3	
13	*Eucalyptus moluccana (Grey Box)*	20	14	740	840	m	f	5%	3a	small habitat hollows , se several large branch failures noted	N	Located within proposed lot	8.88	3.1	
14	*Eucalyptus tereticornis (Forest Red Gum)*	17	8	440	580	m	f	5%	3a	limited canopy development	N	Within future road	5.28	2.6	
15	*Eucalyptus moluccana (Grey Box)*	20	18	700,400	1000	om	f	10%	2b	secondary stem has failed and died. habitat potential in failed stem. Multiple large wounds in major scaffolds	N	Within future road	9.72	3.3	
16	*Eucalyptus tereticornis (Forest Red Gum)*	18	12	420,440	540,500	om	p	10%	3b	large basal cavity in root crown. increased	N	Located within proposed lot	7.32	47	

Tree No	Genus, Species (Common Name)	Height (m)	Canopy (m)	DBH (mm)	DGL (mm)	Age Class	Health	Dead Wood	SULE	Comments	Retain Y or N	Reason for removal	TPZ (m)	SRZ (m)	Protection measures
										likelihood of failure					
17	*Eucalyptus moluccana (Grey Box)*	18	12	640	780	m	f	5%	3a	thinning canopy. several wounds and potential small habitat hollows.	N	Located within proposed lot	7.68	3	
18	*Eucalyptus moluccana (Grey Box)*	16	12	640	740	m	f	10%	3a	dead leader with ha itat hollow.	N	Located within proposed lot	7.68	2.9	
19	*Eucalyptus moluccana (Grey Box)*	18	12	510	610	m	g	5%	2b	habitat hollow at junction of codominant leaders may create a structurally weak junction	N	Located within proposed lot	6.12	2.7	
20	*Eucalyptus moluccana (Grey Box)*	17	8	640	840	m	f	5%	3a	poor form , multiple branch failures noted	N	Located within proposed lot	7.68	3.1	
21	*Eucalyptus tereticornis (Forest Red Gum)*	18	14	600	750	om	p	10%	3a	sparse canopy, deadwood to 120mm	N	Within future road	7.2	2.9	
22	*Eucalyptus moluccana (Grey Box)*	20	16	1170	1200	m	g	5%	2a	codominant stems at 3m. habitat hollow in failed dead scaffold mid canopy.	N	Located within proposed lot	14.04	3.6	
23	*Eucalyptus moluccana (Grey Box)*	16	14	930	1100	m	f	5%	2b	habitat hollow at junction of codominant stems may create a structurally weak junction	N	Located within proposed lot	11.16	3.4	
24	*Eucalyptus moluccana (Grey Box)*	16	14	720	750	m	g	5%	2a	3 deadwood branches 100mm to 150mm diameter	N	Located within proposed lot	8.64	2.9	
25	*Eucalyptus moluccana (Grey Box)*	14	9	430	640	m	f	5%	2a	distorted trunk form	N	Located within proposed lot	5.16	2.7	
26	*Eucalyptus moluccana (Grey Box)*	18	14	720	980	m	p	5%	3a	cavity mid trunk. potential habitat hollow, deadwood to 150mm diameter.	N	Located within proposed lot	8.64	3.3	
27	*Eucalyptus moluccana (Grey Box)*	16	9	530	650	m	f	5	3a	thinning canopy. large cavity in lower trunk. potential habitat hollow	N	Located within proposed lot	6.36	2.8	
28	*Eucalyptus moluccana (Grey Box)*	18	12	830	950	m	f	5%	3a	deadwood branches to 100mm diameter, several failed branches noted.	N	Within future road	9.96	3.2	
29	*Eucalyptus moluccana (Grey Box)*	18	10	470	730	om	p	5%	3b	secondary stem has failed and died. habitat potential in failed stem.	N	Within future road	5.64	2.9	
30	*Eucalyptus moluccana (Grey Box)*	18	12	560	750	m	p	10%	3b	45 degree trunk lean to NE, wood decay bracket mid trunk and at trunk base.	N	Within future road	6.72	2.9	
31	*Eucalyptus moluccana (Grey Box)*	18	14	720	880	om	p	10%	4a	multiple small habitat hollows, deadwood up to 150mm diameter.	N	Within future road	8.64	3.1	
32	*Eucalyptus moluccana (Grey Box)*	8	6	360	430	m	p	5%	3a	secondary stem has failed and died. habitat	N	Within future road	4.32	2.3	

