80 Betty Cuthbert Drive, Lidcombe – Preliminary Tree Assessment

The Department of Planning, Industry and Environment

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Project Name	80 Betty Cuthbert Drive, Lidcombe - Preliminary Tree Assessment
Project Number	19SUT-13268
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Status	**Draft**
Version Number	**v1**
Last saved on	**28 June 2019**

This report should be cited as 'Eco Logical Australia 2019 80 Betty Cuthbert Drive, Lidcombe – Preliminary Tree Assessment . Prepared for **Development and Transactions (D&T) a division of the NSW Department of Planning, Industry and Environment (DPIE).'**

Template 2.8.1

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Abbreviations

Abbreviation	Description
AQF	Australian Qualifications Framework
AS	Australian Standards
DBH	Diameter at Breast Height
ELA	Eco Logical Australia
m	Metre
mm	Millimetre
NDE	Non-Destructive Excavation
NO	Number
NSW	New South Wales
SP	Species
SRZ	Structural Root Zone
TPZ	Tree Protection Zone
VTA	Visual Tree Assessment

1. Background

1.1 Proposed activity

Eco Logical Australia Pty Ltd (ELA) was commissioned by Development and Transactions (D&T) a division of the NSW Department of Planning, Industry and Environment (DPIE) to prepare a preliminary tree assessment for trees located within the grounds of the MS Studdy Centre at Lidcombe. The centre currently operates as respite centre.

The key features of the proposed development that are likely to negatively affect the subject trees (trees within the study area) can be summarised as follows:

- excavation works
- plant movement
- changes in soil grades
- installation of underground services.

1.2 The study area

The study area is within the area of 80 Betty Cuthbert Drive at Lidcombe and covers 5.85 hectares. It is bounded by Joseph Street, Wayland Avenue and Betty Cuthbert Drive and is located within the Local Government Area of Cumberland Council. The study area is mapped in Appendix A.

1.3 Purpose of report

The purpose of this report is to:

- assess the current overall health and condition of the subject trees
- evaluate the retention value of the subject trees

2. Method

2.1 Definitions used in this assessment

2.1.1 Definition of a tree

Cumberland Council defines a tree as being:

> *"any woody and soft wooded perennial plant over 3.6 metres in height" (Cumberland Council 2013)".*

2.1.2 Tree protection zone (TPZ)

The TPZ is the combination of crown and root area (as defined by AS 4970-2009) that requires restriction of access during the construction process. Tree sensitive construction measures must be implemented if works are to proceed within the Tree Protection Zone.

2.1.3 Structural root zone (SRZ)

The SRZ is the area of the root system (as defined by AS 4970-2009) used for stability, mechanical support and anchorage of the tree. It is critical for the support and stability of trees. Severance of roots within the SRZ is not recommended as it may lead to the destabilisation and/or decline of the tree.

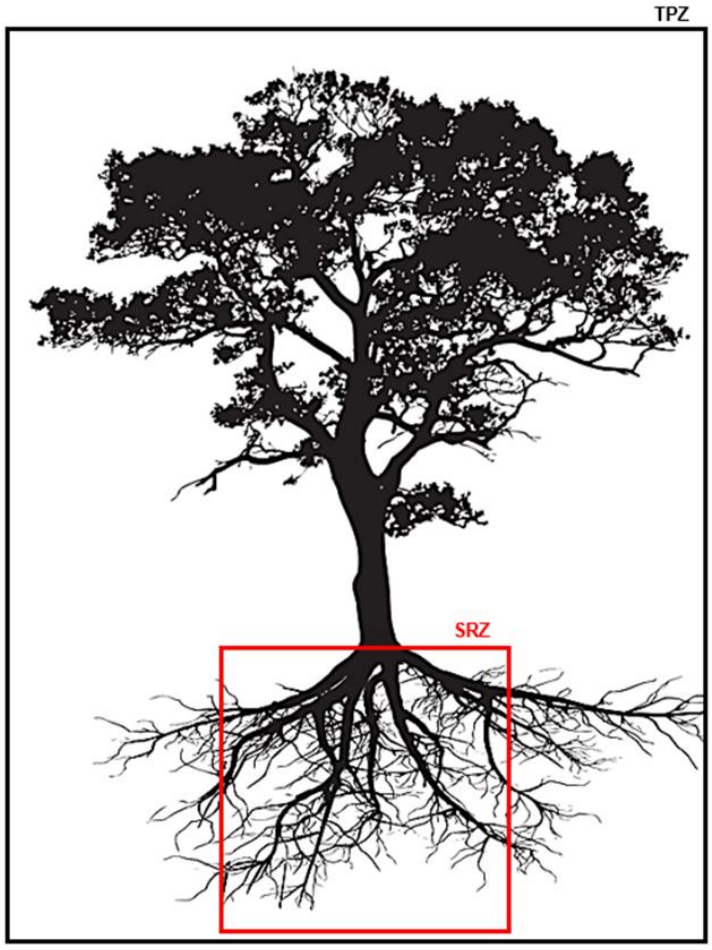

Figure 1: Indicative TPZ and SRZ

2.2 Tree assessment

The health and structure of the subject trees was assessed in accordance with a stage one visual tree assessment (VTA) as formulated by Mattheck & Breloer (1994), and practices consistent with modern arboriculture. Measurements to determine the tree protection zone were carried out in accordance with Clause 3.2 and 3.3.5 of AS4970-2000 Protection of Trees on Development Sites (Standards Australia 2009).

A total of **483** subject trees were inspected in May and June 2019 by AQF Level 5 Consulting Arborist, Elizabeth Hannon.

The following applies to this methodology:

- Trees were inspected from ground level, without the use of any invasive or diagnostic tools and testing. Trees that met the definition of a tree under Cumberland Council's provisions (2013)
- No aerial inspections or root mapping was undertaken.
- Tree heights were determined using a clinometer 15 metres from the base of the tree
- Canopy spread was determined using a measured stride out on site.
- The diameter at breast height (DBH) is a circumference measurement of the tree at 1.4 metres above ground and is done using a tape measure and placing it around the trunk of the tree. Some trees DBH have been estimated using visual assessment out on site. The DBH measurements are used to determine the area for the tree protection zone (which also incorporates the structural root zone).
- The structural root zone (SRZ) was calculated by an estimated measurement of the trunk diameter taken above the root buttress
- Tree identification to species level was based on broad taxonomical features present and visible from ground level at the time of inspection.
- The location of trees was determine using a detailed survey and provided by the client in a geo-referenced .dwg file.

2.3 Retention value

The retention value/importance of a tree or group of trees is determined using a combination of environmental, cultural, physical and social values. This tree retention assessment has been undertaken in accordance with the Institute of Australian Consulting Arboriculturists (IACA) *Significance of a Tree, Assessment Rating System (STARS©)*. The following categories were used:

- **Low**: These trees are not considered important for retention, nor require special works or design modification to be implemented for their retention.
- **Medium**: These trees are moderately important for retention. Their removal should only be considered if adversely affected by the proposed works and all other alternatives have been considered and exhausted.
- **High**: These trees are considered important and should be retained and protected. Design modification or re-location of building/s should be considered to accommodate the setbacks as prescribed by Australian Standard AS4970 - Protection of trees on development sites.

Further details and assessment criteria are in Appendix B.

3. Results and discussion

Results of the arboricultural assessment are tabulated and mapped in Appendix A and Table 1.

3.1 Trees not worthy of retention

- **Low retention value**: A total of **173** trees with a low retention value are not considered important for retention, nor require special works or design modification to be implemented for their retention.

3.2 Trees to be retained where possible

- **Medium retention value**: A total of **294** trees with a medium retention value should be retained wherever possible but should not be a constraint on the development.

3.3 Trees recommended for retention

- **High retention value**: A total of **16** trees with a high retention value are considered important for retention and should be retained and protected wherever possible. All opportunities for retaining these subject trees using design modification and tree sensitive construction techniques should be explored.

Table 1: Results of arboricultural assessment

Tree	Botanical Name	Height (m)	Spread (m)	Health	Structure	Retention Value	DBH (mm)	TPZ (mm)	SRZ (mm)	Notes
1	*Corymbia maculata*	13	12	Fair	Fair	**Medium**	1001	12000	3300	Sparse
2	*Eucalyptus microcorys*	10	8	Fair	Fair	**Medium**	580	7000	2600	
3	*Eucalyptus microcorys*	13	15	Good	Fair	**Medium**	1406	17000	3800	
4	*Eucalyptus microcorys*	17	16	Fair	Poor	**Low**	950	11000	3200	Co dominant
5	*Eucalyptus microcorys*	13	11	Good	Poor	**Low**	800	9600	3000	Multi trunked
6	*Eucalyptus microcorys*	13	11	Poor	Fair	**Low**	500	6000	2500	
7	*Eucalyptus microcorys*	8	7	Fair	Poor	**Low**	300	3600	2000	
8	*Eucalyptus microcorys*	12	13	Fair	Fair	**Medium**	400	4800	2300	
9	*Eucalyptus fibrosa*	20	19	Fair	Fair	**Medium**	850	10000	3100	Previous branch failures
10	*Eucalyptus microcorys*	14	12	Fair	Poor	**Low**	600	7200	2700	Multi trunked
11	*Eucalyptus fibrosa*	15	12	Poor	Fair	**Low**	550	6600	2600	
12	*Eucalyptus fibrosa*	8	7	Poor	Poor	**Low**	200	2400	1700	
13	*Eucalyptus fibrosa*	18	15	Fair	Poor	**Medium**	600	7200	2700	Previous branch failures
14	*Eucalyptus microcorys*	14	12	Fair	Fair	**Low**	400	4800	2300	Sparse
15	*Eucalyptus microcorys*	15	14	Good	Poor	**Medium**	700	8400	2800	Multi trunked
16	*Eucalyptus microcorys*	13	12	Poor	Poor	**Low**	500	6000	2500	Bottle butt
17	*Eucalyptus microcorys*	13	10	Fair	Poor	**Low**	550	6600	2600	
18	*Eucalyptus microcorys*	16	17	Fair	Poor	**Low**	600	7200	2700	Multi trunked
19	*Eucalyptus microcorys*	15	13	Poor	Poor	**Low**	500	6000	2500	
20	*Eucalyptus microcorys*	17	16	Fair	Poor	**Low**	550	6600	2600	Codominant from base
21	*Eucalyptus microcorys*	9	5	Fair	Poor	**Low**	200	2400	1700	

