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LET'S TALK ABOUT TREES
Managing the Urban Forest
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INSTITUTE OF AUSTRALIAN CONSULTING ARBORISTS

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CLIENT DETAILS

Ample Investments

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Arboricultural Assessment for:

151, 161 & 171 Jetty Road, DRYSDALE

Ample Investments Development

TREE ASSESMENT
December 2016

This report has been commissioned by:

Ample Investments

In reference to

Tree Health & Management

December 2016

Version 1.13 (Final)


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1.0 Key Objectives

This report has been commissioned by Ample Investments for the undertaking of a visual tree assessment of trees located on three parcels of land referred to as 151 Jetty Road DRYSDALE, 161 Jetty Road DRYSDALE and 171 Jetty Road DRYSDALE, and the corner allotments at the intersection of Whyndam Street and Central Road DRYSDALE.

It looks at the current health of tree assets on the allotments, identifies them by genus and species and records tree protection zones so as future planning can be undertaken for the development of the allotments.

The key purpose for this report is to assist in managing the useful safe retention of trees to ensure the areas tree assets are managed well through the developmental process for the site, and the sound assets are protected for retention post works.

2.0 Methodology

The inspection for this report was performed on site, on the 28th of November 2016, by Matthew Branagh, Level 5 Consulting Arborist, from Let's Talk About Trees.

A ground-based Visual Tree Assessment was performed on the above-ground section of the tree, in line with modern Arboricultural Practices and Principles, and AS 4970 – 2009 – Protection of Trees on Development Sites, AS 4373 – 2007 – Pruning of Amenity Trees.

All trees on the site were inspected for Health, Vigour, Structure, and suitability to planting location.

All trees were located on site in conjunction with a licenced surveyor.

3.0 Observations / Discussions

All sites are residential gardens, all are landscaped and all have planted vegetation.

No tree assets identified are remnant indigenous, most are native.

No very mature tree assets were seen, the majority of trees were semi mature and mature, the gardens of the allotments having been established between 30 and 40 years ago.

The trees are scattered across the gardens of the sites and are in various stages of health.

The trees at 151 Jetty road show decline related to past dry weather conditions. Deadwood and dieback is present in the canopy of many specimens. Retention value of these trees is mixed however most do not have high long term retention value.

The trees at 161 Jetty road are typical garden shrubs planted as a semi-rural landscape. The trees much like those at 151, show signs of past drought stress. Management over recent times has not been extensive and whilst some of the trees show retention value many would not carry forward with the strong retention value sought in a future site development.

The trees of 171 Jetty road have received a higher level of management. Many of the assets are in good health and condition. Some of the trees of this allotment have a high long term retention value.

Trees on the corner of Wyndham Street and Central road are all common garden species from the area, have predominantly been impacted by utility line clearing, drought and most have a declining health or poor structure. Trees in this location have a low retention value.

The table in this report (table 1) offers the recommendations of each tree asset of the sites. It recommends the removal of some and the pruning of others.

Some assets are currently safe; however without the correct on going management have the likelihood of becoming declining assets and also needing to be removed.

Potential for relocation of some trees within the site.

It was asked in my brief for consideration be given to the potential of some trees to be relocated. Whilst often this is not a viable situation given the cost in re-establishing mature trees and the availability of semi mature replacements, some trees on the site do offer the ability for this to occur. Full assessment for this process was not made as part of this report and further planning would be needed if relocation was considered. The trees numbered 160, 174 and 176 are subject trees with considered good health and a potential for relocation. Once the full development of the site is known this list could be reassessed to include impacted trees and a special report could assess all trees impacted and make full consideration and assessment for the relocation of trees.

The following list is to be referenced to the site survey map in the appendix of this report and is intended as a working list for locating and the undertaking of required maintenance of the tree assets of the site.

The tree numbers in the table reference both the site map[1] for tree location and the tag placed on the trees for accurate identification on site at the time of the inspection.

1 Refer to appendix

TABLE 1

No.	Identification	Est. Age	ULE	Health	Structure	Significance	Hazard	Est. Height	DBH (cm)	TPZ (Radius)	Comment
1	*Cupressus Macrocarpa – Monterey Cypress*	M	M	P	P	L	L	12	42	5	Part of Plantation
2	*Cupressus Macrocarpa – Monterey Cypress*	M	M	F	P	L	L	12	42	5	All average/Poor health. All under pruned. Dying throughout canopy
3	*Cupressus Macrocarpa – Monterey Cypress*	M	M	F	P	L	L	12	42	5	All average/Poor health. All under pruned. Dying throughout canopy
4	*Cupressus Macrocarpa – Monterey Cypress*	M	M	F	P	L	L	12	42	5	Dead
5	*Cupressus Macrocarpa – Monterey Cypress*	M	M	F	P	L	L	12	42	5	All average/Poor health. All under pruned. Dying throughout canopy
6	*Cupressus Macrocarpa – Monterey Cypress*	M	M	F	P	L	L	12	42	5	Dead
7	*Cupressus Macrocarpa – Monterey Cypress*	M	M	F	P	L	L	12	42	5	All average/Poor health. All under pruned. Dying throughout canopy
8	*Cupressus Macrocarpa – Monterey Cypress*	M	M	F	P	L	L	12	42	5	All average/Poor health. All under pruned. Dying throughout canopy
9	*Cupressus Macrocarpa – Monterey Cypress*	M	M	F	P	L	L	12	42	5	All average/Poor health. All under pruned. Dying throughout canopy
10	*Cupressus Macrocarpa – Monterey Cypress*	M	M	F	P	L	L	12	42	5	All average/Poor health. All under pruned. Dying throughout canopy
11	*Cupressus Macrocarpa – Monterey Cypress*	M	M	F	P	L	L	12	42	5	All average/Poor health. All under pruned. Dying throughout canopy