Tree No	Genus, Species (Common Name)	Height (m)	Canopy (m)	DBH (mm)	DGL (mm)	Age Class	Health	Dead Wood	SULE	Comments	Retain Y or N	Reason for removal	TPZ (m)	SRZ (m)	Protection measures
										potential in failed stem.					
33	*Eucalyptus moluccana (Grey Box)*	18	12	470	540	m	f	5%	3a	poor form and structure	N	Within future road	5.64	2.6	
34	*Eucalyptus moluccana (Grey Box)*	18	14	740	900	m	f	5%	3b	habitat hollows over 100mm diam, several large splits and wounds in scaffolds and secondary stem	N	Within future road	8.88	3.2	
35	*Eucalyptus moluccana (Grey Box)*	12	8	680	720	om	p	15%	4a	upper leaders and vertical scaffolds have died. deadwood up to 150mm diameter	N	Within road batter	8.16	2.9	
36	*Eucalyptus moluccana (Grey Box)*	20	16	730	830	m	f	5%	3a	thinning canopy, deadwood up to 120mm diameter. potential habitat hollows	N	Located within proposed lot	8.76	3.1	
37	*Eucalyptus moluccana (Grey Box)*	22	16	740	930	m	f	5%	3a	thinning canopy, one of three upper leaders has split. Remove this section if tree to be retained	N	Located within proposed lot	8.88	3.2	
38	*Eucalyptus moluccana (Grey Box)*	17	10	650	780	m	f	5%	3a	thinning canopy arching to NE	N	Located within proposed lot	7.8	3	
39	*Eucalyptus moluccana (Grey Box)*	14	8	450	540	m	p	10%	3a	potential habitat hollow lower trunk	N	Located within proposed lot	5.4	2.6	
40	*Eucalyptus moluccana (Grey Box)*	8	8	700	860	om	p	15%	4a	50% trunk diameter is dead and partly hollow	N	Located within proposed lot	8.4	3.1	
41	*Eucalyptus moluccana (Grey Box)*	20	16	830	1100	m	g	5%	2a	habitat hollow lower trunk	N	Located within proposed lot	9.96	3.4	
42	*Eucalyptus moluccana (Grey Box)*	14	14	650	900	m	g	5%	2a	partially dead leader	N	Located within proposed lot	7.8	3.2	
43	*Eucalyptus moluccana (Grey Box)*	12	10	450	520	m	p	15%	4a	sparse canopy, bees nest noted	N	Located within proposed lot	5.4	2.5	
44	*dead*	8		590	870	dead	dead	100	4b	trunk spout hollow, large hollows. basal cavity	N	Located within proposed lot	7.08	3.1	
45	*dead*	7	3.5	520	700	dead		100%	4a	habitat hollows over 100mm diam	N	Located within proposed lot	6.24	2.8	
46	*Eucalyptus moluccana (Grey Box)*	7	6	300	400	m	g	<2%	2a	tight stem attachments	N	Located within proposed lot	3.6	2.3	
47	*Eucalyptus moluccana (Grey Box)*	4.5	3.5	170	230	sm	g	<2%	2a	insect defoliation of canopy	N	Within future road	2.04	1.8	
48	*Eucalyptus crebra (Thin-leaved Ironbark)*	17	16	550	750	om	p	30%	4a	extensive canopy dieback.	N	Located within proposed lot	6.6	2.9	
49	*Morus alba (Mulberry)*	7	5	350	400	m	g	5%	2a		N	Within future road	4.2	2.3	
50	*Eucalyptus moluccana (Grey Box)*	7	7	300	420	sm	g	<2%	1a	minor insect damage to canopy	N	Located within proposed lot	3.6	2.3	
51	*Angophora floribunda (Rough-barked Apple)*	11	10	560	720	m	f	10%	3a	new canopy growth due to recent rain	N	Located within proposed lot	6.72	2.9	
52	*Eucalyptus crebra (Thin-*	7	6	250	360	sm	g	<2%	1a		N	Located within	3	2.2	