Tree	Botanical Name	Height (m)	Spread (m)	Health	Structure	Retention Value	DBH (mm)	TPZ (mm)	SRZ (mm)	Notes
22	*Eucalyptus microcorys*	15	12	Fair	Poor	**Low**	600	7200	2700	
23	*Eucalyptus microcorys*	14	13	Fair	Poor	**Low**	750	9000	2900	Burls
24	*Eucalyptus microcorys*	16	15	Fair	Poor	**Low**	850	10000	3100	Dead leader
25	*Eucalyptus microcorys*	9	8	Fair	Poor	**Medium**	900	11000	3200	Previously lopped
26	*Eucalyptus longifolia*	20	18	Good	Fair	**Medium**	700	8400	2800	Near wetland
27	*Eucalyptus microcorys*	5	3	Fair	Poor	**Low**	200	2400	1700	
28	*Eucalyptus microcorys*	13	12	Fair	Fair	**Medium**	350	4200	2100	
29	*Eucalyptus microcorys*	12	6	Poor	Fair	**Low**	250	3000	1800	
30	*Eucalyptus microcorys*	9	5	Poor	Fair	**Low**	250	3000	1800	
31	*Eucalyptus microcorys*	12	11	Fair	Poor	**Low**	250	3000	1800	
32	*Eucalyptus microcorys*	15	8	Fair	Fair	**Medium**	300	3600	2000	
33	*Casuarina cunninghamiana*	15	11	Poor	Poor	**Low**	260	3100	1900	
34	*Eucalyptus microcorys*	16	15	Poor	Poor	**Low**	1000	12000	3300	Co dominant from base
35	*Eucalyptus microcorys*	17	9	Fair	Poor	**Low**	200	2400	1700	
36	*Casuarina glauca*	12	5	Fair	Fair	**Medium**	350	4200	2100	
37	*Eucalyptus microcorys*	9	5	Poor	Poor	**Low**	300	3600	2000	
38	*Acacia sp.*	8	7	Fair	Poor	**Low**	150	2000	1500	Borers
39	*Eucalyptus fibrosa*	17	16	Good	Good	**High**	780	9400	3000	
40	*Eucalyptus fibrosa*	17	18	Fair	Poor	**Low**	700	8400	2800	Inclusion. Branch failures
41	*Eucalyptus longifolia*	7	5	Fair	Poor	**Low**	350	4200	2100	
42	*Eucalyptus microcorys*	7	5	Fair	Poor	**Low**	400	4800	2300	Multi trunked
43	*Eucalyptus microcorys*	10	9	Good	Fair	**Medium**	450	5400	2400	

Tree	Botanical Name	Height (m)	Spread (m)	Health	Structure	Retention Value	DBH (mm)	TPZ (mm)	SRZ (mm)	Notes
44	*Eucalyptus sideroxylon*	11	9	Good	Fair	**Medium**	350	4200	2100	
45	*Eucalyptus microcorys*	8	7	Fair	Poor	**Low**	500	6000	2500	Multi trunked
46	*Eucalyptus microcorys*	14	12	Good	Fair	**Medium**	450	5400	2400	
47	*Eucalyptus microcorys*	15	13	Good	Fair	**Medium**	550	6600	2600	
48	*Eucalyptus sp.*	12	9	Good	Fair	**Medium**	450	5400	2400	
49	*Eucalyptus microcorys*	11	7	Poor	Fair	**Low**	400	4800	2300	Sparse
50	*Melaleuca quinquenervia*	5	2	Poor	Poor	**Low**	100	2000	1500	
51	*Eucalyptus microcorys*	10	9	Poor	Fair	**Low**	480	5800	2400	
52	*Eucalyptus microcorys*	14	11	Fair	Fair	**Medium**	400	4800	2300	
53	*Eucalyptus microcorys*	12	11	Poor	Poor	**Low**	600	7200	2700	Co dominant. Sparse
54	*Eucalyptus pilularis*	7	6	Poor	Poor	**Low**	700	8400	2800	Dead leaders
55	*Eucalyptus piperita*	8	5	Fair	Poor	**Low**	350	4200	2100	Suppressed growth
56	*Eucalyptus pilularis*	12	10	Good	Fair	**Medium**	480	5800	2400	
57	*Eucalyptus microcorys*	13	13	Good	Fair	**Medium**	370	4400	2200	
58	*Eucalyptus pilularis*	13	11	Poor	Poor	**Low**	550	6600	2600	Dead leader
59	*Eucalyptus longifolia*	9	8	Good	Poor	**Low**	350	4200	2100	Co dominant
60	*Melaleuca quinquenervia*	4	2	Fair	Poor	**Low**	200	2400	1700	Suppressed
61	*Melaleuca quinquenervia*	6	3	Poor	Poor	**Low**	150	2000	1500	Suppressed
62	*Melaleuca quinquenervia*	5	3	Poor	Fair	**Low**	350	4200	2100	Suppressed
63	*Eucalyptus microcorys*	9	8	Fair	Fair	**Medium**	540	6500	2600	
64	*Eucalyptus microcorys*	8	7	Fair	Fair	**Medium**	320	3800	2100	
65	*Eucalyptus microcorys*	11	8	Good	Fair	**Medium**	520	6200	2500	

Tree	Botanical Name	Height (m)	Spread (m)	Health	Structure	Retention Value	DBH (mm)	TPZ (mm)	SRZ (mm)	Notes
66	*Eucalyptus sp.*	12	11	Fair	Poor	**Low**	550	6600	2600	Inclusion. Plate lift
67	*Eucalyptus sp.*	10	8	Fair	Poor	**Low**	300	3600	2000	
68	*Eucalyptus microcorys*	13	12	Fair	Good	**Medium**	740	8900	2900	
69	*Eucalyptus microcorys*	9	7	Fair	Poor	**Low**	450	5400	2400	
70	*Eucalyptus microcorys*	12	8	Fair	Fair	**Medium**	400	4800	2300	
71	*Eucalyptus longifolia*	12	7	Poor	Fair	**Low**	270	3200	1900	
72	*Eucalyptus microcorys*	12	10	Good	Fair	**Medium**	450	5400	2400	
73	*Eucalyptus pilularis*	11	10	Poor	Poor	**Low**	550	6600	2600	Dead
74	*Eucalyptus pilularis*	15	14	Good	Good	**High**	580	7000	2600	
75	*Eucalyptus longifolia*	12	11	Fair	Fair	**Medium**	540	6500	2600	
76	*Eucalyptus microcorys*	9	6	Fair	Fair	**Medium**	350	4200	2100	
77	*Eucalyptus microcorys*	12	11	Fair	Fair	**Medium**	550	6600	2600	
78	*Eucalyptus microcorys*	10	11	Fair	Poor	**Low**	650	7800	2800	Previously lopped. Sparse
79	*Eucalyptus microcorys*	11	10	Fair	Fair	**Medium**	550	6600	2600	
80	*Eucalyptus microcorys*	12	11	Fair	Fair	**Medium**	300	3600	2000	
81	*Eucalyptus microcorys*	11	12	Good	Fair	**Medium**	550	6600	2600	
82	*Melaleuca quinquenervia*	8	5	Fair	Fair	**Medium**	400	4800	2300	
83	*Eucalyptus longifolia*	9	6	Fair	Poor	**Low**	200	2400	1700	Co dominant from base
84	*Eucalyptus pilularis*	15	11	Fair	Fair	**Medium**	740	8900	2900	Minor borer
85	*Eucalyptus microcorys*	12	9	Good	Fair	**Medium**	400	4800	2300	
86	*Eucalyptus pilularis*	15	16	Good	Fair	**Medium**	970	12000	3300	
87	*Melaleuca quinquenervia*	7	5	Poor	Poor	**Low**	320	3800	2100	Sparse

Tree	Botanical Name	Height (m)	Spread (m)	Health	Structure	Retention Value	DBH (mm)	TPZ (mm)	SRZ (mm)	Notes
88	*Eucalyptus microcorys*	9	8	Good	Fair	**Medium**	400	4800	2300	
89	*Eucalyptus microcorys*	10	7	Fair	Fair	**Medium**	450	5400	2400	
90	*Melaleuca quinquenervia*	6	3	Poor	Poor	**Low**	350	4200	2100	
91	*Melaleuca quinquenervia*	6	3	Poor	Fair	**Low**	270	3200	1900	
92	*Melaleuca quinquenervia*	4	3	Poor	Poor	**Low**	150	2000	1500	
93	*Eucalyptus microcorys*	11	9	Good	Fair	**Medium**	400	4800	2300	
94	*Melaleuca quinquenervia*	7	4	Fair	Fair	**Medium**	300	3600	2000	
95	*Eucalyptus pilularis*	15	14	Good	Good	**High**	1204	14000	3600	
96	*Melaleuca quinquenervia*	8	3	Poor	Fair	**Low**	400	4800	2300	
97	*Eucalyptus pilularis*	15	12	Good	Fair	**Medium**	820	9800	3000	
98	*Eucalyptus microcorys*	6	5	Fair	Poor	**Low**	400	4800	2300	Suppressed
99	*Eucalyptus microcorys*	7	6	Fair	Poor	**Low**	300	3600	2000	Co dominant
100	*Eucalyptus haemastoma*	6	4	Fair	Poor	**Low**	150	2000	1500	Co dominant
101	*Eucalyptus tereticornis*	13	9	Fair	Fair	**Medium**	390	4700	2200	
102	*Eucalyptus microcorys*	4	2	Poor	Poor	**Low**	200	2400	1700	
103	*Melaleuca quinquenervia*	4	2	Poor	Poor	**Low**	340	4100	2100	Sparse
104	*Corymbia maculata*	10	5	Fair	Fair	**Medium**	300	3600	2000	
105	*Melaleuca quinquenervia*	5	3	Fair	Fair	**Medium**	350	4200	2100	
106	*Melaleuca quinquenervia*	8	6	Fair	Fair	**Medium**	475	5700	2400	
107	*Corymbia maculata*	11	6	Fair	Fair	**Medium**	300	3600	2000	
108	*Corymbia maculata*	4	5	Fair	Fair	**Low**	200	2400	1700	
109	*Melaleuca quinquenervia*	6	4	Poor	Poor	**Low**	300	3600	2000	