No.	Identification	Est. Age	ULE	Health	Structure	Significance	Hazard	Est. Height	DBH (cm)	TPZ (Radius)	Comment
12	*Cupressus Macrocarpa – Monterey Cypress*	M	M	F	P	L	L	12	42	5	All average/Poor health. All under pruned. Dying throughout canopy
13	*Cupressus Macrocarpa – Monterey Cypress*	M	M	F	P	L	L	12	42	5	All average/Poor health. All under pruned. Dying throughout canopy
14	*Schinus mollie - Pepper Corn*	SM	L	F	G	L	L	7	31	3.7	Sound small specimen
15	*Schinus mollie - Pepper Corn*	SM	L	F	G	L	L	8	51	6.1	Sound small specimen
16	*Salix Babalonica*	SM	S	P	P	L	M	8	49	5.9	Failing tree 40% dead
17	*Cupressus Macrocarpa – Monterey Cypress*	M	M	G	F	L	M	14	82	9.8	Sound tree mature 1 x main scaffold. Previously removed. Impacting tree structure and form. Low rate value.
18	*Cupressus Macrocarpa – Monterey Cypress*	M	M	P	P	L	L	12	77	9.2	All average/Poor health. All under pruned. Dying throughout canopy
19	*Cupressus Macrocarpa – Monterey Cypress*	M	M	P	P	L	L	12	77	9.2	All average/Poor health. All under pruned. Dying throughout canopy
20	*Cupressus Macrocarpa – Monterey Cypress*	M	M	P	P	L	L	12	77	9.2	All average/Poor health. All under pruned. Dying throughout canopy
21	*Cupressus Macrocarpa – Monterey Cypress*	M	M	P	P	L	L	12	77	9.2	All average/Poor health. All under pruned. Dying throughout canopy
22	*Cupressus Macrocarpa – Monterey Cypress*	M	M	P	P	L	L	12	77	9.2	All average/Poor health. All under pruned. Dying throughout canopy

No.	Identification	Est. Age	ULE	Health	Structure	Significanc	Hazard	Est. Height	DBH (cm)	TPZ (Radius)	Comment
23	*Cupressus Macrocarpa – Monterey Cypress*	M	M	P	P	L	L	12	77	9.2	All average/Poor health. All under pruned. Dying throughout canopy
24	*Cupressus Macrocarpa – Monterey Cypress*	M	M	P	P	L	L	12	77	9.2	All average/Poor health. All under pruned. Dying throughout canopy
25	*Cupressus Macrocarpa – Monterey Cypress*	M	M	P	P	L	L	12	77	9.2	All average/Poor health. All under pruned. Dying throughout canopy
26	*Cupressus Macrocarpa – Monterey Cypress*	M	M	P	P	L	L	12	77	9.2	All average/Poor health. All under pruned. Dying throughout canopy
27	*Cupressus Macrocarpa – Monterey Cypress*	M	M	G	G	M	L	12	77	9.2	All average/Poor health. All under pruned. Dying throughout canopy
28	*Cupressus Macrocarpa – Monterey Cypress*	M	M	G	G	M	L	12	77	9.2	All average/Poor health. All under pruned. Dying throughout canopy
29	*Cupressus Macrocarpa – Monterey Cypress*	M	M	G	G	M	L	12	77	9.2	All average/Poor health. All under pruned. Dying throughout canopy
30	*Cupressus Macrocarpa – Monterey Cypress*	M	M	G	G	M	L	12	77	9.2	All average/Poor health. All under pruned. Dying throughout canopy
31	*Cupressus Macrocarpa – Monterey Cypress*	M	M	G	G	M	L	12	77	9.2	All average/Poor health. All under pruned. Dying throughout canopy
32	*Cupressus Macrocarpa – Monterey Cypress*	M	M	G	G	M	L	12	77	9.2	All average/Poor health. All under pruned. Dying throughout canopy
33	*Cupressus Macrocarpa – Monterey Cypress*	M	M	G	G	M	L	12	77	9.2	All average/Poor health. All under pruned. Dying throughout canopy
34	*Cupressus Macrocarpa – Monterey Cypress*	M	M	G	G	L	L	12	77	9.2	Dead Stump

