JMD design

ARBORICULTURAL ASSESSMENT

Version 1 October 2023

Prepared for: Landcom Site location:

Precinct 3 Subdivision - RE1 Zone

Lot 2,3 & 5,Cnr Campbelltown Rd and MacDonald Rd Edmondson Park, 2174





1.1 Subject Trees

The following trees were inspected from the ground and the following items identified.

	The following	trees were in	ispecie	ou mon	i tile gro	und and	a ti io ioii	owning in	CIIIS IU	Cittilica.									
TREE No. (Tag number)	Botanical Name:	Common Name:	Approx. height: (M)	N	Approx. Canopy Spread(M)	Е	Ιw	Trunk Diameter at Breast Height: (M)	Trunk Diameter at Buttress:	Tree Protection Zone (TPZ) (Radius:M)	Structural Root Zone (SRZ) (Radius:M)	Structure: (Poor/Fair/Good)	Health	Age: Juvenile/Semi-Mature/ Mature	Deadwood/Diameter mm/%	Defect:	Estimated Life Expectancy: (ELE) Long >40/Medium 15-40/Short <1- 15/DEAD	Significance: (STARS) Landscape Significance	Priority of Retention: High, Medium, Low
										-				-					
1	Eucalyptus tereticornis	Forest Red Gum	18	3	3.24	3.39	2.95	0.401	0.442	4.81	2.35	G	G	SM	S-M (150- 450mm) 35%	Small to medium diameter deadwood present in canopy.	М	М	М
2 (139)	Eucalyptus molucanna	Grey Box	20	2.67	3.07	3.22	4.1	0.432	0.442	5.18	2.35	G	F	SM	S-M (150- 450mm) 20%	Mistletoe present in canopy. Small to medium diameter deadwood present in canopy.	М	М	М
3	Eucalyptus molucanna	Grey Box	20	3.18	3.73	2.06	4.18	0.44	0.763	5.28	2.95	F	Р	SM	S-M (150- 450mm) 15%	Multi- stems from base. White rot present at base of trunk (covering 55% of trunk circumference to 0.3m from base). Olive growing under canopy and around trunk. Bark flaking from trunk	S	L	L
4	Eucalyptus molucanna	Grey Box	16	3.26	2.91	2.45	3.78	0.33	0.528	3.96	2.53	F	F	SM	S-M (150- 450mm) 15%	Leaning 15º west (uncorrected).	S	L	L
5	Eucalyptus molucanna	Grey Box	18.5	2.8	2.45	2.57	3.41	0.71	0.681	8.52	2.82	F	G	SM	S-M (150- 450mm) 10%	Co- Dominant stems from base. Minor evidence of white rot in trunk.	М	М	М
6	Eucalyptus molucanna	Grey Box	20	3.61	2.73	3.38	2.45	0.254	0.318	3.05	2.05	F	F	SM	S (0-150mm) 10%	Mistletoe present in canopy. Small to medium diameter deadwood present in canopy.	М	L	L
9 (3)	Eucalyptus molucanna	Grey Box	18	13.36	1	5	9.50	0.636	0.837	7.63	3.07	G	F	М	S-M (150- 450mm) 30%	Mistletoe present in canopy. Small to medium diameter deadwood present in canopy.	М	М	М