Tree	Botanical Name	Height (m)	Spread (m)	Health	Structure	Retention Value	DBH (mm)	TPZ (mm)	SRZ (mm)	Notes
110	*Eucalyptus haemastoma*	5	4	Fair	Poor	**Low**	200	2400	1700	Suppressed
111	*Eucalyptus leucoxylon*	13	12	Good	Good	**High**	800	9600	3000	
112	*Melaleuca quinquenervia*	3	2	Poor	Poor	**Low**	300	3600	2000	Suppressed
113	*Eucalyptus leucoxylon*	13	14	Good	Good	**High**	650	7800	2800	
114	*Eucalyptus leucoxylon*	10	9	Good	Fair	**Medium**	600	7200	2700	
115	*Melaleuca quinquenervia*	5	4	Fair	Fair	**Medium**	350	4200	2100	
116	*Eucalyptus pilularis*	7	7	Poor	Poor	**Low**	650	7800	2800	Borer
117	*Melaleuca quinquenervia*	8	5	Fair	Fair	**Medium**	300	3600	2000	
118	*Melaleuca quinquenervia*	8	4	Poor	Poor	**Low**	390	4700	2200	
119	*Melaleuca quinquenervia*	6	4	Fair	Fair	**Medium**	400	4800	2300	
120	*Eucalyptus microcorys*	10	8	Fair	Poor	**Low**	450	5400	2400	Co dominant
121	*Eucalyptus pilularis*	12	7	Poor	Fair	**Low**	410	4900	2300	
122	*Eucalyptus microcorys*	10	9	Fair	Poor	**Low**	500	6000	2500	Lopped
123	*Eucalyptus microcorys*	11	9	Good	Poor	**Medium**	570	6800	2600	
124	*Eucalyptus leucoxylon*	15	11	Good	Fair	**Medium**	420	5000	2300	
125	*Melaleuca quinquenervia*	5	3	Fair	Poor	**Low**	350	4200	2100	
126	*Melaleuca quinquenervia*	6	3	Poor	Fair	**Low**	320	3800	2100	
127	*Melaleuca quinquenervia*	6	4	Fair	Fair	**Medium**	380	4600	2200	
128	*Melaleuca quinquenervia*	7	4	Good	Fair	**Medium**	370	4400	2200	
129	*Eucalyptus leucoxylon*	9	5	Fair	Fair	**Medium**	400	4800	2300	
130	*Eucalyptus pilularis*	15	14	Poor	Fair	**Low**	690	8300	2800	Sparse
131	*Melaleuca quinquenervia*	8	3	Fair	Fair	**Medium**	400	4800	2300	

Tree	Botanical Name	Height (m)	Spread (m)	Health	Structure	Retention Value	DBH (mm)	TPZ (mm)	SRZ (mm)	Notes
132	*Melaleuca quinquenervia*	7	5	Fair	Fair	**Medium**	380	4600	2200	
133	*Eucalyptus leucoxylon*	9	5	Fair	Poor	**Low**	370	4400	2200	Co dominant
134	*Melaleuca quinquenervia*	8	5	Fair	Poor	**Low**	500	6000	2500	Multi trunked
135	*Melaleuca quinquenervia*	5	4	Fair	Fair	**Medium**	380	4600	2200	
136	*Eucalyptus crebra*	10	9	Good	Good	**High**	620	7400	2700	
137	*Melaleuca quinquenervia*	5	3	Fair	Poor	**Low**	200	2400	1700	
138	*Eucalyptus microcorys*	11	10	Good	Fair	**Medium**	590	7100	2700	
139	*Melaleuca quinquenervia*	8	5	Poor	Fair	**Medium**	300	3600	2000	
140	*Eucalyptus longifolia*	12	11	Good	Fair	**Medium**	420	5000	2300	
141	*Melaleuca quinquenervia*	6	5	Fair	Fair	**Medium**	390	4700	2200	
142	*Eucalyptus microcorys*	6	5	Good	Fair	**Medium**	380	4600	2200	
143	*Melaleuca quinquenervia*	8	5	Fair	Fair	**Medium**	410	4900	2300	
144	*Eucalyptus saligna*	11	12	Good	Fair	**Medium**	430	5200	2300	
145	*Eucalyptus leucoxylon*	15	12	Fair	Good	**Medium**	500	6000	2500	
146	*Eucalyptus fibrosa*	12	9	Fair	Fair	**Medium**	430	5200	2300	
147	*Melaleuca quinquenervia*	7	3	Poor	Fair	**Low**	350	4200	2100	Sparse
148	*Eucalyptus microcorys*	12	10	Poor	Poor	**Low**	400	4800	2300	Epicormics
149	*Corymbia citriodora*	6	7	Fair	Poor	**Low**	350	4200	2100	Multi trunked
150	*Eucalyptus fibrosa*	12	11	Fair	Fair	**Medium**	400	4800	2300	
151	*Eucalyptus pilularis*	12	5	Poor	Fair	**Low**	280	3400	1900	Sparse
152	*Eucalyptus microcorys*	8	6	Fair	Poor	**Low**	300	3600	2000	Multi trunked
153	*Eucalyptus fibrosa*	17	16	Good	Good	**High**	900	11000	3200	

Tree	Botanical Name	Height (m)	Spread (m)	Health	Structure	Retention Value	DBH (mm)	TPZ (mm)	SRZ (mm)	Notes
154	*Eucalyptus fibrosa*	18	15	Poor	Poor	**Low**	910	11000	3200	Borers termites
155	*Eucalyptus fibrosa*	15	14	Good	Good	**High**	750	9000	2900	
156	*Eucalyptus fibrosa*	11	9	Good	Fair	**Medium**	400	4800	2300	
157	*Lophostemon confertus*	3	4	Poor	Fair	**Low**	400	4800	2300	
158	*Lophostemon confertus*	4	4	Fair	Poor	**Low**	450	5400	2400	Suppressed
159	*Eucalyptus fibrosa*	16	11	Poor	Fair	**Low**	650	7800	2800	Large wound at base
160	*Eucalyptus fibrosa*	14	12	Good	Good	**High**	660	7900	2800	
161	*Eucalyptus microcorys*	10	8	Fair	Poor	**Low**	300	3600	2000	
162	*Eucalyptus sideroxylon*	8	6	Fair	Poor	**Low**	250	3000	1800	Multi trunked
163	*Eucalyptus microcorys*	10	9	Good	Fair	**Medium**	400	4800	2300	
164	*Eucalyptus microcorys*	9	4	Fair	Poor	**Low**	250	3000	1800	
165	*Eucalyptus sp.*	12	8	Poor	Fair	**Low**	500	6000	2500	Wound
166	*Casuarina cunninghamiana*	7	4	Poor	Poor	**Low**	250	3000	1800	
167	*Casuarina glauca*	5	3	Poor	Poor	**Low**	110	2000	1500	
168	*Casuarina glauca*	6	5	Fair	Poor	**Low**	350	4200	2100	
169	*Casuarina glauca*	7	5	Fair	Poor	**Low**	300	3600	2000	
170	*Casuarina glauca*	7	5	Fair	Fair	**Medium**	300	3600	2000	
171	*Eucalyptus fibrosa*	9	6	Good	Fair	**Medium**	600	7200	2700	Co dominant
172	*Eucalyptus piperita*	7	5	Fair	Poor	**Low**	200	2400	1700	
173	*Eucalyptus fibrosa*	4	3	Fair	Poor	**Low**	200	2400	1700	Multi trunked
174	*Casuarina glauca*	6	3	Fair	Fair	**Medium**	200	2400	1700	
175	*Casuarina glauca*	5	3	Fair	Fair	**Medium**	250	3000	1800	

Tree	Botanical Name	Height (m)	Spread (m)	Health	Structure	Retention Value	DBH (mm)	TPZ (mm)	SRZ (mm)	Notes
176	*Casuarina glauca*	11	5	Fair	Fair	**Medium**	350	4200	2100	
177	*Casuarina glauca*	8	5	Fair	Fair	**Medium**	400	4800	2300	
178	*Eucalyptus microcorys*	9	4	Fair	Poor	**Low**	300	3600	2000	Suppressed
179	*Eucalyptus microcorys*	11	9	Fair	Poor	**Low**	550	6600	2600	Inclusion
180	*Eucalyptus microcorys*	14	12	Fair	Fair	**Medium**	500	6000	2500	
181	*Eucalyptus longifolia*	3	2	Fair	Poor	**Low**	125	2000	1500	Suppressed
182	*Corymbia maculata*	15	14	Fair	Fair	**Medium**	570	6800	2600	Wound
183	*Corymbia maculata*	11	5	Good	Fair	**Medium**	400	4800	2300	
184	*Corymbia maculata*	13	8	Fair	Fair	**Medium**	450	5400	2400	
185	*Corymbia maculata*	14	12	Good	Fair	**Medium**	400	4800	2300	
186	*Corymbia maculata*	13	7	Good	Fair	**Medium**	400	4800	2300	
187	*Corymbia maculata*	12	6	Good	Fair	**Medium**	410	4900	2300	
188	*Eucalyptus sideroxylon*	10	7	Fair	Fair	**Medium**	380	4600	2200	
189	*Fraxinus raywood*	4	3	Fair	Poor	**Low**	250	3000	1800	
190	*Fraxinus raywood*	5	3	Fair	Poor	**Low**	200	2400	1700	
191	*Exocarpus cuppressiformis*	5	6	Poor	Poor	**Low**	400	4800	2300	Split in middle
192	*Corymbia maculata*	10	5	Fair	Fair	**Medium**	200	2400	1700	
193	*Corymbia maculata*	13	7	Fair	Fair	**Medium**	350	4200	2100	
194	*Corymbia maculata*	14	12	Good	Fair	**Medium**	410	4900	2300	
195	*Corymbia maculata*	7	5	Poor	Fair	**Low**	200	2400	1700	Suppressed
196	*Corymbia maculata*	9	8	Good	Fair	**Medium**	400	4800	2300	
197	*Corymbia maculata*	11	8	Good	Fair	**Medium**	400	4800	2300	