No.	Identification	Est. Age	ULE	Health	Structure	Significanc	Hazard	Est. Height	DBH (cm)	TPZ (Radius)	Comment
35	*A*cacia iteaphylla – Narrow leafed wattle	M	S	G	G	L	L	8	34	4.1	Mature tree. Good condition with short ULE
36	*Salix Tortuosa - Curly Willow*	M	S	P	P	L	L	10	28	2	Poor Specimen. Dead wood throughout canopy. Low retention value
37	*Cupressus Macrocarpa – Monterey Cypress*	M	M	P	P	L	L	14	51	6.1	Dead
38	*Cupressus Macrocarpa – Monterey Cypress*	M	M	P	P	L	L	14	51	6.1	Fair Condition. Mature Plantation
39	*Cupressus Macrocarpa – Monterey Cypress*	M	M	P	P	L	L	14	51	6.1	Fair Condition. Mature Plantation
40	*Cupressus Macrocarpa – Monterey Cypress*	M	M	P	P	L	L	14	51	6.1	Fair Condition. Mature Plantation
41	*Cupressus Macrocarpa – Monterey Cypress*	M	M	P	P	L	L	14	51	6.1	Fair Condition. Mature Plantation
42	*Cupressus Macrocarpa – Monterey Cypress*	M	M	P	P	L	L	14	51	6.1	Fair Condition. Mature Plantation
43	*Cupressus Macrocarpa – Monterey Cypress*	M	M	P	P	L	L	14	51	6.1	Fair Condition. Mature Plantation
44	*Cupressus Macrocarpa – Monterey Cypress*	M	M	P	P	L	L	14	51	6.1	Fair Condition. Mature Plantation
45	*Cupressus Macrocarpa – Monterey Cypress*	M	M	P	P	L	L	14	51	6.1	Fair Condition. Mature Plantation
46	*Poplar yunnanensis – White Poplar*	SM	L	G	G	L	L	12	24	2.9	Small sound young tree bifurcated.

No.	Identification	Est. Age	ULE	Health	Structure	Significanc	Hazard	Est. Height	DBH (cm)	TPZ (Radius)	Comment
47	*Eucalyptus Camaldulensis – River Red Gum*	SM	L	F	F	M	L	18	92	11	Sound tree. Fair health has had 1 major scaffold removed
48	*Eucalyptus Globulus – Blue Gum*	M	M	P	P	L	M	23	90	10.8	Poor health. Dead wood throughout canopy
49	*Eucalyptus Globulus – Blue Gum*	M	M	P	P	L	M	24	125	15	Poor health. Dead wood throughout canopy
50	*Eucalyptus radiata – Peppermint Gum*	SM	L	G	G	M	L	18	62	7.4	Sound small mature tree. Good form
51	*Melaleuca armillaris – Honey Bracelet Myrtle*	SM	M	P	P	L	L	6	23	2.8	Small tree in fair condition. Low retention value
52	*Eucalyptus Camaldulensis – River Red Gum*	SM	L	G	F	M	M	16	62	7.4	Dead wood in main structure. Small tree planted ind. native
53	*Eucalyptus Camaldulensis – River Red Gum*	SM	M	F	F	L	L	10	35	4.2	Planted tree in boundary plantation
54	*Eucalyptus Camaldulensis – River Red Gum*	SM	M	F	F	L	L	10	39	4.7	Planted tree in boundary plantation
55	*Eucalyptus Camaldulensis – River Red Gum*	SM	M	F	F	L	L	10	43	5.2	Planted tree in boundary plantation
56	*Poplar yunnanensis – White Poplar*	SM	L	G	G	L	L	13	32	3.8	Sound tree in good form and condition
57	*Poplar yunnanensis – White Poplar*	SM	L	G	G	L	L	13	47	5.6	Sound tree in good form and condition
58	*Grevillea robusta – Silky Oak*	SM	S	P	P	L	H	11	38	4.6	Tree has a partial scalf cut on main stem – Dangerous tree.
59	*Eucalyptus gomphocephala – Tuart Gum*	SM	M	F	P	L	L	9	42	5.0	Plantation tree in removable health. Low retention value
60	*Eucalyptus gomphocephala – Tuart Gum*	SM	M	F	P	L	L	9	43	5.2	Plantation tree in removable health. Low retention value