TREE No. (Tag number)	Botanical Name:	Common Name:	Approx. height: (M)	N	φ Approx. Canopy Spread (M)	E	W	Trunk Diameter at Breast Height: (M)	Trunk Diameter at Buttress:	Tree Protection Zone (TPZ) (Radius:M)	Structural Root Zone (SRZ) (Radius:M)	Structure: (Poor/Fair/Good)	Health	Age: Juvenile/Semi-Mature/ Mature	Deadwood/Diameter mm/%	Defect:	Estimated Life Expectancy: (ELE) Long >40/Medium 15-40/Short <1- 15/DEAD	Significance: (STARS) Landscape Significance	Priority of Retention: High, Medium, Low
10	Eucalyptus molucanna	Grey Box	17.5	3.70	89	5.1	7.1	0.512	0.646	6.14	2.75	G	G	М	S-M (150- 450mm) 20%	Small to medium diameter present throughout canopy.	М	М	М
11 (2)	Eucalyptus molucanna	Grey Box	18	21	7	2.5	2.7	0.458	0.77	8.44	2.97	G	F	М	S-M (150- 450mm) 15%	Large Cavity in trunk, decay present (occluding). Olive growing from base of trunk. Small to medium diameter present throughout canopy.	S	L	L
12 (1)	Eucalyptus molucanna	Grey Box	16	2.4	7.3	3.6	6.7	0.509	0.515	6.11	2.5	G	F	М	S-M (150- 450mm) 15%	Minor evidence of white rot in trunk. Small to medium diameter deadwood present in canopy.	М	М	М
13	Eucalyptus molucanna	Grey Box	18	5.8	11.6	13	3.8	0.528	0.665	6.96	2.73	G	G	М	S-M (150- 450mm) 10%	Minor evidence of white rot in trunk. Small to medium diameter deadwood present in canopy.	М	М	М
14 (5)	Eucalyptus molucanna	Grey Box	18	8	3	9.4	4.6	0.58	0.655	6.96	2.77	G	F	SM	S-M (150- 450mm) 20%	Small to medium diameter deadwood. Multiple small diameter snap outs present in canopy.	М	М	М
15 (6)	Eucalyptus molucanna	Grey Box	17.5	5.3	3.76	3.3	5.5	0.452	0.557	5.42	2.59	F	G	М	S-M (150- 450mm) 15%	Small to medium diameter deadwood. Multiple Mistletoe present in canopy.	М	М	М
16 (7)	Eucalyptus molucanna	Grey Box	18	13.1	11.8	8.4	4	0.678	0.945	8.14	3.23	Р	Р	М	S-M (150- 450mm) 20%	Wound at base of trunk (30% of circumference) fungal bracket present and multiple borer holes. Bark flaking around base. Small to medium deadwood in canopy. 5° lean to the North uncorrected.	S	L	L

TREE No. (Tag number)	Botanical Name:	Common Name:	Approx. height: (M)	N	ο Approx. Canopy Spread (M)	Е	I w	Trunk Diameter at Breast Height: (M)	Trunk Diameter at Buttress:	Tree Protection Zone (TPZ) (Radius:M)	Structural Root Zone (SRZ) (Radius:M)	Structure: (Poor/Fair/Good)	Health	Age: Juvenile/Semi-Mature/ Mature	Deadwood/Diameter mm/%	Defect:	Estimated Life Expectancy: (ELE) Long >40/Medium 15-40/Short <1- 15/DEAD	Significance: (STARS) Landscape Significance	Priority of Retention: High, Medium, Low
17 (9)	Eucalyptus molucanna	Grey Box	16	3.5	13.7	1.8	9.2	0.426	0.528	5.12	2.53	G	G	SM	S-M (150- 450mm) 5%	Small wound at base (occluding). Mistletoe present in canopy. Small to medium diameter deadwood present in canopy.	м	м	М
18 (10)	Eucalyptus molucanna	Grey Box	18.5	12	2.4	9.6	11.5	0.843	1.114	10.12	3.46	G	F	М	S-M (150- 450mm) 15%	Multiple Mistletoe in canopy. Small to medium diameter deadwood throughout canopy. Multiple small wounds at base of trunk (occluding).	М	М	М
21	Eucalyptus tereticornis	Forest Red Gum	19	13.1	11.9	7.2	9.8	1.47	1.356	15	3.76	F	G	М	S-M (150- 450mm) 10%	Multi -Stem from 2m. Multiple failed limbs on eastern face. Small to medium diameter deadwood throughout canopy.	М	Н	Н
22	Eucalyptus tereticornis	Forest Red Gum	17.5	6.58	7.44	4.5	3.80	0.79	0.859	9.48	3.1	G	G	М	S-M (150- 450mm) 14%	Large wound in trunk at 1.4m from base. Small to medium diameter deadwood housed in canopy.	М	Н	Н
23	Eucalyptus tereticornis	Forest Red Gum	19	7.15	14.12	7.3	8	1.11	1.4	13.32	3.81	F	F	М	S-L (150- 500mm) 40%	Multi stem from (0.5m from base). Multiple failed limb on northern face of trunk. Multiple medium diameter dead branches in canopy. Large limb failure on western face. Canker present in above multi stem leader union.	М	L	М
24	Eucalyptus molucanna	Grey Box	17.5	9.33	10.9	7.5	9	0.78	1.11	9.36	3.46	Р	Р	М	S-L (150- 500mm) 50%	Olive growing from base of trunk. Canopy very sparce. Mistletoe present in canopy. Large wound at base encompasses 60% of Trunk circumference. Decay and Borer holes present in cavity. Bark flaking. Large epicormic growth dying back.	М	L	М
25 (103)	Syncarpia glomulifera	Turpentine	13	4.95	4.3	3.5	4.6	0.63	0.65	7.56	2.76	F	G	SM	S (0-150mm) 10%	Multi- stem(1.6m from base) . Small diameter deadwood.	L	М	Н
26	Eucalyptus moluccana	Brown Box	16	0	9.4	6.5	7.75	0.71	0.84	8.52	3.08	P	Р	М	S-L (150- 500mm) 60%	Multiple limbs dying of Large diameter. Small – medium diameter deadwood through canopy. Large wound at base (200mm wide/2m tall) decay present. Fungal bracket at base. Olive trees surrounding base.	М	L	M