Tree	Botanical Name	Height (m)	Spread (m)	Health	Structure	Retention Value	DBH (mm)	TPZ (mm)	SRZ (mm)	Notes
198	*Corymbia maculata*	16	14	Good	Good	**High**	520	6200	2500	
199	*Corymbia maculata*	12	9	Fair	Poor	**Low**	500	6000	2500	
200	*Eucalyptus microcorys*	17	16	Fair	Good	**Medium**	550	6600	2600	
201	*Eucalyptus haemastoma*	5	6	Fair	Poor	**Low**	150	2000	1500	
202	*Eucalyptus haemastoma*	6	5	Poor	Fair	**Low**	350	4200	2100	Wound
203	*Eucalyptus microcorys*	13	8	Fair	Fair	**Medium**	410	4900	2300	
204	*Eucalyptus sp.*	4	2	Poor	Poor	**Low**	100	2000	1500	
205	*Eucalyptus haemastoma*	8	6	Fair	Poor	**Low**	300	3600	2000	Wound
206	*Eucalyptus fibrosa*	16	17	Fair	Fair	**Medium**	1106	13000	3500	Fruiting body at base
207	*Corymbia maculata*	11	10	Good	Fair	**Medium**	450	5400	2400	
208	*Corymbia maculata*	13	11	Good	Fair	**Medium**	400	4800	2300	
209	*Araucaria heterophylla*	6	4	Fair	Poor	**Low**	150	2000	1500	
210	*Eucalyptus tereticornis*	15	12	Fair	Fair	**Medium**	520	6200	2500	
211	*Eucalyptus tereticornis*	15	12	Fair	Fair	**Medium**	900	11000	3200	
212	*Corymbia maculata*	16	12	Good	Fair	**Medium**	450	5400	2400	
213	*Eucalyptus sp.*	11	6	Fair	Poor	**Low**	250	3000	1800	Suppressed
214	*Corymbia maculata*	13	6	Fair	Poor	**Low**	250	3000	1800	
215	*Corymbia maculata*	14	11	Good	Fair	**Medium**	510	6100	2500	
216	*Corymbia maculata*	15	12	Good	Good	**High**	540	6500	2600	
217	*Corymbia maculata*	13	7	Good	Fair	**Medium**	400	4800	2300	
218	*Corymbia maculata*	15	14	Good	Good	**High**	530	6400	2500	
219	*Casuarina cunninghamiana*	12	8	Fair	Fair	**Medium**	400	4800	2300	

Tree	Botanical Name	Height (m)	Spread (m)	Health	Structure	Retention Value	DBH (mm)	TPZ (mm)	SRZ (mm)	Notes
220	*Fraxinus raywood*	7	5	Fair	Fair	**Medium**	309	3700	2000	
221	*Corymbia citriodora*	12	11	Fair	Fair	**Medium**	400	4800	2300	
222	*Corymbia citriodora*	12	11	Good	Fair	**Medium**	400	4800	2300	
223	*Corymbia citriodora*	11	10	Fair	Fair	**Medium**	400	4800	2300	
224	*Corymbia citriodora*	11	8	Fair	Fair	**Medium**	400	4800	2300	
225	*Eucalyptus microcorys*	12	9	Fair	Fair	**Medium**	400	4800	2300	
226	*Corymbia citriodora*	9	9	Fair	Poor	**Low**	550	6600	2600	
227	*Eucalyptus microcorys*	11	9	Fair	Fair	**Medium**	500	6000	2500	
228	*Corymbia citriodora*	11	8	Fair	Fair	**Medium**	300	3600	2000	
229	*Corymbia citriodora*	12	10	Good	Fair	**Medium**	300	3600	2000	
230	*Corymbia citriodora*	8	5	Fair	Poor	**Low**	300	3600	2000	
231	*Eucalyptus fibrosa*	9	7	Poor	Fair	**Low**	230	2800	1800	
232	*Corymbia maculata*	9	8	Good	Good	**High**	350	4200	2100	Potential amenity
233	*Corymbia citriodora*	11	6	Fair	Fair	**Medium**	490	5900	2500	
234	*Corymbia sp.*	10	9	Fair	Poor	**Low**	450	5400	2400	
235	*Corymbia citriodora*	8	7	Fair	Poor	**Low**	400	4800	2300	
236	*Eucalyptus sideroxylon*	10	6	Good	Fair	**Medium**	280	3400	1900	
237	*Corymbia maculata*	16	14	Good	Fair	**Medium**	570	6800	2600	
238	*Corymbia maculata*	15	13	Good	Fair	**Medium**	480	5800	2400	
239	*Eucalyptus sideroxylon*	10	10	Good	Fair	**Medium**	410	4900	2300	
240	*Corymbia maculata*	13	8	Fair	Fair	**Medium**	300	3600	2000	
241	*Corymbia maculata*	13	7	Fair	Poor	**Low**	380	4600	2200	

Tree	Botanical Name	Height (m)	Spread (m)	Health	Structure	Retention Value	DBH (mm)	TPZ (mm)	SRZ (mm)	Notes
242	*Corymbia maculata*	12	6	Good	Fair	**Medium**	400	4800	2300	
243	*Corymbia maculata*	10	5	Good	Fair	**Medium**	340	4100	2100	
244	*Corymbia maculata*	13	7	Good	Fair	**Medium**	290	3500	2000	
245	*Corymbia maculata*	10	6	Fair	Poor	**Low**	250	3000	1800	
246	*Eucalyptus haemastoma*	9	6	Fair	Fair	**Medium**	350	4200	2100	
247	*Eucalyptus tereticornis*	11	9	Good	Fair	**Medium**	580	7000	2600	
248	*Corymbia maculata*	8	5	Fair	Poor	**Low**	200	2400	1700	
249	*Corymbia maculata*	12	8	Fair	Fair	**Medium**	300	3600	2000	
250	*Corymbia maculata*	8	5	Fair	Poor	**Medium**	300	3600	2000	
251	*Corymbia maculata*	12	10	Fair	Fair	**Medium**	360	4300	2200	
252	*Corymbia maculata*	12	8	Fair	Poor	**Low**	320	3800	2100	Co dominant
253	*Corymbia maculata*	9	5	Fair	Poor	**Low**	150	2000	1500	
254	*Corymbia maculata*	13	7	Fair	Poor	**Low**	300	3600	2000	
255	*Corymbia maculata*	4	3	Fair	Poor	**Low**	150	2000	1500	
256	*Corymbia maculata*	9	6	Good	Fair	**Medium**	320	3800	2100	
257	*Eucalyptus sideroxylon*	15	11	Poor	Poor	**Low**	601	7200	2700	Fungi, wounds epicormics
258	*Corymbia maculata*	11	5	Fair	Fair	**Medium**	300	3600	2000	
259	*Corymbia maculata*	10	4	Fair	Fair	**Medium**	250	3000	1800	
260	*Corymbia maculata*	11	5	Poor	Fair	**Low**	200	2400	1700	
261	*Corymbia maculata*	13	12	Good	Good	**High**	460	5500	2400	
262	*Corymbia maculata*	13	7	Fair	Fair	**Medium**	250	3000	1800	
263	*Eucalyptus sideroxylon*	9	8	Poor	Poor	**Low**	400	4800	2300	Wounds

Tree	Botanical Name	Height (m)	Spread (m)	Health	Structure	Retention Value	DBH (mm)	TPZ (mm)	SRZ (mm)	Notes
264	*Corymbia maculata*	15	11	Good	Fair	**Medium**	400	4800	2300	
265	*Corymbia maculata*	11	8	Fair	Fair	**Medium**	260	3100	1900	
266	*Corymbia maculata*	9	4	Poor	Poor	**Low**	150	2000	1500	
267	*Corymbia maculata*	5	4	Fair	Poor	**Low**	200	2400	1700	
268	*Eucalyptus haemastoma*	5	2	Poor	Poor	**Low**	100	2000	1500	
269	*Corymbia maculata*	12	9	Good	Fair	**Medium**	380	4600	2200	
270	*Corymbia maculata*	11	9	Good	Fair	**Medium**	330	4000	2100	
271	*Eucalyptus microcorys*	5	7	Poor	Fair	**Low**	200	2400	1700	
272	*Corymbia maculata*	13	8	Good	Fair	**Medium**	300	3600	2000	
273	*Corymbia maculata*	13	12	Good	Fair	**Medium**	400	4800	2300	
274	*Eucalyptus tereticornis*	13	11	Fair	Poor	**Low**	450	5400	2400	
275	*Eucalyptus sp.*	12	11	Good	Fair	**Medium**	510	6100	2500	
276	*Eucalyptus haemastoma*	5	7	Fair	Poor	**Low**	300	3600	2000	Multi trunked
277	*Eucalyptus sideroxylon*	7	5	Poor	Poor	**Low**	310	3700	2000	
278	*Eucalyptus haemastoma*	15	8	Fair	Poor	**Low**	400	4800	2300	
279	*Eucalyptus microcorys*	15	9	Fair	Poor	**Low**	600	7200	2700	Multi trunked
280	*Casuarina cunninghamiana*	12	6	Fair	Poor	**Low**	350	4200	2100	
281	*Casuarina cunninghamiana*	12	7	Fair	Poor	**Low**	350	4200	2100	
282	*Corymbia maculata*	15	9	Good	Fair	**Medium**	450	5400	2400	
283	*Corymbia maculata*	17	7	Good	Fair	**Medium**	400	4800	2300	
284	*Corymbia maculata*	15	12	Fair	Fair	**Medium**	400	4800	2300	

Tree	Botanical Name	Height (m)	Spread (m)	Health	Structure	Retention Value	DBH (mm)	TPZ (mm)	SRZ (mm)	Notes
285	*Corymbia maculata*	17	9	Fair	Fair	**Medium**	480	5800	2400	
286	*Corymbia maculata*	15	6	Good	Fair	**Medium**	330	4000	2100	
287	*Corymbia maculata*	15	9	Fair	Fair	**Medium**	380	4600	2200	
288	*Corymbia maculata*	15	8	Fair	Poor	**Low**	280	3400	1900	
289	*Corymbia maculata*	16	9	Good	Fair	**Medium**	420	5000	2300	
290	*Corymbia maculata*	15	6	Fair	Poor	**Low**	230	2800	1800	Suppressed
291	*Corymbia maculata*	13	11	Fair	Fair	**Medium**	300	3600	2000	
292	*Eucalyptus tereticornis*	15	9	Fair	Fair	**Medium**	480	5800	2400	
293	*Corymbia maculata*	10	4	Fair	Poor	**Low**	170	2000	1600	
294	*Corymbia maculata*	15	6	Fair	Fair	**Medium**	280	3400	1900	
295	*Corymbia maculata*	8	5	Fair	Fair	**Low**	200	2400	1700	
296	*Corymbia maculata*	9	5	Good	Fair	**Medium**	150	2000	1500	
297	*Corymbia maculata*	15	6	Poor	Poor	**Low**	230	2800	1800	
298	*Eucalyptus tereticornis*	11	6	Fair	Poor	**Low**	250	3000	1800	
299	*Eucalyptus tereticornis*	12	6	Poor	Poor	**Low**	250	3000	1800	
300	*Eucalyptus tereticornis*	5	3	Fair	Poor	**Low**	170	2000	1600	
301	*Corymbia maculata*	16	9	Good	Fair	**Medium**	320	3800	2100	
302	*Corymbia maculata*	12	4	Poor	Poor	**Low**	150	2000	1500	
303	*Corymbia maculata*	15	9	Fair	Fair	**Medium**	280	3400	1900	
304	*Corymbia maculata*	16	11	Fair	Poor	**Low**	380	4600	2200	Co dominant
305	*Corymbia maculata*	15	3	Poor	Poor	**Low**	200	2400	1700	
306	*Corymbia maculata*	12	9	Fair	Fair	**Medium**	500	6000	2500	