Tree No	Genus, Species (Common Name)	Height (m)	Canopy (m)	DBH (mm)	DGL (mm)	Age Class	Health	Dead Wood	SULE	Comments	Retain Y or N	Reason for removal	TPZ (m)	SRZ (m)	Protection measures
	leaved Ironbark)											proposed lot			
53	*Eucalyptus crebra (Thin-leaved Ironbark)*	6	6	260	340	sm	g	<2%	1a		N	Located within proposed lot	3.12	2.1	
54	*Eucalyptus crebra (Thin-leaved Ironbark)*	20	14	700	900	m	f	10%	3a	dead to 200mm diameter	N	Located within proposed lot	8.4	3.2	
55	*Eucalyptus moluccana (Grey Box)*	5	4	160, 120	230,160	sm	f	5%	3a	partial defoliation by insect,2 stems at ground level. regrowth stems from cut stump	N	Located within proposed lot	2.4	1.9	
56	*Eucalyptus crebra (Thin-leaved Ironbark)*	17	16	820	920	om	f	10%	3b	poor form. possibly struck by lightning, spiral wound extends to ground, fissure hollows noted	N	Located within proposed lot	9.84	3.2	
57	*Angophora floribunda (Rough-barked Apple)*	5	4	240	300	sm	p	25%	4a	sparse canopy	N	Located within proposed lot	2.88	2	
58	*Angophora floribunda (Rough-barked Apple)*	6	5	240	300	sm	f	5%	3a	low vigour	N	Located within proposed lot	2.88	2	
59	*Eucalyptus crebra (Thin-leaved Ironbark)*	7	6	280	320	sm	g	2%	2a	minor twig dieback	N	Located within proposed lot	3.36	2.1	
60	*Eucalyptus crebra (Thin-leaved Ironbark)*	20	12	650	800	om	p	15%	3a	minor epicormics from trunk	N	Within future road	7.8	3	
61	*Eucalyptus crebra (Thin-leaved Ironbark)*	14	16	470	60	m	f	10%	3b	part failure of upper stem in the past, poor structural form	N	Within future road	5.64	1	
62	*Eucalyptus crebra (Thin-leaved Ironbark)*	18	16	800	930	m	g	5%	2b	multiple scaffold failures in canopy	N	Located within proposed lot	9.6	3.2	
63	*Eucalyptus crebra (Thin-leaved Ironbark)*	20	14	760	1000	om	p	20%	4a	sparse canopy, deadwood to 120mm	N	Located within proposed lot	9.12	3.3	
64	*Eucalyptus crebra (Thin-leaved Ironbark)*	20	14	600	800	om	p	60%	4b	codominant stem at 5m is dead, dead scaffolds are dismantling	N	Located within proposed lot	7.2	3	
65	*Eucalyptus crebra (Thin-leaved Ironbark)*	9	6	590	740	om	f	5%	3b	poor structure, trunk has failed at 4.5m, potential habitat fissure at failure point	N	Located within proposed lot	7.08	2.9	
66	*Eucalyptus crebra (Thin-leaved Ironbark)*	10	16	460	530	m	f	10%	3b	poor form, regrowth from upper trunk failure arching to nth, 100mm diam branch collar hollow	N	Located within proposed lot	5.52	2.5	
67	*Eucalyptus crebra (Thin-leaved Ironbark)*	18	16	700	800	om	p	20%	4a	substantial dead cambium. Termite activity, microbat potential under lifted bark	N	Located within proposed lot	8.4	3	
68	*Eucalyptus crebra (Thin-leaved Ironbark)*	20	10	600	740	om	p	10%	4a	deadwood to 120mm diameter, no obvious habitat hollows	N	Located within proposed lot	7.2	2.9	