No.	Identification	Est. Age	ULE	Health	Structure	Significanc	Hazard	Est. Height	DBH (cm)	TPZ (Radius)	Comment
61	*Eucalyptus gomphocephala – Tuart Gum*	SM	M	F	P	L	L	4	19	2.3	Plantation tree in removable health. Low retention value
62	*Eucalyptus gomphocephala – Tuart Gum*	SM	M	F	P	L	L	9	53	6.4	Some Plantation trees. Low retention value. Fair condition
63	*Eucalyptus gomphocephala – Tuart Gum*	SM	M	F	P	L	L	9	45	5.4	Some Plantation trees. Low retention value. Fair condition
64	*Eucalyptus gomphocephala – Tuart Gum*	SM	M	F	P	L	L	10	61	7.3	Some Plantation trees. Low retention value. Fair condition
65	*Lagunaria pattersonii – Pyramid Tree*	SM	Y	F	P	L	L	8	26	3.1	Bifurcated multi stemmed. Poor structure. Low retention value
66	*Photinea robusta – Xmas Bush*	M	M	G	G	L	L	6	8	2	Multi stemmed garden shrub. Low retention value.
67	*Swains Golden Cypress*	SM	L	G	G	L	L	8	30	3.6	Sound small tree. Good street health and form
68	*Salix Tortuosa - Curly Willow*	SM	L	G	G	L	L	10	50	6	Multi stemmed. Good form and health
69	*Alnus jorullensis – Evergreen elder*	SM	L	G	G	L	L	12	32	3.8	Sound tree in good condition. Multi limbed open canopy
70	*Lauris nobilis – Bay Tree*	Y	L	G	G	L	L	10	16	2	Sound tree in good condition.
71	*Black Fig - Fruit Tree*	SM	L	G	G	L	L	9	5	2	Multi stemmed from bill tree in good health. Fruit tree species
72	*Eucalyptus cladocalyx – Sugar gum*	M	M	P	P	L	M	12	41	4.9	Poor health and condition. Dead wood throughout. Major trunk defects
73	*Eucalyptus cladocalyx – Sugar gum*	M	M	P	P	L	M	14	47	5.6	Poor health and condition. Dead wood throughout. Major trunk defects
74	*Melaleuca armillaris – Honey Bracelet Myrtle*	M	D	P	P	L	M	8	43	5.2	Plantation stretches approx. 20 trees from tree 72
75	*Melia azedarach – White Cedar*	M	L	G	G	L	L	12	48	5.8	Sound tree in good condition. Worthy of retention
76	*Eucalyptus gomphocephala – Tuart Gum*	M	L	G	G	L	L	14	60	7.2	Sound tree with open spreading canopy
77	*Melia azedarach – Lilly Pilly*	Y	L	G	G	L	L	9	29	3.5	Sound young tree in good condition

No.	Identification	Est. Age	ULE	Health	Structure	Significanc	Hazard	Est. Height	DBH (cm)	TPZ (Radius)	Comment
78	*Eucalyptus gomphocephala – Tuart Gum*	SM	L	G	G	L	L	10	67	8	Mature open spreading crown c/w throughout
79	*Eucalyptus gomphocephala – Tuart Gum*	SM	L	G	G	L	L	10	68	8.2	Mature open spreading crown c/w throughout
80	*Eucalyptus gomphocephala – Tuart Gum*	SM	S	P	P	L	M	6	35	4.2	Poor dying stunted. Part Specimen
81	*Eucalyptus gomphocephala – Tuart Gum*	SM	L	G	G	L	L	10	65	7.8	Mature open spreading crown. Dead wood throughout
82	*Eucalyptus gomphocephala – Tuart Gum*	SM	L	G	G	L	L	10	66	7.9	Mature open spreading crown. Dead wood throughout
83	*Eucalyptus gomphocephala – Tuart Gum*	SM	L	G	G	L	L	10	64	7.7	Mature open spreading crown. Dead wood throughout
84	*Cupressus Macrocarpa – Monterey Cypress*	M	L	G	F	M	L	18	145	15	Multi stemmed mature tree in fair condition
85	*Ulmus procera Louis Van Houtii – Golden Elm*	SM	L	G	G	M	L	12	34	4.1	Sound small specimen tree. Worthy of retention
86	*Cupressus Macrocarpa – Monterey Cypress*	SM	L	G	G	L	L	6	23	2.8	Heavily trimmed against ex dwelling. Not worthy of retention
87	*Ulmus procera Louis Van Houtii – Golden Elm*	SM	L	G	G	M	L	12	35	4.2	Sound semi mature tree worthy of retention
88	*Eucalyptus gomphocephala – Tuart Gum*	M	L	G	G	M	L	20	130	15	Site tree – lerp infestation. Good condition. Dead wood minor in canopy. Sound tree
89	*Melaleuca armillaris – Honey Bracelet Myrtle*	M	S	P	P	L	M	D	D	D	Failed tree. Requires removal
90	*Eucalyptus gomphocephala – Tuart Gum*	M	S	P	P	L	L	5	23	2.8	Stunted. Poor form. Not worthy of retention
91	*Eucalyptus gomphocephala – Tuart Gum*	M	L	F	G	L	L	16	92	11	Large tree. Open spreading crown. Dead wood in canopy. Phellinus fungus present in trunk