Tree	Botanical Name	Height (m)	Spread (m)	Health	Structure	Retention Value	DBH (mm)	TPZ (mm)	SRZ (mm)	Notes
307	*Corymbia maculata*	14	6	Fair	Fair	**Medium**	250	3000	1800	
308	*Corymbia maculata*	12	7	Fair	Poor	**Low**	250	3000	1800	Forks
309	*Corymbia maculata*	12	6	Fair	Fair	**Medium**	350	4200	2100	
310	*Corymbia maculata*	15	8	Good	Fair	**Medium**	400	4800	2300	
311	*Corymbia maculata*	12	7	Fair	Poor	**Low**	200	2400	1700	
312	*Corymbia maculata*	15	7	Fair	Fair	**Medium**	200	2400	1700	
313	*Corymbia maculata*	11	3	Poor	Poor	**Low**	250	3000	1800	
314	*Eucalyptus sp.*	8	9	Poor	Poor	**Low**	400	4800	2300	
315	*Corymbia maculata*	12	9	Good	Fair	**Medium**	400	4800	2300	
316	*Corymbia maculata*	12	7	Poor	Fair	**Low**	320	3800	2100	
317	*Eucalyptus haemastoma*	8	6	Fair	Poor	**Low**	200	2400	1700	
318	*Corymbia maculata*	18	15	Good	Fair	**Medium**	520	6200	2500	
319	*Corymbia maculata*	14	12	Good	Fair	**Medium**	530	6400	2500	
320	*Corymbia maculata*	12	11	Fair	Fair	**Medium**	350	4200	2100	
321	*Corymbia maculata*	12	11	Fair	Fair	**Medium**	370	4400	2200	
322	*Corymbia maculata*	9	6	Fair	Fair	**Medium**	300	3600	2000	
323	*Corymbia maculata*	15	12	Poor	Fair	**Low**	400	4800	2300	Sparse
324	*Corymbia maculata*	17	15	Fair	Fair	**Medium**	400	4800	2300	
325	*Corymbia maculata*	16	11	Good	Fair	**Medium**	470	5600	2400	
326	*Corymbia maculata*	13	11	Poor	Fair	**Low**	300	3600	2000	
327	*Corymbia maculata*	14	15	Fair	Fair	**Medium**	500	6000	2500	
328	*Corymbia maculata*	8	7	Fair	Poor	**Low**	300	3600	2000	Co dominant

Tree	Botanical Name	Height (m)	Spread (m)	Health	Structure	Retention Value	DBH (mm)	TPZ (mm)	SRZ (mm)	Notes
329	*Corymbia maculata*	9	8	Fair	Fair	**Medium**	300	3600	2000	
330	*Corymbia maculata*	14	12	Good	Fair	**Medium**	520	6200	2500	
331	*Eucalyptus sideroxylon*	11	8	Fair	Fair	**Medium**	300	3600	2000	
332	*Eucalyptus sideroxylon*	12	11	Poor	Poor	**Low**	550	6600	2600	Sparse
333	*Eucalyptus sideroxylon*	12	9	Fair	Fair	**Medium**	450	5400	2400	
334	*Angophora floribunda*	8	5	Fair	Fair	**Medium**	340	4100	2100	
335	*Angophora floribunda*	5	3	Poor	Poor	**Low**	109	2000	1500	
336	*Angophora floribunda*	5	3	Poor	Poor	**Low**	100	2000	1500	
337	*Eucalyptus fibrosa*	12	11	Good	Good	**High**	650	7800	2800	
338	*Angophora floribunda*	8	6	Fair	Poor	**Low**	150	2000	1500	
339	*Angophora floribunda*	5	3	Poor	Poor	**Low**	150	2000	1500	
340	*Angophora floribunda*	10	5	Fair	Fair	**Medium**	300	3600	2000	
341	*Angophora floribunda*	8	5	Fair	Poor	**Low**	250	3000	1800	
342	*Angophora floribunda*	5	4	Fair	Poor	**Low**	250	3000	1800	
343	*Angophora floribunda*	9	5	Fair	Fair	**Medium**	340	4100	2100	
344	*Angophora floribunda*	12	11	Fair	Fair	**Medium**	500	6000	2500	
345	*Angophora floribunda*	7	4	Fair	Fair	**Medium**	200	2400	1700	
346	*Angophora floribunda*	9	6	Fair	Fair	**Medium**	200	2400	1700	
347	*Angophora floribunda*	5	3	Poor	Poor	**Low**	150	2000	1500	
348	*Angophora floribunda*	5	3	Fair	Poor	**Low**	120	2000	1500	
349	*Angophora floribunda*	8	5	Fair	Fair	**Medium**	230	2800	1800	
350	*Angophora floribunda*	6	4	Poor	Poor	**Low**	120	2000	1500	

Tree	Botanical Name	Height (m)	Spread (m)	Health	Structure	Retention Value	DBH (mm)	TPZ (mm)	SRZ (mm)	Notes
351	*Angophora floribunda*	6	5	Fair	Fair	**Medium**	240	2900	1800	
352	*Angophora floribunda*	5	3	Poor	Poor	**Low**	200	2400	1700	
353	*Angophora floribunda*	7	6	Fair	Fair	**Medium**	400	4800	2300	
354	*Eucalyptus fibrosa*	11	12	Good	Fair	**Medium**	550	6600	2600	
355	*Eucalyptus fibrosa*	5	4	Fair	Poor	**Low**	250	3000	1800	Suppressed
356	*Eucalyptus fibrosa*	11	13	Good	Fair	**Medium**	1001	12000	3300	Minor lean
357	*Casuarina cunninghamiana*	7	6	Fair	Poor	**Low**	300	3600	2000	
358	*Casuarina cunninghamiana*	11	8	Poor	Poor	**Low**	340	4100	2100	
359	*Eucalyptus haemastoma*	10	6	Poor	Fair	**Low**	300	3600	2000	
360	*Eucalyptus sideroxylon*	10	5	Fair	Fair	**Medium**	200	2400	1700	
361	*Eucalyptus fibrosa*	6	4	Fair	Fair	**Low**	150	2000	1500	
362	*Eucalyptus fibrosa*	4	3	Fair	Poor	**Low**	120	2000	1500	
363	*Eucalyptus microcorys*	12	13	Good	Fair	**Medium**	520	6200	2500	
364	*Eucalyptus microcorys*	6	5	Poor	Fair	**Low**	440	5300	2300	Epicormics. Lopped
365	*Eucalyptus microcorys*	8	5	Fair	Fair	**Medium**	250	3000	1800	
366	*Eucalyptus microcorys*	7	5	Fair	Fair	**Medium**	300	3600	2000	
367	*Eucalyptus microcorys*	7	5	Fair	Fair	**Medium**	300	3600	2000	
368	*Eucalyptus microcorys*	9	6	Fair	Fair	**Medium**	401	4800	2300	
369	*Eucalyptus fibrosa*	13	12	Fair	Fair	**Medium**	470	5600	2400	
370	*Eucalyptus fibrosa*	15	12	Fair	Poor	**Low**	490	5900	2500	
371	*Eucalyptus fibrosa*	15	11	Good	Fair	**Medium**	480	5800	2400	

Tree	Botanical Name	Height (m)	Spread (m)	Health	Structure	Retention Value	DBH (mm)	TPZ (mm)	SRZ (mm)	Notes
372	*Eucalyptus microcorys*	10	11	Good	Fair	**Medium**	460	5500	2400	
373	*Eucalyptus microcorys*	11	9	Good	Fair	**Medium**	460	5500	2400	
374	*Eucalyptus microcorys*	9	11	Fair	Fair	**Medium**	800	3013	9600	Road verge
375	*Eucalyptus microcorys*	10	9	Fair	Fair	**Medium**	400	4800	2300	
376	*Eucalyptus microcorys*	11	14	Fair	Fair	**Medium**	1100	13000	3400	
377	*Eucalyptus microcorys*	15	15	Poor	Fair	**Low**	1200	14000	3600	
378	*Eucalyptus microcorys*	8	10	Fair	Fair	**Medium**	800	9600	3000	
379	*Eucalyptus microcorys*	16	8	Fair	Fair	**Medium**	700	8400	2800	
380	*Eucalyptus microcorys*	8	3	Fair	Fair	**Medium**	150	2000	1500	
381	*Eucalyptus microcorys*	14	10	Fair	Fair	**Medium**	300	3600	2000	
382	*Eucalyptus microcorys*	9	9	Fair	Fair	**Medium**	1000	12000	3300	
383	*Eucalyptus microcorys*	10	4	Fair	Fair	**Medium**	250	3000	1800	
384	*Eucalyptus microcorys*	10	8	Fair	Fair	**Medium**	250	3000	1800	
385	*Eucalyptus microcorys*	10	8	Fair	Fair	**Medium**	200	2400	1700	
386	*Eucalyptus microcorys*	10	6	Fair	Fair	**Medium**	200	2400	1700	
387	*Eucalyptus microcorys*	12	12	Fair	Fair	**Medium**	800	9600	3000	
388	*Eucalyptus microcorys*	12	3	Fair	Fair	**Medium**	150	2000	1500	
389	*Eucalyptus microcorys*	9	7	Fair	Fair	**Medium**	200	2400	1700	
390	*Eucalyptus microcorys*	8	4	Fair	Fair	**Medium**	150	2000	1500	
391	*Eucalyptus microcorys*	9	4	Fair	Fair	**Medium**	150	2000	1500	
392	*Eucalyptus microcorys*	10	4	Fair	Fair	**Medium**	150	2000	1500	
393	*Eucalyptus microcorys*	12	10	Fair	Fair	**Medium**	400	4800	2300	