TREE No. (Tag number)	Botanical Name:	Common Name:	Approx. height: (M)	N	Approx. Canopy Spread (M)	Е	W	Trunk Diameter at Breast Height: (M)	Trunk Diameter at Buttress:	Tree Protection Zone (TPZ) (Radius:M)	Structural Root Zone (SRZ) (Radius:M)	Structure: (Poor/Fair/Good)	Health	Age: Juvenile/Semi-Mature/ Mature	Deadwood/Diameter mm/%	Defect:	Estimated Life Expectancy: (ELE) Long >40/Medium 15-40/Short <1- 15/DEAD	Significance: (STARS) Landscape Significance	Priority of Retention: High, Medium, Low
27 (216)	Eucalyptus microcory	Tallowwood	15	9	7.6	13.3	6.2	0.80	1.19	9.6	3.56	G	G	М	S-M (150- 450mm) 15%	Small to Large diameter deadwood throughout canopy.	М	М	М
31	Eucalyptus moluccana	Brown Box	14	12.1	8.72	8.1	5.5	0.91	1.20	10.92	3.57	Р	F	М	S-M (150- 450mm) 15%	Small to medium diameter deadwood in canopy, Multiple previous pruning point on southern face. Bification on the northern leader(reaction wood present) Fungal bracket present in northern leader.	М	L	М
32	Eucalyptus tereticornis	Forest Red Gum	11	3	6	4.9	1.45	0.60	0.60	7.92	2.78	Р	Р	М	S-M (150- 450mm) 30%	Large wound base on the eastern face of trunk(occupies 60% of trunk circumference).	М	L	L
33	Eucalyptus tereticornis	Forest Red Gum	14	11.8	7.89	4	6	1.24	1.14	14.88	3.18	F	F	М	S-M (150- 450mm) 30%	Small to Medium diameter deadwood in canopy. Co-dom stems at 1m, Large wounds on west and east face of trunk, decay present (partial occluded). Cankers present all major limbs.	М	L	М
34	Eucalyptus moluccana	Brown Box	14	8	9.38	6.2	5.1	0.572	0.65	6.86	2.76	F	G	М	S-M (150- 450mm) 20%	Co-dom stems at 2.5m, Southern leader lopped. Small cavity on southern face, semi occluded. Small to medium diameter deadwood in canopy.	М	М	М
35	Eucalyptus tereticomis	Forest Red Gum	8	1.2	9.5	5.9	2.10	0.36	0.54	4.32	2.55	G	G	SM	S (0-150mm) 10%	Lean 6° South. Growth Suppressed by surrounding trees	М	М	М
36	Eucalyptus tereticornis	Forest Red Gum	15	11.2	10	3.9	7.7	1.07	1.3	12.84	3.7	F	F	М	S-L (150- 500mm) 20%	Lean 16 _o west – Uncorrected. Large wound at base, decay present, borer holes evident. Sounded semi hollow. Small to Large diameter deadwood in canopy	S	L	L

Table 1. Tree Data

Full criteria of Tree significance (STARS) and Estimate of age provided in appendix 1.2