No.	Identification	Est. Age	ULE	Health	Structure	Significance	Hazard	Est. Height	DBH (cm)	TPZ (Radius)	Comment
92	*Eucalyptus gomphocephala – Tuart Gum*	M	M	P	P	L	L	8	34	4.1	Poor heavy specimen. Not worthy of retention
93	*Eucalyptus gomphocephala – Tuart Gum*	M	M	P	P	L	L	8	37	4.4	Poor heavy specimen. Not worthy of retention
94	*Corymbia maculata – Spotted Gum*	Y	L	G	G	L	L	12	12	2	Young tree in good health and condition
95	*Corymbia maculata – Spotted Gum*	Y	L	G	G	L	L	12	12	2	Young tree in good health and condition
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96	*Angophora Costata – Apple gum*	SM	L	G	G	M	L	9	46	5.5	Sound multi stemmed tree in good health and condition
97	*Eucalyptus g*lobulus – Blue Gum	M	L	G	G	L	L	18	89	10.7	Mature tree in good condition. Dead wood in canopy
98	*Eucalyptus* **b**otryoides – Mahogany Gum	M	L	G	G	L	L	16	56	6.7	Good sound tree for this species
99	*Pinus radiata – Radiata pine*	D	D	D	D	D	D	D	D	D	Dead Stump. Requires removal
100	*Eucalyptus g*lobulus – Blue Gum	M	L	G	G	L	L	18	77	9.2	Sound mature tree in good health
101	*Eucalyptus nicholii – Peppermint Gum*	M	M	F	F	L	L	14	29	3.5	Mature tree stunted in growth. Dead wood in canopy
102	*Cupressus italic – Pencil Cypress*	M	L	G	G	H	L	9	69	8.3	Sound young tree in good condition
103	*Cupressus italic – Pencil Cypress*	M	L	G	G	H	L	9	10	2	Sound young tree in good condition
104	*Corymbia maculata – Spotted Gum*	M	L	G	G	M	L	18	10	2	Sound tree open spreading crown. Minimal dead wood in canopy
105	*Agonis flexuosa – Willow Myrtle*	M	L	G	P	L	L	6	37	4.4	Stunted tree in fair form and condition. Low retention value
106	*Corymbia ficifolia – WA Flowering Gum*	M	L	G	P	L	L	6	37	4.4	Multi stemmed dead tree. Requires removal

No.	Identification	Est. Age	ULE	Health	Structure	Significance	Hazard	Est. Height	DBH (cm)	TPZ (Radius)	Comment
107	*Pittosporum undulatum – Sweet Pittosporum*	M	L	G	G	L	L	7	33	4	Weed species. Recommend removal
108	*Eucalyptus botryoides – Mahogany Gum*	D	D	D	D	D	D	D	D	D	Stump regenerated. Removal required.
109	*Melaleuca armillaris – Honey Bracelet Myrtle*	M	S	G	P	L	M	8	33	4	Poor specimen not worth retention
110	*Acacia bailyana – Cootamundra wattle*	M	S	P	P	L	M	7	32	3.8	Poor specimen not worth retention
111	*Corymbia ficifolia – WA flowering gum*	M	L	G	G	M	L	9	39	4.7	Poor specimen not worth retention
112	*Dead Gum*	D	D	D	D	D	D	D	D	D	Dead tree. Requires removal
113	*Eucalyptus ovata – Swamp Gum*	M	S	P	P	L	H	6	27	3.2	95% Dead. Recommend Removal
114	*Eucalyptus Radiata – Peppermint gum*	M	L	G	G	M	L	14	46	5.5	Sound SM trees
115	*Schinus mollie - Peppercorn*	M	L	G	G	L	L	10	39	4.7	Sound multi stemmed open spreading crown
116	*Agonis Flexuosa - Willow Myrtle*	SM	L	G	G	L	L	9	23	2.8	Young tree with open spreading structure in good condition
117	*Poplar Yunnanensis – Yunnan poplar*	M	L	G	G	L	L	14	44	5.3	Sound tree with dead wood in canopy
118	*Eucalyptus crenulata – Spinner Gum*	M	M	P	P	L	L	12	36	4.3	Dead crown in this tree. Overgrown by larger trees
119	*Eucalyptus leucoxylon – Yellow Gum*	SM	S	P	P	L	L	12	47	5.6	Poor form and structure. Dead wood in canopy
120	*Corymbia Maculata – Spotted Gum*	M	L	G	G	M	L	18	93	11.2	Sound tree in good health. Open spreading form worthy of retention
121	*Eucalyptus botryoides – Mahogany Gum*	M	L	G	G	M	L	18	94	11.3	Dead wood in canopy. Sound tree.