Tree	Botanical Name	Height (m)	Spread (m)	Health	Structure	Retention Value	DBH (mm)	TPZ (mm)	SRZ (mm)	Notes
394	*Eucalyptus microcorys*	10	6	Fair	Fair	**Medium**	250	3000	1800	
395	*Eucalyptus microcorys*	12	6	Fair	Fair	**Medium**	250	3000	1800	
396	*Eucalyptus microcorys*	9	7	Fair	Fair	**Medium**	200	2400	1700	
397	*Eucalyptus microcorys*	14	5	Fair	Fair	**Medium**	250	3000	1800	
398	*Eucalyptus microcorys*	8	4	Fair	Fair	**Medium**	200	2400	1700	
399	*Eucalyptus microcorys*	12	8	Fair	Fair	**Medium**	250	3000	1800	
400	*Eucalyptus microcorys*	14	8	Fair	Fair	**Medium**	300	3600	2000	
401	*Eucalyptus microcorys*	10	8	Fair	Fair	**Medium**	300	3600	2000	
402	*Eucalyptus microcorys*	10	6	Fair	Fair	**Medium**	250	3000	1800	
403	*Eucalyptus microcorys*	12	10	Fair	Fair	**Medium**	200	2400	1700	
404	*Eucalyptus microcorys*	4	4	Fair	Fair	**Medium**	200	2400	1700	
405	*Eucalyptus microcorys*	5	4	Fair	Fair	**Medium**	150	2000	1500	
406	*Eucalyptus microcorys*	9	8	Fair	Fair	**Medium**	300	3600	2000	
407	*Eucalyptus microcorys*	10	6	Fair	Fair	**Medium**	150	2000	1500	
408	*Eucalyptus microcorys*	12	12	Fair	Fair	**Medium**	600	7200	2700	
409	*Eucalyptus microcorys*	14	7	Fair	Fair	**Medium**	250	3000	1800	
410	*Eucalyptus microcorys*	10	5	Fair	Fair	**Medium**	250	3000	1800	
411	*Eucalyptus microcorys*	10	12	Fair	Fair	**Medium**	450	5400	2400	
412	*Eucalyptus microcorys*	12	5	Fair	Fair	**Medium**	250	3000	1800	
413	*Eucalyptus microcorys*	12	5	Fair	Fair	**Medium**	200	2400	1700	
414	*Eucalyptus microcorys*	9	4	Fair	Fair	**Medium**	150	2000	1500	
415	*Eucalyptus microcorys*	12	6	Fair	Fair	**Medium**	250	3000	1800	

Tree	Botanical Name	Height (m)	Spread (m)	Health	Structure	Retention Value	DBH (mm)	TPZ (mm)	SRZ (mm)	Notes
416	*Eucalyptus microcorys*	14	10	Fair	Fair	**Medium**	500	6000	2500	
417	*Eucalyptus microcorys*	5	5	Fair	Fair	**Medium**	150	2000	1500	
418	*Eucalyptus microcorys*	10	8	Fair	Fair	**Medium**	350	4200	2100	
419	*Eucalyptus microcorys*	12	8	Fair	Fair	**Medium**	200	2400	1700	
420	*Eucalyptus microcorys*	9	6	Fair	Fair	**Medium**	150	2000	1500	
421	*Eucalyptus microcorys*	8	3	Fair	Fair	**Medium**	150	2000	1500	
422	*Eucalyptus microcorys*	14	10	Fair	Fair	**Medium**	600	7200	2700	
423	*Eucalyptus microcorys*	8	8	Fair	Fair	**Medium**	150	2000	1500	
424	*Eucalyptus microcorys*	12	8	Fair	Fair	**Medium**	350	4200	2100	
425	*Eucalyptus microcorys*	8	6	Fair	Fair	**Medium**	300	3600	2000	
426	*Eucalyptus microcorys*	12	10	Fair	Fair	**Medium**	250	3000	1800	
427	*Eucalyptus microcorys*	10	5	Fair	Fair	**Medium**	200	2400	1700	
428	*Eucalyptus microcorys*	8	5	Fair	Fair	**Medium**	150	2000	1500	
429	*Eucalyptus microcorys*	14	4	Fair	Fair	**Medium**	250	3000	1800	
430	*Eucalyptus microcorys*	8	4	Fair	Fair	**Medium**	150	2000	1500	
431	*Eucalyptus microcorys*	8	6	Fair	Fair	**Medium**	200	2400	1700	
432	*Eucalyptus microcorys*	16	12	Fair	Fair	**Medium**	500	6000	2500	
433	*Eucalyptus microcorys*	8	3	Fair	Fair	**Medium**	150	2000	1500	
434	*Eucalyptus microcorys*	12	5	Fair	Fair	**Medium**	250	3000	1800	
435	*Eucalyptus microcorys*	6	6	Fair	Fair	**Medium**	150	2000	1500	
436	*Eucalyptus microcorys*	6	4	Fair	Fair	**Medium**	150	2000	1500	
437	*Eucalyptus microcorys*	16	8	Fair	Fair	**Medium**	400	4800	2300	

Tree	Botanical Name	Height (m)	Spread (m)	Health	Structure	Retention Value	DBH (mm)	TPZ (mm)	SRZ (mm)	Notes
438	*Eucalyptus microcorys*	9	8	Fair	Fair	**Medium**	200	2400	1700	
439	*Eucalyptus microcorys*	14	8	Fair	Fair	**Medium**	350	4200	2100	
440	*Eucalyptus microcorys*	10	5	Fair	Fair	**Medium**	250	3000	1800	
441	*Eucalyptus microcorys*	10	8	Fair	Fair	**Medium**	400	4800	2300	
442	*Eucalyptus microcorys*	14	6	Fair	Fair	**Medium**	250	3000	1800	
443	*Eucalyptus microcorys*	8	3	Fair	Fair	**Medium**	150	2000	1500	
444	*Eucalyptus microcorys*	6	4	Fair	Fair	**Medium**	150	2000	1500	
445	*Eucalyptus microcorys*	14	6	Fair	Fair	**Medium**	350	4200	2100	
446	*Eucalyptus microcorys*	12	6	Fair	Fair	**Medium**	300	3600	2000	
447	*Eucalyptus microcorys*	14	3	Fair	Fair	**Medium**	150	2000	1500	
448	*Eucalyptus microcorys*	9	5	Fair	Fair	**Medium**	200	2400	1700	
449	*Eucalyptus microcorys*	12	8	Fair	Fair	**Medium**	250	3000	1800	
450	*Eucalyptus microcorys*	12	8	Fair	Fair	**Medium**	200	2400	1700	
451	*Eucalyptus microcorys*	6	6	Fair	Fair	**Medium**	150	2000	1500	
452	*Eucalyptus microcorys*	12	12	Fair	Fair	**Medium**	250	3000	1800	
453	*Eucalyptus microcorys*	16	7	Fair	Fair	**Medium**	250	3000	1800	
454	*Eucalyptus microcorys*	10	5	Fair	Fair	**Medium**	200	2400	1700	
455	*Eucalyptus microcorys*	12	5	Fair	Fair	**Medium**	200	2400	1700	
456	*Eucalyptus microcorys*	16	18	Fair	Fair	**Medium**	300	3600	2000	
457	*Eucalyptus microcorys*	12	4	Fair	Fair	**Medium**	200	2400	1700	
458	*Eucalyptus microcorys*	12	12	Fair	Fair	**Medium**	500	6000	2500	
459	*Eucalyptus microcorys*	14	8	Fair	Fair	**Medium**	250	3000	1800	

Tree	Botanical Name	Height (m)	Spread (m)	Health	Structure	Retention Value	DBH (mm)	TPZ (mm)	SRZ (mm)	Notes
460	*Eucalyptus microcorys*	20	9	Fair	Fair	**Medium**	350	4200	2100	
461	*Eucalyptus microcorys*	7	8	Fair	Fair	**Medium**	250	3000	1800	
462	*Eucalyptus microcorys*	6	6	Fair	Fair	**Medium**	250	3000	1800	
463	*Eucalyptus microcorys*	9	6	Fair	Fair	**Medium**	200	2400	1700	
464	*Eucalyptus microcorys*	9	6	Fair	Fair	**Medium**	450	5400	2400	
465	*Eucalyptus microcorys*	10	7	Fair	Fair	**Medium**	250	3000	1800	
466	*Eucalyptus microcorys*	8	6	Fair	Fair	**Medium**	350	4200	2100	
467	*Eucalyptus microcorys*	12	6	Fair	Fair	**Medium**	250	3000	1800	
468	*Eucalyptus microcorys*	14	7	Fair	Fair	**Medium**	200	2400	1700	
469	*Eucalyptus microcorys*	10	7	Fair	Fair	**Medium**	250	3000	1800	
470	*Eucalyptus microcorys*	14	10	Fair	Fair	**Medium**	350	4200	2100	
471	*Eucalyptus microcorys*	9	5	Fair	Fair	**Medium**	150	2000	1500	
472	*Eucalyptus microcorys*	8	5	Fair	Fair	**Medium**	200	2400	1700	
473	*Eucalyptus microcorys*	6	4	Fair	Fair	**Medium**	150	2000	1500	
474	*Eucalyptus microcorys*	6	4	Fair	Fair	**Medium**	150	2000	1500	
475	*Eucalyptus microcorys*	8	6	Fair	Fair	**Medium**	200	2400	1700	
476	*Eucalyptus microcorys*	6	6	Fair	Fair	**Medium**	250	3000	1800	
477	*Eucalyptus microcorys*	14	10	Fair	Fair	**Medium**	250	3000	1800	
478	*Eucalyptus microcorys*	12	9	Fair	Fair	**Medium**	350	4200	2100	
479	*Eucalyptus microcorys*	12	10	Fair	Fair	**Medium**	450	5400	2400	
480	*Eucalyptus microcorys*	10	6	Fair	Fair	**Medium**	150	2000	1500	
481	*Eucalyptus microcorys*	7	6	Fair	Fair	**Medium**	150	2000	1500	

Tree	Botanical Name	Height (m)	Spread (m)	Health	Structure	Retention Value	DBH (mm)	TPZ (mm)	SRZ (mm)	Notes
482	*Eucalyptus microcorys*	4	5	Fair	Fair	**Medium**	150	2000	1500	
483	*Eucalyptus microcorys*	14	10	Fair	Fair	**Medium**	400	4800	2300	

4. Tree protection plan

Following the approval of a proposed building envelope, the following measures are to be implemented to protect trees to be retained:

4.1 Tree pruning and removal

- All tree work is to be carried out by an arborist with a minimum AQF Level 3 qualification in Arboriculture.
- All tree work must be in accordance with *Australian Standard AS 4373-2007, Pruning of Amenity Trees* and the *NSW WorkCover Code of Practice for the Amenity Tree Industry* (1998).
- Permission must be granted from the relevant consent authority prior to removing or pruning of any of the subject trees.