Assessment parameters for Safe Useful Life expectancy provided in appendix 1.3



1.2 Tree Significance/Estimate of Age

(STARS) Criteria for Assessment of Landscape Significance (IACA 2010)

1. High Significance in landscape

- -The tree is in good condition and good vigour;
- -The tree has a form typical for the species;
- -The tree is a remnant or is a planted locally indigenous specimen and/or is rare or uncommon in the local area or of botanical interest or of substantial age;
- -The tree is listed as a Heritage Item, Threatened Species or part of an Endangered ecological community or listed on Councils significant Tree Register;
- -The tree is visually prominent and visible from a considerable distance when viewed from most directions within

the landscape due to its size and scale and makes a positive contribution to the local amenity;

- -The tree supports social and cultural sentiments or spiritual associations, reflected by the broader population or community group or has commemorative values;
- -The tree's growth is unrestricted by above and below ground influences, supporting its ability to reach dimensions typical for the taxa in situ
- -tree is appropriate to the site conditions.

2. Medium Significance in landscape

- -The tree is in fair-good condition and good or low vigour;
- -The tree has form typical or atypical of the species;
- -The tree is a planted locally indigenous or a common species with its taxa commonly planted in the local area
- -The tree is visible from surrounding properties, although not visually prominent as partially obstructed by other vegetation or buildings when viewed from the street,
- -The tree provides a fair contribution to the visual character and amenity of the local area,
- -The tree's growth is moderately restricted by above or below ground influences, reducing its ability to reach dimensions typical for the taxa *in situ*.

3. Low Significance in landscape

- -The tree is in fair-poor condition and good or low vigour;
- -The tree has form atypical of the species;
- -The tree is not visible or is partly visible from surrounding properties as obstructed by other vegetation or buildings,
- -The tree provides a minor contribution or has a negative impact on the visual character and amenity of the local area,
- -The tree is a young specimen which may or may not have reached dimension to be protected by local Tree Preservation Orders or similar protection mechanisms and can easily be replaced with a suitable specimen,
- -The tree's growth is severely restricted by above or below ground influences, unlikely to reach dimensions typical for the taxa in situ

- -tree is inappropriate to the site conditions,
- -The tree is listed as exempt under the provisions of the local Council Tree Preservation Order or similar protection mechanisms,
- -The tree has a wound or defect that has potential to become structurally unsound.

Environmental Pest / Noxious Weed Species

- -The tree is an Environmental Pest Species due to its invasiveness or poisonous/ allergenic properties,
- -The tree is a declared noxious weed by legislation.

Hazardous/Irreversible Decline

- -The tree is structurally unsound and/or unstable and is considered potentially dangerous,
- -The tree is dead, or is in irreversible decline, or has the potential to fail or collapse in full or part in the immediate to short term.

The tree is to have a minimum of three (3) criteria in a category to be classified in that group.

TREE RETENTION VALUE- ASSESSMENT METHODOLOGY

				Significance		
		1. High	2. Medium		3. Low	
		Significance in Landscape	Significance in Landscape	Significance in Landscape	Environmental Pest / Noxious Weed Species	Hazardous / Irreversible Decline
ıcy	1. Long >40 years					
Estimated Life Expectancy	2. Medium 15-40 Years					
timated Lif	3. Short <1-15 Years					
Es	Dead					
Lege	nd for Matrix A	Assessment			1 4	OF AUSTRALIAN ARBORICULTURISTS
	or re-loca	for Retention (High) - tion of building/s should be co opment sites. Tree sensitive of a Zone.	onsidered to accommodate th	e setbacks as prescribed b	y the Australian Standard As	S4970 Protection of trees
		er for Retention (Medi main priority with removal con usted.				
		er for Removal (Low) - ted for their retention.	These trees are not conside	red important for retention,	nor require special works or	design modification to be
	Priority	for Removal - These t	rees are considered hazardo	ous, or in irreversible declin	ne, or weeds and should be	removed irrespective of

USE OF THIS DOCUMENT AND REFERENCING

development.