Tree No	Genus, Species (Common Name)	Height (m)	Canopy (m)	DBH (mm)	DGL (mm)	Age Class	Health	Dead Wood	SULE	Comments	Retain Y or N	Reason for removal	TPZ (m)	SRZ (m)	Protection measures
69	*Eucalyptus crebra (Thin-leaved Ironbark)*	18	14	800	950	om	p	20%	3b	root plate displays uplift on Sth side, deadwood to 300mm diam. potential habitat hollows 50 mm to 100mm diameter	N	Located within proposed lot	9.6	3.2	
70	*Eucalyptus crebra (Thin-leaved Ironbark)*	6	4	240	280	sm	g	<2%	2a	part of copse trees	N	Located within proposed lot	2.88	1.9	
71	*Eucalyptus crebra (Thin-leaved Ironbark)*	6	5	220	340	sm	g	<2%	2a	part of copse trees	N	Located within proposed lot	2.64	2.1	
72	*Eucalyptus crebra (Thin-leaved Ironbark)*	7	6	230	300	sm	g	2%	2a	part of copse trees	N	Located within proposed lot	2.76	2	
73	*Eucalyptus crebra (Thin-leaved Ironbark)*	8	5	220	300	sm	g	<2%	2a	part of copse trees	N	Located within proposed lot	2.64	2	
74	*Eucalyptus crebra (Thin-leaved Ironbark)*	7	6	280	350	sm	g	<2%	2a	part of copse trees	N	Located within proposed lot	3.36	2.1	
75	*Eucalyptus crebra (Thin-leaved Ironbark)*	6	4	210	270	sm	g	<2%	2a	part of copse trees	N	Located within proposed lot	2.52	1.9	
76	*Eucalyptus crebra (Thin-leaved Ironbark)*	8	4	200	300	sm	g	<2%	2a	part of copse trees	N	Located within proposed lot	2.4	2	
77	*Eucalyptus crebra (Thin-leaved Ironbark)*	7	6	290	400	sm	g	2%	2a	part of copse trees	N	Located within proposed lot	3.48	2.3	
78	*Eucalyptus crebra (Thin-leaved Ironbark)*	6	3	180	280	sm	g	2%	2a	part of copse trees	N	Located within proposed lot	2.16	1.9	
79	*Eucalyptus crebra (Thin-leaved Ironbark)*	8	4	240	330	sm	g	5%	2a	part of copse trees	N	Located within proposed lot	2.88	2.1	
80	*Eucalyptus crebra (Thin-leaved Ironbark)*	8	6	230	340	sm	g	2%	2a	part of copse trees	N	Located within proposed lot	2.76	2.1	
81	*Eucalyptus crebra (Thin-leaved Ironbark)*	8	7	260	350	sm	g	2%	2a	part of a copse of trees	N	Located within proposed lot	3.12	2.1	
82	*Eucalyptus crebra (Thin-leaved Ironbark)*	8	3	170	250	sm	g	2%	2a	part of a copse of trees	N	Located within proposed lot	2.04	1.8	
83	*Eucalyptus crebra (Thin-leaved Ironbark)*	7.5	3	170	230	sm	g	2%	2a	part of a copse of trees	N	Located within proposed lot	2.04	1.8	
84	*Eucalyptus crebra (Thin-leaved Ironbark)*	6	6	250	300	sm	g	<2%	2a	part of a copse of trees	N	Located within proposed lot	3	2	
85	*Eucalyptus crebra (Thin-leaved Ironbark)*	8	4	170	240	sm	f	10%	3a	part of a copse of trees	N	Within future road	2.04	1.8	
86	*Eucalyptus crebra (Thin-leaved Ironbark)*	8	4	170	230	sm	f	5%	3a	minor mistletoe	N	Within future road	2.04	1.8	
87	*Eucalyptus crebra (Thin-leaved Ironbark)*	8	6	240	280	sm	g	<5%	2a	part of a copse of trees	N	Within future road	2.88	1.9	
88	*Eucalyptus crebra (Thin-leaved Ironbark)*	7	5	190	260	sm	g	2%	2a	part of a copse of trees	N	Located within proposed lot	2.28	1.9	
89	*Eucalyptus crebra (Thin-leaved Ironbark)*	8	4	230	250	sm	g	2%	2a	part of a copse of trees	N	Located within proposed lot	2.76	1.8	
90	*Eucalyptus crebra (Thin-leaved Ironbark)*	5	2	180	230	sm	g	<2%	2a	part of a copse of trees	N	Located within proposed lot	2.16	1.8	
91	*Angophora floribunda*	10	6	290,310	350,340	m	g	5%	2a	part of a copse of trees	N	Located within	5.04	2.5	