No.	Identification	Est. Age	ULE	Health	Structure	Significance	Hazard	Est. Height	DBH (cm)	TPZ (Radius)	Comment
122	*Tristania confertus – Box Elder*	SM	S	P	P	L	L	6	12	2	Young stunted tree not worthy of retention
123	*Corymbia ficifolia – WA Flowering Gum*	M	L	G	G	L	L	7	56	6.7	Multi stemmed sound tree
124	*Eucalyptus gomphocephala – Tuart Gum*	M	L	G	G	L	L	9	37	4.4	Sound full upright tree in good health
125	*Eucalyptus Viminallis – Manna Gum*	M	S	P	P	L	H	20	136	15	Plant failed tree. Removal required
126	*Melaleuca styphelioides – Prickly Paperbark*	SM	L	G	G	L	L	12	21	2.5	Poor form for this species. Sound tree
127	*Melaleuca armillaris – Honey Bracelet Myrtle*	M	M	G	P	L	L	9	39	4.7	Open spreading tree with poor structure and form
128	*Corymbia ficifolia – WA Flowering Gum*	SM	S	P	P	L	L	3	15	2	Small stunted. Poor specimen
129	*Melaleuca armillaris – Honey Bracelet Myrtle*	M	S	P	P	L	H	7	23	2.8	Failed tree. Requires removal
130	*Eucalyptus gomphocephala – Tuart Gum*	M	M	P	G	L	L	10	68	8.2	Declining tree. Lots of dead wood in canopy
131	*Eucalyptus gomphocephala – Tuart Gum*	M	M	P	G	L	L	10	63	7.6	Declining tree. Lots of dead wood in canopy
132	*Dead Tree*	D	D	D	D	D	D	D	D	D	Dead tree. Requires removal
133	*Eucalyptus globulus – Blue Gum*	M	S	P	P	L	M	18	92	11	Declining tree. No worth retention
134	*Eucalyptus camaldulensis – River Red Gum*	M	M	G	G	L	L	18	49	5.9	Sound tree. Dead wood in canopy and thinning
135	*Eucalyptus sideroxylon – Iron Bark*	M	M	G	G	L	L	17	54	6.5	Sound tree
136	*Eucalyptus camaldulensis – River Red Gum*	SM	L	G	G	M	L	16	110	13.2	Sound tree

No.	Identification	Est. Age	ULE	Health	Structure	Significance	Hazard	Est. Height	DBH (cm)	TPZ (Radius)	Comment
137	*Eucalyptus spathulata – Silver Gum*	M	M	G	P	L	L	9	32	3.8	Space open crown. Sound tree.
138	*Agonis flexuosa – Willow Myrtle*	SM	L	G	G	L	L	7	31	3.7	Sound young tree.
139	*Dead Tree*	D	D	D	D	D	D	D	D	D	Dead tree. Requires removal
140	*Eucalyptus leucoxylon – Yellow Gum*	Y	L	G	G	L	L	9	14	2	Growing from regenerated stump. Recommend removal
141	*Eucalyptus spathulata – Silver gum*	Y	L	G	G	L	L	9	12	2	Sound young tree
142	*Eucalyptus gomphocephala – Tuart Gum*	M	L	G	P	L	L	12	57	6.8	50% failed tree. Requires removal
143	*Eucalyptus camaldulensis – River Red Gum*	Y	L	G	G	L	L	10	18	2.2	Tall up tree
144	*Eucalyptus camaldulensis – River Red Gum*	SM	L	G	G	L	L	14	59	7.1	Sound young tree. Good condition
145	*Schinus mollie Peppercorn*	Y	L	G	G	L	L	6	22	2.6	Sound young tree
146	*Eucalyptus gomphocephala – Tuart Gum*	SM	L	G	G	L	L	9	26	3.1	Impacted by Lerp. In good condition
147	*Corymbia Ficifolia – WA Flowering Gum*	Y	L	G	G	L	L	9	24	2.9	Sound young tree multi stemmed tree
148	*Corymbia maculata – Spotted Gum*	M	L	G	G	L	L	11	56	6.7	Sound bifurcated tree in good condition
149	*Eucalyptus gomphocephala – Tuart Gum*	M	L	G	G	L	L	11	45	5.4	Tall upright tree. Lerp attach. Sound
150	*Pinus radiata – Monterey Pine*	SM	L	G	G	L	L	11	46	5.5	Weed Sp. Sound tree
151	*Eucalyptus Spathulata – Silver Gum*	Y	L	G	G	L	L	9	14	2	Sound young tree. Growing at a lean152

No.	Identification	Est. Age	ULE	Health	Structure	Significance	Hazard	Est. Height	DBH (cm)	TPZ (Radius)	Comment
152	*Eucalyptus camaldulensis – River Red Gum*	SM	L	G	G	M	L	19	91	10.9	Bifurcated sound tree in good condition. Worthy of retention
153	*Eucalyptus Spathulata – Silver Gum*	SM	L	G	F	L	L	9	26	3.1	Poor specimen
154	*Eucalyptus camaldulensis – River Red Gum*	SM	L	G	G	L	L	14	37	4.4	Sound young tree
155	*Eucalyptus camaldulensis – River Red Gum*	SM	L	G	G	L	L	15	42	5	Sound young tree
156	*Corymbia maculata – Spotted Gum*	SM	L	G	G	L	L	15	39	4.7	Sound young tree
157	*Eucalyptus gomphocephala – Tuart Gum*	M	L	G	G	L	L	15	48	5.8	Sound tree
158	*Eucalyptus camaldulensis – River Red Gum*	SM	L	G	G	L	L	12	38	4.6	Struggling tree
159	*Quercus robur – English Oak*	SM	S	P	P	L	L	14	62	7.4	Bifurcated not worthy of retention. Possum damaged tree
160	Cedar Deodar – Deodar Cedar	SM	L	G	G	H	L	14	31	3.7	Very good specimen in good health. Worth retention.
161	*Eucalyptus camaldulensis – River Red Gum*	Y	L	G	G	L	L	12	15	2	Young sound tree
162	*Melia azerach - White Cedar*					L	L	14	14	2	Dead Tree
163	*Eucalyptus camaldulensis – River Red Gum*	Y	L	P	P	L	L	12	21	2.5	Possum damaged in fair condition
164	*Eucalyptus gomphocephala – Tuart Gum*	M	L	P	P	L	L	14	68	8.2	Declining specimen
165	*Eucalyptus gomphocephala – Tuart Gum*	SM	M	G	P	L	L	11	19	2.3	Leaning tree in decline