The IACA Significance of a Tree, Assessment Rating System (STARS) is free to use, but only in its entirety and must be cited as follows:

IACA, 2010, IACA Significance of a Tree, Assessment Rating System (STARS), Institute of Australian Consulting Arboriculturists, Australia, www.iaca.org.au

REFERENCES

Australia ICOMOS Inc. 1999, The Burra Charter – The Australian ICOMOS Charter for Places of Cultural Significance, International Council of Monuments and Sites, www.icomos.org/australia

Draper BD and Richards PA 2009, Dictionary for Managing Trees in Urban Environments, Institute of Australian Consulting Arboriculturists (IACA), CSIRO Publishing, Collingwood, Victoria, Australia.

Footprint Green Pty Ltd 2001, Footprint Green Tree Significance & Retention Value Matrix, Avalon, NSW Australia, www.footprintgreen.com.au

IACA 2010, IACA Significance of a Tree, Assessment Rating System (STARS), Institute of Australian Consulting Arborioulturists, www.iaca.org.su

The following example shows the IACA Significance of a Tree, Assessment Rating System (STARS) used in an Arboricultural report.

Tree Significance

Determined by using the Tree Significance - Assessment Criteria of the IACA Significance of a Tree, Assessment Rating System (STARS)© (IACA, 2010), Appendix B.

Trees 14, 16, 17/3, 19 and 20/4 are of high significance with the remaining majority of medium significance and a few of low significance. Tree 14 is significant as a prominent specimen and a food source for indigenous avian fauna. Tree 16 as a non-locally indigenous planting is of good from and prominent *in situ*; Tree 17/3 as a stand of 6 street trees along the Davey Street frontage screening views to and from the site and contiguous with trees in Victoria Park extending the aesthetic influence of the urban canopy to the site. Similarly for Trees 20/4 as street trees in Long Road and Tree 19 as an extant exotic planting as a senescent component of the original landscaping. The trees of low significance are recent plantings as fruit trees — Avocados, and 1 Cootamundra Wattle as a non-locally indigenous tree in irreversible decline and potentially structurally unsound.

Significance Scale

- 1 High
- 2 Medium
- 3-Low

Significance Scale	1	2	3
Tree No. / Stand No.	14, 16, 17/3, 19, 20/4	1/1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12/2, 15, 18, 21/5	3, 13, 22

Tree Retention Value

Determined by using the Retention Value - Priority Matrix of the *IACA Significance of a Tree, Assessment Rating System* (STARS)© (IACA, 2010), Appendix B.

Retention Value

High – Priority for Retention Medium – Consider for Retention Low – Consider for Removal Remove - Priority for Removal

Retention Value	High Priority for Retention	Medium Consider for Retention	Low Consider for Removal	Remove Priority for Removal
Tree No. / Stand No.	1/1, 5, 17/3*, 19	2, 4, 6, 7, 8, 9, 10, 11, 14, 15, 16, 18, 20/4*, 21/5	3, 12/2, 13,	22

^{*} Trees located within the neighbouring property and should be retained and protected.

IACA 2010, IACA Significance of a Tree, Assessment Rating System (STARS), Institute of Australian Consulting Arboriculturists, www.iaca.org.au

1.3 Safe Useful Life Expectancy (SULE)

Safe Useful Life Expectancy Categories (Updated 04/01)

This reference sheet should be included as supplementary information with all reports where a SULE assessment is an element. Additionally, it can be copied and covered with a laminated plastic protective sheet and used as a field sheet to help with data collection.

Safe Useful Life Expectancy Categories (Updated 01/04/01)