4.2 Tree protection measures

Encroachment within the TPZ must be offset with a range of mitigation measures to ensure that impacts to the subject tree(s) are reduced or restricted wherever possible. Mitigation must be increased relative to the level of encroachment within the TPZ to ensure the subject tree remains viable. Tree protection measures should be implemented by the contractor and would include:

- Tree protection fencing must be established around the perimeter of the TPZ. If the protective fencing requires temporary removal, trunk, branch and ground protection must be installed and must comply with *AS 4970-2009 - Protection of trees on development sites*. Existing fencing and site hoarding may be used as tree protection fencing.
- If temporary access for machinery is required within the TPZ, ground protection measures will be required. The purpose of ground protection is to prevent root damage and soil compaction within the TPZ. Ground protection may include a permeable membrane such as geotextile fabric beneath a layer of mulch, crushed rock or rumble boards.
- Any additional construction activities within the TPZ of the subject trees must be assessed and approved by the project arborist and must comply with *AS 4970-2009 - Protection of trees on development sites*.

4.3 Hold points, inspection and certification

A copy of this report must be available on-site prior to the commencement of works, and throughout the entirety of the project. Hold points have been specified in the schedule of works below to ensure trees are adequately protected during construction. It is the responsibility of the principal contractor to complete each of the tasks.

- Pre-construction
  - Indicate clearly (with spray paint on trunks) trees marked for removal.
- During construction
  - Monthly inspection of trees by the project arborist (or other timing as agreed with the project arborist)

    - Notification to be given prior to the commencement of work within the tree protection zone, with supervision by the project arborist of any work undertaken in this zone.
- Post-construction
    - Final inspection of trees by project arborist after all major construction has ceased and following the removal of tree protection measures.

Once each stage is reached, the work will be inspected and certified by the project arborist and the next stage may commence. Alterations to this schedule may be required due to necessity, however, this shall be through consultation with the project arborist only.

4.4 Replacement planting

Any loss of trees should be offset with replacement planting in accordance with the relevant offset policy and in consultation with the relevant consent authority.

5. References

5.1 General references

Barrell, J. 2001. 'SULE: Its use and status into the new millennium', in *Management of mature trees*, Proceedings of the 4th NAAA Tree Management Seminar, NAAA, Sydney.

Brooker M.I.H, Kleinig D.A. 2006. *Field Guide to Eucalypts. Volume 1, South-eastern Australia,* 3rd ed Bloomings Books, Melbourne

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

Harris, R.W., Matheny, N.P., and Clark, J.R., 1999. *Arboriculture: integrated management of landscape trees, shrubs, and vines*, Prentice Hall, Upper Saddle River, New Jersey.

Mattheck, C. and Breloer, H. 1994. 'Field Guide for Visual Tree Assessment' *Arboricultural Journal*, Vol 18 pp 1-23.

Mattheck, C. 2007. *Updated Field Guide for Visual Tree Assessment*. Karlsruhe: Forschungszentrum Karlsruhe.

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

Robinson L, 2003. *Field Guide to the Native Plants of Sydney*, 3rd ed, Kangaroo Press, East Roseville NSW

Standards Australia 2007. *Australian Standard: Pruning of amenity trees, AS 4373 (2007)*, Standards Australia, Sydney.

Standards Australia 2009. *Australian Standard: Protection of trees on development sites, AS 4970 (2009).* Standards Australia, Sydney.

5.2 Project specific references

Rygate & Company Pty Ltd, *Plan showing details and levels Lot 74 DP 1141724 No.80 Betty Cuthbert Drive*, *Revision A*, dated 12/04/2019

NSW Government, *Holroyd City Council's Local Environmental Plan (LEP) 2013 (Clause 5.9) Development Control Plan (DCP) 2013 (Part A – Section 4)*