Tree No	Genus, Species (Common Name)	Height (m)	Canopy (m)	DBH (mm)	DGL (mm)	Age Class	Health	Dead Wood	SULE	Comments	Retain Y or N	Reason for removal	TPZ (m)	SRZ (m)	Protection measures
	(Rough-barked Apple)											proposed lot			
92	*Eucalyptus crebra (Thin-leaved Ironbark)*	8	2	150	190	sm	f	5%	3a	low vigour, sparse canopy	N	Located within proposed lot	1.8	1.6	
93	*Eucalyptus crebra (Thin-leaved Ironbark)*	7.5	4	220	250	sm	g	<5%	2a	part of a copse of trees	N	Located within proposed lot	2.64	1.8	
94	*Eucalyptus crebra (Thin-leaved Ironbark)*	8	4.5	230	260	sm	g	5%	2a	part of a copse of trees	N	Located within proposed lot	2.76	1.9	
95	*Eucalyptus crebra (Thin-leaved Ironbark)*	9	7	260	330	m	g	2%	2a	part of a copse of trees	N	Located within proposed lot	3.12	2.1	
96	*Eucalyptus crebra (Thin-leaved Ironbark)*	9	2	160	190	sm	f	2%	2a	part of a copse of trees	N	Located within proposed lot	1.92	1.6	
97	*Eucalyptus crebra (Thin-leaved Ironbark)*	9	4.5	260	300	m	g	2%	2a	part of a copse of trees	N	Located within proposed lot	3.12	2	
98	*Eucalyptus crebra (Thin-leaved Ironbark)*	5	3	200	230	sm	g	2%	3a	trunk has failed at 3metres	N	Located within proposed lot	2.4	1.8	
99	*Eucalyptus crebra (Thin-leaved Ironbark)*	6	3	150	190	sm	g	2%	2a	part of a copse of trees	N	Within future road	1.8	1.6	
100	*Eucalyptus crebra (Thin-leaved Ironbark)*	8	4	180	260	sm	g	2%	2a	part of a copse of trees	N	Within future road	2.16	1.9	
101	*Angophora floribunda (Rough-barked Apple)*	9	5	220	240	m	g	5%	2a	part of a copse of trees	N	Within future road	2.64	1.8	
102	*Eucalyptus crebra (Thin-leaved Ironbark)*	7	3	200	240	sm	g	2%	2a	part of a copse of trees	N	Within future road	2.4	1.8	
103	*Eucalyptus crebra (Thin-leaved Ironbark)*	8	5	220	250	sm	g	5%	2a	part of a copse of trees	N	Within future road	2.64	1.8	
104	*Eucalyptus crebra (Thin-leaved Ironbark)*	10	6	290	380	m	g	2%	2a	part of a copse of trees	N	Within future road	3.48	2.2	
105	*Eucalyptus crebra (Thin-leaved Ironbark)*	9	3	260	340	m	g	2%	2a	part of a copse of trees	N	Within future road	3.12	2.1	
106	*Angophora floribunda (Rough-barked Apple)*	9	7	330,330	700	m	g	5%	2a	part of a copse of trees	N	Within future road	5.64	2.8	
107	*Eucalyptus crebra (Thin-leaved Ironbark)*	9.5	4	270	340	sm	g	2%	2a	part of a copse of trees	N	Located within proposed lot	3.24	2.1	
107	*Corymbia maculata (Spotted Gum)*	12	8	450	530	m	g	<2%	1a	planted row	N	Located within proposed lot	5.4	2.5	
108	*Eucalyptus crebra (Thin-leaved Ironbark)*	8	3	210	280	sm	g	2%	2a	part of a copse of trees	N	Located within proposed lot	2.52	1.9	
108	*Corymbia maculata (Spotted Gum)*	8	6	390	370	m	g	2%	1a	planted row	N	Located within proposed lot	4.68	2.2	
109	*Corymbia maculata (Spotted Gum)*	12	8	400	520	m	g	<2%	2a	partial included stems at 4 and 5m	N	Located within proposed lot	4.8	2.5	
110	*Corymbia maculata (Spotted Gum)*	12	7	450	550	m	g	<2%	1a	planted row	N	Located within proposed lot	5.4	2.6	
111	*Corymbia maculata (Spotted Gum)*	12	7	410	570	m	g	2%	1a	planted row	N	Located within proposed lot	4.92	2.6	
112	*Corymbia maculata (Spotted Gum)*	10	8	460	600	m	g	<2%	1a	planted row	N	Located within proposed lot	5.52	2.7	
113	*Eucalyptus robusta (Swamp Mahogany)*	7	6	440	460	m	f	5%	3a	planted row	N	Located within proposed lot	5.28	2.4	