- Long SULE: Trees that appeared to be retainable at the time of assessment for more than 40 years with an acceptable level of risk.
 - (a) Structurally sound trees located in positions that can accommodate future growth.
 - (b) Trees that could be made suitable for retention in the long term by remedial tree care.
 - (c) Trees of special significance for historical, commemorative or rarity reasons that would warrant extraordinary efforts to secure their long term retention.
- Medium SULE: Trees that appeared to be retainable at the time of assessment for 15-40 years with an acceptable level of risk.
 - (a) Trees that may only live between 15 and 40 more years.
 - (b) Trees that could live for more than 40 years but may be removed for safety or nuisance reasons.
 - (c) Trees that could live for more than 40 years but may be removed to prevent interference with more suitable individuals or to provide space for new planting.
 - (d) Trees that could be made suitable for retention in the medium term by remedial tree care.
- Short SULE: Trees that appeared to be retainable at the time of assessment for 5-15 years with an
 acceptable level of risk.
 - (a) Trees that may only live between 5 and 15 more years.
 - (b) Trees that could live for more than 15 years but may be removed for safety or nuisance reasons.
 - (c) Trees that could live for more than 15 years but may be removed to prevent interference with more suitable individuals or to provide space for new planting.
 - (d) Trees that require substantial remedial tree care and are only suitable for retention in the short
- Remove: Trees that should be removed within the next 5 years.
 - (a) Dead, dving, suppressed or declining trees because of disease or inhospitable conditions.
 - (b) Dangerous trees because of instability or recent loss of adjacent trees.
 - (c) Dangerous trees because of structural defects including cavities, decay, included bank, wounds or poor form.
 - (d) Damaged trees that are clearly not safe to retain.
 - (e) Trees that could live for more than 5 years but may be removed to prevent interference with more suitable individuals or to provide space for new planting.
 - (f) Trees that are damaging or may cause damage to existing structures within 5 years.
 - (g) Trees that will become dangerous after removal of other trees for the reasons given in (a) to (f).
 - (h) Trees in categories (a) to (g) that have a high wildlife habitat value and, with appropriate treatment, could be retained subject to regular review.
- Small, young or regularly pruned: Trees that can be reliably moved or replaced.
 - (a) Small trees less than 5m in height.
 - (b) Young trees less than 15 years old but over 5m in height.
 - (c) Formal hedges and trees intended for regular pruning to artificially control growth.

Brief Guidance Notes on SULE Data Collection (Updated 04/01)

- General: A competent SULE assessment can only be carried out by an arboriculturist with extensive practical experience and a high level of technical knowledge. The objective of a SULE assessment is to clarify the relative values of individual trees where there is a need to assess the future impact of different management options.
- Preparation: Before undertaking any field work, the following requirements should be clearly established by the arboriculturist:-
 - What objective information is required, i.e. height, crown spread, trunk diameter, etc.
 - (ii) What subjective information is required, i.e. the most appropriate range for the SULE categories.

3 SULE Assessment:

- What is SULE: SULE is the length of time that the arboriculturist assesses an individual tree can be retained with an acceptable level of risk based on the information available at the time of inspection. It is a snapshot in time of the potential an individual tree has for survival in the eyes of the assessor. SULE is not static; it is closely related to tree condition and the surrounding environment. Alterations in these variables may result in changes to the SULE assessment. Consequently, the reliability all SULE assessments will decrease as time passes from the initial assessment because the potential for change in these variables increases.
- (ii) How to assess SULE: The SULE assessment can be broken down into 12 separate stages that can each be recorded on a field assessment form. These are summarised below but require further reference for more detailed explanation.
 - Estimate the age of the tree.
 - 2. Establish the average life span of the species.
 - 3. Consider how local environmental circumstances may modify average life span.
 - 4. Estimate life expectancy (Subtract 1 from 3).
 - 5. Consider how health will affect safety.
 - Consider how tree structure and size will affect safety.

 - Consider how location will affect safety.
 Estimate safe life expectancy (4 modified by 5, 6 & 7).
 - Consider economics of management costs must be reasonable.
 - Consider adverse effects on better trees.
 - Consider sustaining amenity making space for new trees.
 - Estimate SAFE USEFUL LIFE EXPECTANCY (8 modified by 9, 10 & 11).

WARNING: Making these assessments requires extensive practical experience with trees and a high level of technical knowledge.

- SULE Recording: Each category has a number of sub-categories. These sub-categories should always be recorded to help future users of the information appreciate the reason for each allocation decision. It is normal to have instances where trees will not fit neatly into a single SULE category. In such cases, the arboriculturist should record the preferred category first and include the possible category in brackets, mentioning the allocation problem in the notes. This assessment information should be recorded in a tree schedule along with any objective data that is collected.
- SULE Category Ranges: The selection of age categories will depend on the tree population of the site. It needs to be flexible so that adjustments can be made to meet particular circumstances. For example, if the trees on a site had a SULE well in excess of the upper limit of 40 years, then it may be more appropriate for the categories to be redefined as follows: Short SULE = 5-40 years; Medium SULE = 40-80 years; and Long SULE = 80 years and longer. The Young and Remove categories would remain the same