Appendix A Maps

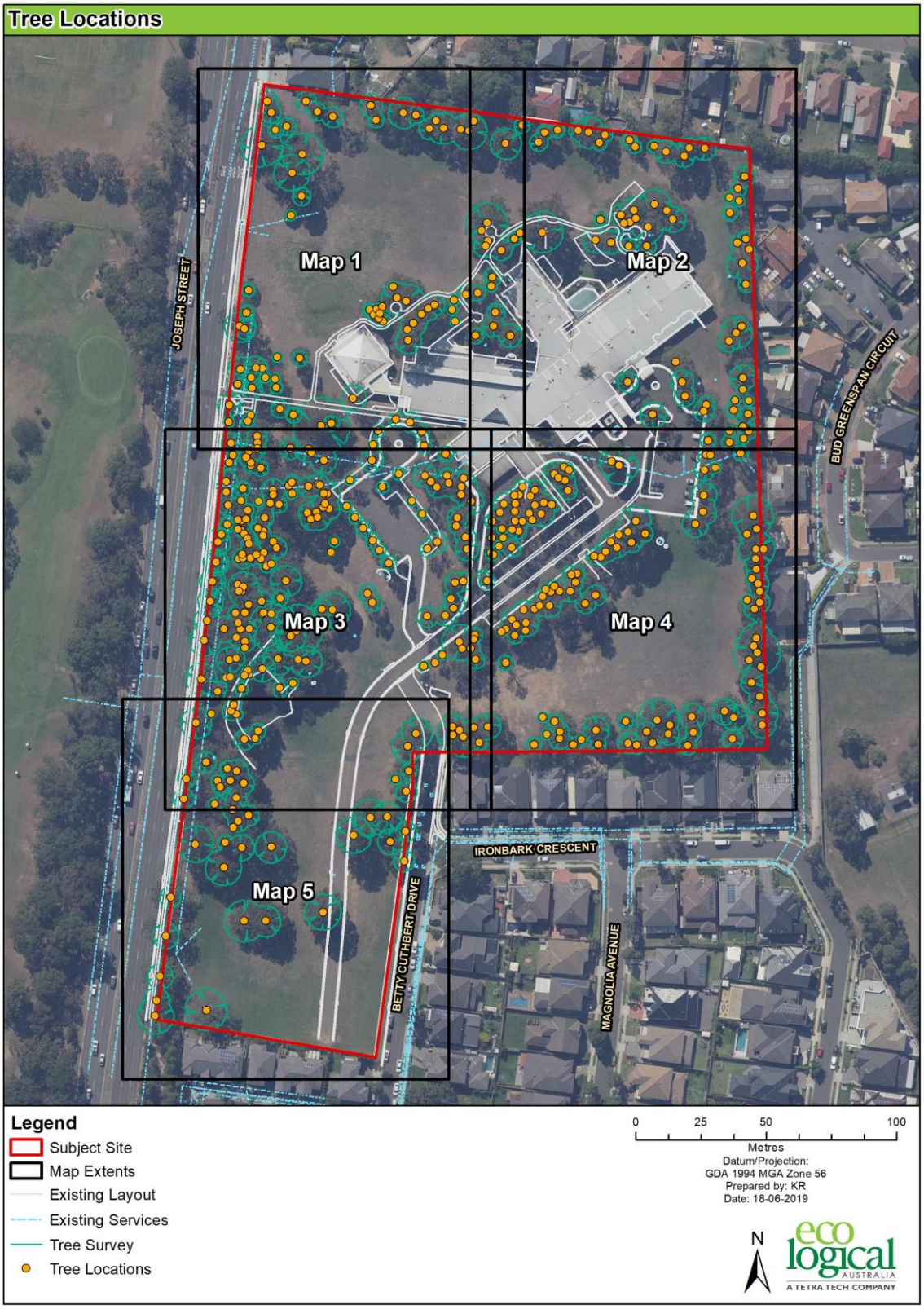

Figure 2: Tree locations map

Figure 3: Tree retention map

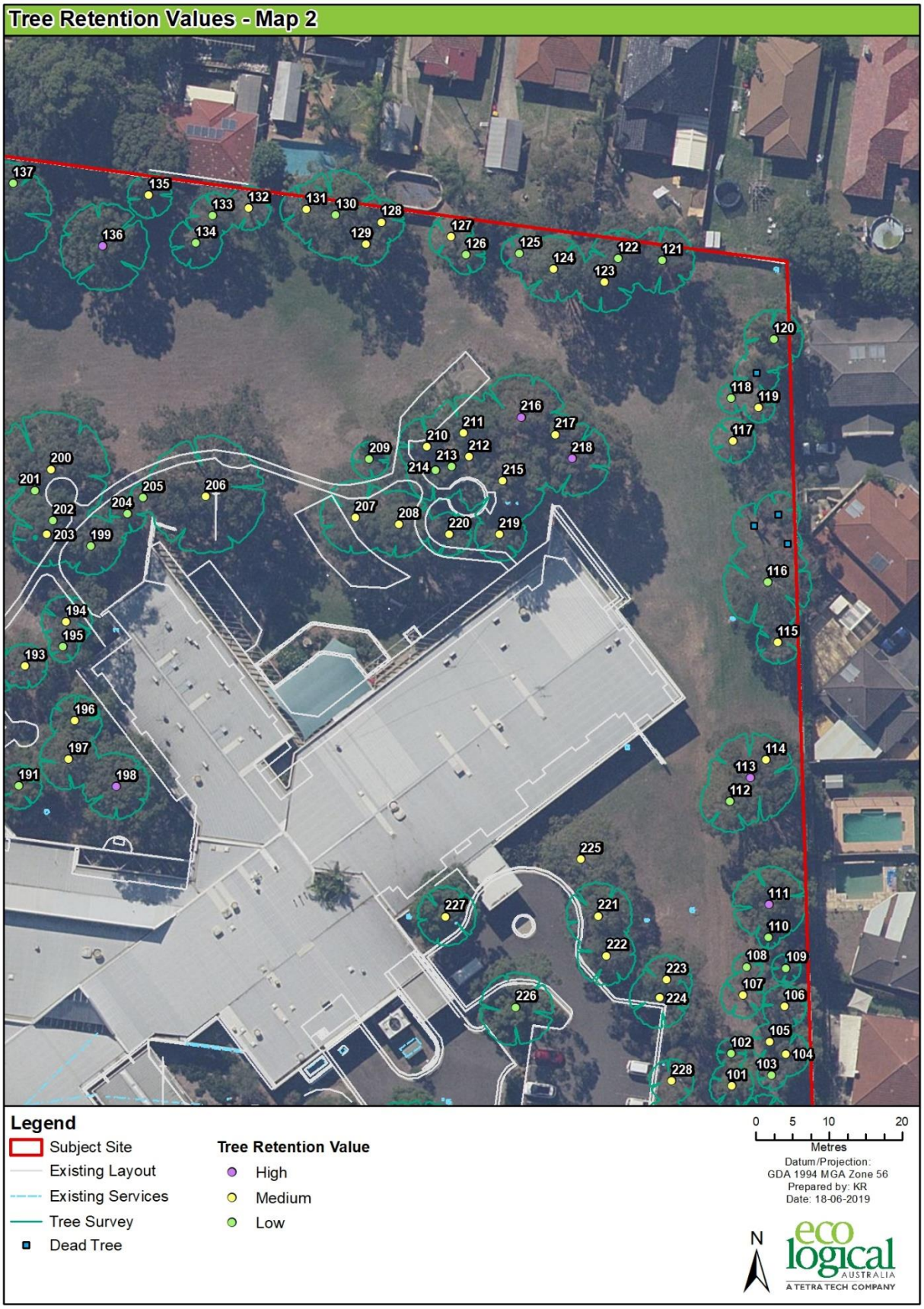

Figure 4: Tree retention map

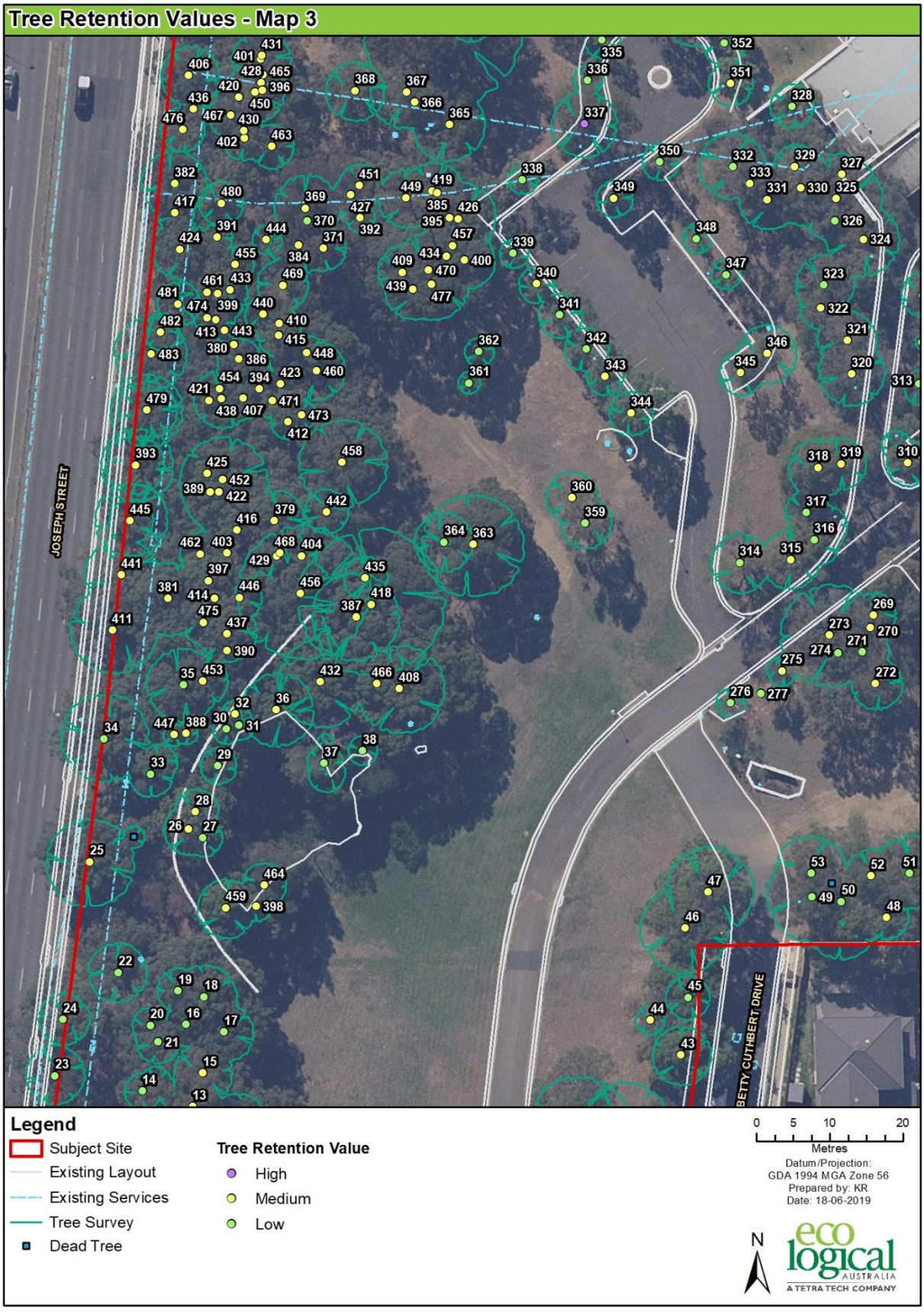

Figure 5: Tree retention map

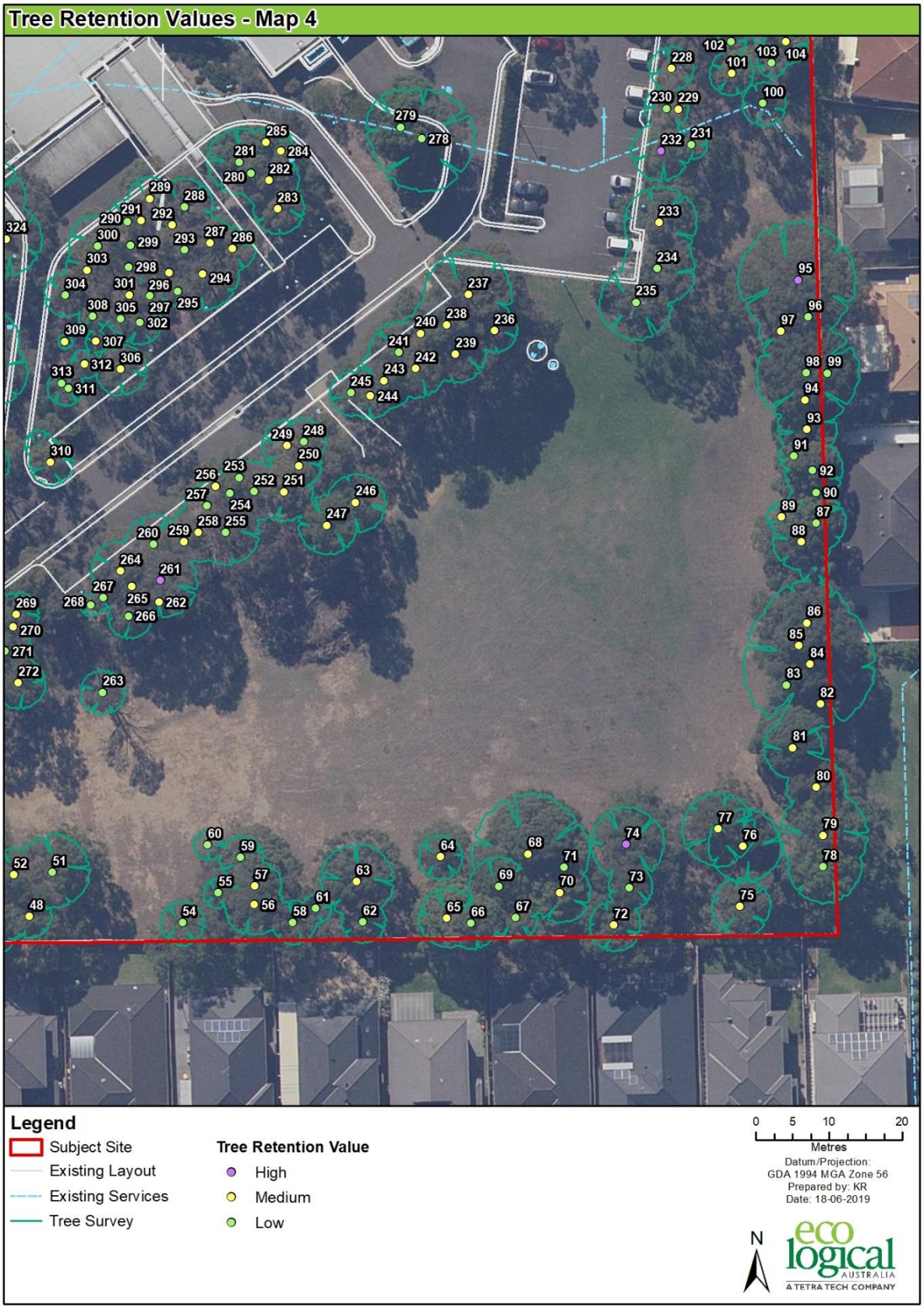

Figure 6: Tree retention map

Figure 7: Tree retention map

Appendix B Tree retention assessment method

B1 Tree Significance Assessment Criteria - STARS©

Low	Medium	High
The tree is in fair-poor condition and good or low vigour.	The tree is in fair to good condition	The tree is in good condition and good vigour
The tree has form atypical of the species	The tree has form typical or atypical of the species	The tree has a form typical for the species
The tree is not visible or is partly visible from the surrounding properties or obstructed by other vegetation or buildings	The tree is a planted locally indigenous or a common species with its taxa commonly planted in the local area	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 provides a minor contribution or has a negative impact on the visual character and amenity of 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 is listed as a heritage item, threatened species or part of an endangered ecological community or listed on Council's significant tree register
The tree is a young specimen which may or may not have reached dimensions to be protected by local Tree Preservation Orders or similar protection mechanisms and can easily be replaced with a suitable specimen	The tree provides a fair contribution to the visual character and amenity of the local area	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'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's growth is moderately restricted by above or below ground influences, reducing its ability to reach dimensions typical for the taxa in situ	The tree supports social and cultural sentiments or spiritual associations, reflected by the broader population or community group or has commemorative values.
The tree is listed as exempt under the provisions of the local Council Tree Preservation Order or similar protection mechanisms		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.
The tree has a wound or defect that has the potential to become structurally unsound.		
The tree is an environmental pest species due to its invasiveness or poisonous/allergenic properties.		
The tree is a declared noxious weed by legislation		

B2 Matrix assessment

		Tree significance				
		High	Medium	Low		
Useful Life Expectancy	Long >40 years					
	Medium 15-40 years					
	Short <1-15 years					
	Dead					

Legend:

	Priority for retention (High): Tree considered important so should be retained and protected. Design modification or re-location of structure should be considered to accommodate the setbacks as prescribed by the *Australian Standard AS4970 Protection of trees on development sites*. Tree sensitive construction measures must be implemented if works are to proceed within the Tree Protection Zone.
	Consider for retention (Medium): Tree considered less important, however**,** retention should remain priority. Removal considered only if adversely affecting the proposed building/works and all other alternatives have been considered and exhausted.
	Consider for removal (Low): Tree not considered important for retention, nor requiring special works or design modification to be implemented for their retention.
	Consider for removal (Low): Tree not considered important for retention, nor requiring special works or design modification to be implemented for their retention.

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