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114	*Eucalyptus robusta (Swamp Mahogany)*	5	1	180	340	dead	dead	100%	4a	planted row	N	Located within proposed lot	2.16	2.1	
115	*Eucalyptus robusta (Swamp Mahogany)*	7	5	330	430	dead	dead	100%	4a	planted row	N	Located within proposed lot	3.96	2.3	
116	*Eucalyptus robusta (Swamp Mahogany)*	7	6		350	440	p	90%	4a	90% dead, planted row	N	Located within proposed lot	0	2.1	
117	*Corymbia maculata (Spotted Gum)*	9	8	390	440	m	g	2%	1a	planted row	N	Located within proposed lot	4.68	2.3	
118	*Casuarina glauca (Swamp Oak)*	8	5	330	400	m	g	2%	1a	planted row	N	Located within proposed lot	3.96	2.3	
119	*Casuarina glauca (Swamp Oak)*	7	4	290	400	m	g	2%	1a	planted row	N	Located within proposed lot	3.48	2.3	
120	*Casuarina glauca (Swamp Oak)*	6	4	220	240	m	g	2%	1a	planted row	N	Located within proposed lot	2.64	1.8	
121	*Casuarina glauca (Swamp Oak)*	13	5.5	370	70	m	g	2%	1a	planted row	N	Located within proposed lot	4.44	1.1	
122	*Casuarina glauca (Swamp Oak)*	8	2	80	260	sm	g	2%	1a	planted row	N	Located within proposed lot	0.96	1.9	
123	*Casuarina glauca (Swamp Oak)*	10	5	320	400	m	g	2%	1a	planted row	N	Located within proposed lot	3.84	2.3	
124	*Casuarina glauca (Swamp Oak)*	8	3	180	280	m	g	2%	1a	planted row	N	Located within proposed lot	2.16	1.9	
125	*Casuarina glauca (Swamp Oak)*	7	2	210	300	m	g	2%	1a	planted row	N	Located within proposed lot	2.52	2	
126	*Casuarina glauca (Swamp Oak)*	10	6	410	510	m	g	2%	1a	planted row	N	Located within proposed lot	4.92	2.5	
127	*Casuarina glauca (Swamp Oak)*	8	5	320	370	m	g	2%	1a	planted row	N	Located within proposed lot	3.84	2.2	
128	*Casuarina glauca (Swamp Oak)*	6.5	2.5	210	290	m	g	2%	1a	planted row	N	Located within proposed lot	2.52	2	
129	*Casuarina glauca (Swamp Oak)*	6.5	6	130,140,130	440	m	g	2%	1a	planted row	N	Located within proposed lot	2.76	2.3	
130	*Casuarina glauca (Swamp Oak)*	7	5.5	290	400	m	g	2%	1a	planted row	N	Located within proposed lot	3.48	2.3	
131	*Casuarina glauca (Swamp Oak)*	8	5	290	390	m	g	2%	1a	planted row	N	Located within proposed lot	3.48	2.2	
132	*Casuarina glauca (Swamp Oak)*	7	5	260	380	m	g	2%	1a	planted row	N	Located within proposed lot	3.12	2.2	
133	*Casuarina glauca (Swamp Oak)*	7	4	180,200	290	m	g	2%	1a	planted row	N	Located within proposed lot	3.24	2	
134	*Eucalyptus crebra (Thin-leaved Ironbark)*	12	14	650	750	m	g	5%	2a	reduced canopy density, large wound in upper scaffold	N	Within future lot	7.8	2.9	
135	*Eucalyptus crebra (Thin-leaved Ironbark)*	6	3	170	200	sm	g	5%	2a		N	Within future lot	2.04	1.7	
136	*Eucalyptus crebra (Thin-leaved Ironbark)*	6	2.5	150	210	sm	g	5%	2a		N	Within future lot	1.8	1.7	
137	*Eucalyptus crebra (Thin-leaved Ironbark)*	6	3	200	270	sm	g	5%	2a		N	Within future lot	2.4	1.9	