No.	Identification	Est. Age	ULE	Health	Structure	Significance	Hazard	Est. Height	DBH (cm)	TPZ (Radius)	Comment
166	*Eucalyptus gomphocephala – Tuart Gum*	SM	L	F	G	L	L	11	23	2.8	Sound tree
167	*Eucalyptus gomphocephala – Tuart Gum*	SM	L	F	G	L	L	12	25	3	Sound tree
168	*Fraxinus Raywoodii – Desert Ash*	SM	L	G	G	L	L	11	20	2.4	Sound tree
169	*Eucalyptus globulus – Blue gum*	M	L	F	P	L	L	14	68	8.2	Open spreading crown. Fail tree. Remove
170	*Eucalyptus gomphocephala – Tuart Gum*	M	S	P	P	L	H	8	12	2	Dead wood in poor health and condition
171	*Eucalyptus gomphocephala – Tuart Gum*	Y	S	P	P	L	L	17	14	2	Poor specimen
172	*Eucalyptus gomphocephala – Tuart Gum*	M	L	G	G	L	L	16	66	7.9	Sound open spreading crown. Tree in good condition
173	*Eucalyptus camaldulensis – River Red Gum*	SM	L	G	G	L	L	14	48	5.8	Open and spreading thinning in canopy
174	*Quercus robur - English Elm*	SM	L	G	G	H	L	14	42	5	Sound specimen worthy of retention
175	*Corymbia maculata – Spotted Gum*	M	L	G	G	H	L	15	53	6.4	Sound specimen worthy of retention
176	*Araucaria heterophylla – North Folk Island Pine*	SM	L	G	G	H	L	15	29	3.5	Worthy of retention
177	*Grevillia robusta – Silky Oak*	SM	L	G	G	L	L	12	22	2.6	Sound tree
178	*Hake laurina – Pin Cushion Hakea*	M	L	G	G	L	L	8	26	3.1	Sound shrub
179	Poplar yunnanensis – Yunnan Poplar	SM	L	G	G	L	L	14	44	5.3	Tall upright tree. Low retention value
180	*Fraxinus raywoodii – Desert Ash*	SM	L	G	G	L	L	14	44	5.3	Sound tree
181	*Vagillia*	M	L	F	F	L	L	7	19	2.3	Declining specimen

No.	Identification	Est. Age	ULE	Health	Structure	Significance	Hazard	Est. Height	DBH (cm)	TPZ (Radius)	Comment
182	*Poplar yunnanensis – Yunnan Poplar*	SM	L	G	G	L	L	20	45	5.4	Sound tree in good health
183	*Eucalyptus camaldulensis – River Red Gum*	SM	L	G	G	L	L	12	36	4.3	Sound young tree
184	*Eucalyptus gomphocephala – Tuart Gum*	M	L	G	G	L	L	12	37	4.4	Sound young tree
185	*Eucalyptus gomphocephala – Tuart Gum*	SM	L	G	G	L	L	12	23	2.8	Sound tree
186	*Eucalyptus botryoides – Blue gum*	D	D	D	D	D	D	D	D	D	Dead tree. Requires removal
187	*Eucalyptus Radiata – Peppermint Gum*	M	S	P	P	L	M	14	55	6.6	Dead canopy tree
188	*Melaleuca armillaris – Bracelet Honey Myrtle*	M	S	P	P	L	L	8	32	3.8	Poor form and structure
189	*Eucalyptus botryoides – Blue gum*	SM	L	G	G	L	L	8	26	3.1	Sound young tree
190	*Eucalyptus gomphocephala – Tuart Gum*	SM	L	G	G	L	L	12	55	6.6	Sound tree
191	*Eucalyptus gomphocephala – Tuart Gum*	SM	M	F	G	L	L	8	26	3.1	Poor specimen
192	*Eucalyptus gomphocephala – Tuart Gum*	SM	M	F	G	L	L	7	24	2.9	Poor specimen
193	*Schinus mollie Peppercorn*	SM	L	G	G	M	L	6	26	3.1	Sound specimen
194	*Melaleuca armillaris – Bracelet Honey Myrtle*	M	S	P	P	L	L	7	7	2	Not tagged. F tree
195	*Eucalyptus gomphocephala – Tuart Gum*	SM	L	F	P	L	L	8	30	3.6	Poor health and condition