Tree No	Genus, Species (Common Name)	Height (m)	Canopy (m)	DBH (mm)	DGL (mm)	Age Class	Health	Dead Wood	SULE	Comments	Retain Y or N	Reason for removal	TPZ (m)	SRZ (m)	Protection measures
138	*Eucalyptus crebra (Thin-leaved Ironbark)*	5	2	150	180	sm	g	5%	2a		N	Within future lot	1.8	1.6	
139	*Eucalyptus crebra (Thin-leaved Ironbark)*	7	4	190	230	sm	g	5%	2a		N	Within future lot	2.28	1.8	
140	*Eucalyptus crebra (Thin-leaved Ironbark)*	6	6	180	330	sm	g	5%	2a	codominant stems at ground level	N	Within future lot	2.16	2.1	
141	*Eucalyptus crebra (Thin-leaved Ironbark)*	6.5	4	130	160	sm	g	<2%	1a		N	Within future lot	1.56	1.5	
142	*Eucalyptus crebra (Thin-leaved Ironbark)*	7	4.5	220	400	sm	g	<2%	1a		N	Within future lot	2.64	2.3	
159	*Eucalyptus moluccana (Grey Box)*	9	8	150, 200, 330	280, 300, 400	m	f	5%	3a	through road tree, part canopy defoliation from insects	N	Within future road	4.92	2.6	
160	*Eucalyptus moluccana (Grey Box)*	9	8	250,260	600	m	f	5%	3a	through road tree, part canopy defoliation from insects	N	Within future road	4.32	2.7	
134a	*Casuarina glauca (Swamp Oak)*	7	3	160	220	m	g	<2%	1a	planted row	N	Located within proposed lot	1.92	1.8	
135a	*Casuarina glauca (Swamp Oak)*	8	4	180	220	m	g	<2%	1a	planted row	N	Located within proposed lot	2.16	1.8	
136a	*Casuarina glauca (Swamp Oak)*	6.5	5	260	320	m	g	<2%	1a	planted row	N	Located within proposed lot	3.12	2.1	
137a	*Casuarina glauca (Swamp Oak)*	6.5	5	250	370	m	g	<2%	1a	planted row	N	Located within proposed lot	3	2.2	
138a	*Casuarina glauca (Swamp Oak)*	7.5	3.5	250	380	m	g	<2%	1a	planted row	N	Located within proposed lot	3	2.2	
139a	*Casuarina glauca (Swamp Oak)*	7	4	250	380	m	g	<2%	1a	planted row	N	Located within proposed lot	3	2.2	
140a	*Casuarina glauca (Swamp Oak)*	11	5	290,180	500	m	g	<2%	1a	planted row	N	Located within proposed lot	4.08	2.5	
141a	*Casuarina glauca (Swamp Oak)*	8	5	350	400	m	g	<2%	1a	planted row	N	Within future road	4.2	2.3	
142a	*Casuarina glauca (Swamp Oak)*	6	3	190	250	m	g	<2%	1a	planted row	N	Within future road	2.28	1.8	
143a	*Casuarina glauca (Swamp Oak)*	5.5	4.5	250	280	m	g	<2%	1a	planted row	N	Within future road	3	1.9	
144a	*Corymbia maculata (Spotted Gum)*	9	7	330	430	m	g	<2%	1a	planted row	N	Located within proposed lot	3.96	2.3	
145a	*Corymbia maculata (Spotted Gum)*	10	7	480	650	m	g		2a	planted row	N	Located within proposed lot	5.76	2.8	
146a	*Corymbia maculata (Spotted Gum)*	10	7	430	540	m	g		1a	planted row	N	Located within proposed lot	5.16	2.6	
147a	*Corymbia maculata (Spotted Gum)*	9	6	360	450	m	g		1a	planted row	N	Located within proposed lot	4.32	2.4	
148a	*Cupressus sp (Cupressus)*	4	3	140,60	280	sm	f	2	3a	leader dying, low landscape significance	N	Located within proposed lot	2	1.9	
149a	*Melaleuca linarifolia (Snow In Summer)*	5	3	200	250	m	g		2a	planted row	N	Located within proposed lot	2.4	1.8	
150a	*Melaleuca linarifolia*	5	4	250	230	m	g		2a	planted row	N	Located within	3	1.8	

Tree No	Genus, Species (Common Name)	Height (m)	Canopy (m)	DBH (mm)	DGL (mm)	Age Class	Health	Dead Wood	SULE	Comments	Retain Y or N	Reason for removal	TPZ (m)	SRZ (m)	Protection measures
	(Snow In Summer)											proposed lot			
151a	*Melaleuca linarifolia (Snow In Summer)*	3	2	120,140	240	m	g		2a	planted row	N	Located within proposed lot	2.16	1.8	
152a	*Melaleuca linarifolia (Snow In Summer)*	3	2	220	220	m	g		2a	planted row	N	Located within proposed lot	2.64	1.8	
153a	*Melaleuca linarifolia (Snow In Summer)*	5	3	320	320	m	g		2a	planted row	N	Located within proposed lot	3.84	2.1	
154a	*Melaleuca linarifolia (Snow In Summer)*	5	4	240,130,100,100	270,230	m	g		2a	planted row	N	Located within proposed lot	3.72	35	
155a	*Melaleuca linarifolia (Snow In Summer)*	4	3	130,130	250	m	g		2a	planted row	N	Located within proposed lot	2.16	1.8	
156a	*Melaleuca linarifolia (Snow In Summer)*	4	3	130	220	m	g	<2%	2a	Bee swarm	N	Located within proposed lot	1.56	1.8	
157a	*Melaleuca linarifolia (Snow In Summer)*	5.5	6	470	500	m	g		2a	planted row	N	Located within proposed lot	5.64	2.5	
158a	*Melaleuca linarifolia (Snow In Summer)*	5	2	260	280	m	g		2a	planted row	N	Located within proposed lot	3.12	1.9	

Key
G =Good
F = Fair
P = Poor
D = Dead
OM = Over-mature
M = Mature
SM = Semi-mature

AS = Asymmetrical
S = Symmetrical

Appendix B

SULE Rating

Appendix A – SULE Ratings

SULE (an acronym for **Safe Useful Life Expectancy**) (Barrell 1996). Particular consideration is given to the following points when making the final SULE assessment for each tree.

- Obvious past influences (suppression).
- Present health and condition, and future potential in current position.
- Estimated age at assessment in relation to the life expectancy for the species.
- Observed and potential structural defects which may influence potential life expectancy.
- Potential remedial work which may allow retention in the existing location.

An outline of the four relevant SULE categories and their subgroups used in this report is as follows:

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1 Long **SULE** (Trees that appear to be retainable at the time of assessment for more than 40 years with an acceptable level of risk)

- **A** A structurally sound tree, located where potential future growth can be accommodated
- **B** A damaged or defective tree that could be made suitable in the long term (40+ years), where remedial care is given
- **C** A tree of particular significance (historical / commemorative merit or rarity) that warrants extensive efforts in securing long term retention.

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2 Medium **SULE** (Trees that appear to be retainable at the time of assessment, for 15 to 40 years with an acceptable level of risk)

- **A** A tree predicted to only live between 15 and 40 years
- **B** A tree that may live for more than 40 years but should be removed to prevent safety or nuisance problems.
- **C** A tree that may live for more than 40 years, but should be removed to prevent competition with more suitable individuals, or to provide space for new planting
- **D** A damaged or defective tree that could be made suitable in the medium term (15-40 years), where remedial care is given.

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3 Short **SULE** (Trees that appear to be retainable at the time of assessment for 5 to 15 years with an acceptable level of risk)

- **A** A tree predicted to only live between 5 and 15 years
- **B** A tree that may live for more than 15 years, but should be removed to prevent safety or nuisance problems
- **C** A tree that may live for more than 15 years, but should be removed to prevent competition with more suitable individuals or to provide space for new planting
- **D** A damaged or defective tree that could only be made suitable in the short term (5-15 years) and would require significant remedial work.

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4 **Removals** (Trees with a high level of risk that should be removed within the next 5 years)

- **A** A dead, dying, suppressed or declining tree
- **B** A dangerous tree made so through instability or recent loss of neighbouring trees
- **C** A dangerous tree made so through structural defects (cavities, decay, included bark, wounds or poor form)
- **D** A damaged tree that is clearly not safe to retain
- **E** A tree that is damaging, or may cause damage, to existing structures within 5 years
- **F** A tree that will become dangerous after removal of neighbouring trees for the reasons given in A to E.

SULE ratings given to any tree in this report assumes that appropriate maintenance (if required) will be provided by a qualified arborist. Incorrect tree work practices can significantly accelerate tree suppression and increase hazard potential