No.	Identification	Est. Age	ULE	Health	Structure	Significance	Hazard	Est. Height	DBH (cm)	TPZ (Radius)	Comment
196	*Corymbia Ficifolia – WA Flowering Gum*	M	S	P	P	L	L	6	28	3.4	Failing tree. Remove
197	*Eucalyptus gomphocephala – Tuart Gum*	M	L	F	P	L	L	17	69	8.3	Bifurcated. Poor form
198	*Eucalyptus gomphocephala – Tuart Gum*	M	L	G	G	L	L	16	45	5.4	Dead wood throughout canopy. Failing tree
199	*Eucalyptus leucoxylon – Yellow Gum*	SM	M	M	F	L	L	12	35	4.2	Poor retention value 'Rosea'
200	*Lagunaria Pattersonii – Pyramid Tree*	SM	L	G	G	L	L	10	30	3.6	Sound specimen
201	*Grevillea robusta – Silky Oak*	SM	L	G	G	L	L	11	24	2.9	Sound tree
202	*Cotton Easter*	M	L	G	G	L	L	6	19	2.3	Multi stemmed. Good sound tree
203	*Eucalyptus leucoxylon – Yellow Gum*	SM	L	F	F	L	L	8	32	3.8	Open crown 'Rosea'
204	*Poplar yunnanensis – Yunnan Poplar*	M	L	F	F	L	L	12	48	5.8	Stressed tree
205	*Cedar Deodar – Deodar Cedar*	SM	L	G	G	L	L	9	32	3.8	Sound tree. Good form. Worth retention
206	*Corymbia Ficifolia – WA Flowering Gum*	SM	L	G	G	L	L	9	53	6.4	Multi stemmed sound tree. Worth retention
207	*Casuarina cumminghamiana – She oak*	M	L	G	G	M	L	12	48	5.8	Good specimen of this species
208	*Callistemon viminallis – Weeping Bottlebrush*	M	L	G	G	L	L	8	25	3.0	Scraggly poor specimen
209	*Callistemon Citrinis – Lemon Bottlebrush*	M	L	G	G	L	L	5	20	2.4	Sound specimen
210	*Callistemon Kings Park Special*	M	L	G	G	L	L	7	28	3.4	Sound specimen tree

No.	Identification	Est. Age	ULE	Health	Structure	Significance	Hazard	Est. Height	DBH (cm)	TPZ (Radius)	Comment
211	*Corymbia Ficifolia – WA Flowering Gum*	SM	L	G	G	L	L	12	44	5.3	Sound tree
212	*Tristania confertus – Box Elder*	SM	L	G	G	L	L	11	26	3.1	Sound trifurcated tree
213	*Eucalyptus leucoxylon – Yellow Gum*	D	D	D	D	D	D	D	D	D	Dead reshot stump. Remove
214	*Banksia Sp*	D	D	D	D	D	D	D	D	D	Dead tree. Remove
215	*Hake Laurina – Pin Cushion Hakea*	M	M	F	P	L	L	5	28	3.4	Poor failing specimen
216	*Fraxinus Raywood – Desert Ash*	M	L	G	G	L	L	18	33	4	Sound specimen
217	*Agonis flexuosa – Willow Myrtle*	M	M	F	P	L	L	12	19	2.3	Tree on severe growing lean. Poor specimen
218	*Fraxinus Raywoodii – Desert Ash*	M	L	G	G	L	L	16	22	2.6	Poor specimen. Good health
									90	10.8	Rear of adjoining allotments in Whyndam Street
219	*Pinus Radiata – Monterey Pine*	M	L	G	G	L	L	25	90	10.8	Sound condition
220	*Pinus Radiata – Monterey Pine*	M	L	G	G	L	L	25	90	10.8	Sound condition
221	*Pinus Radiata – Monterey Pine*	M	L	G	G	L	L	25	21	2.5	Sound condition
222	*Eucalyptus gomphocephala – Tuart Gum*	M	S	P	P	L	L	25	90	10.8	Poor specimen. Poor condition
223	*Pinus Radiata – Monterey Pine*	M	L	G	G	L	L	25	90	10.8	Sound tree
224	*Pinus Radiata – Monterey Pine*	M	L	G	G	L	L	25	90	10.8	Sound tree
225	*Eucalyptus viminallis – Manna Gum*	M	S	P	P	L	L	10	21	2.5	Failing tree

No.	Identification	Est. Age	ULE	Health	Structure	Significance	Hazard	Est. Height	DBH (cm)	TPZ (Radius)	Comment
226	*Pinus Radiata – Monterey Pine*	M	S	P	P	L	L	12	D	D	Stunted tree. Dead
227	*Pinus Radiata – Monterey Pine*	M	L	G	G	L	L	25	90	10.8	Failing tree
228	*Pinus Radiata – Monterey Pine*	M	L	G	G	L	L	25	90	10.8	Sound tree
229	*Pinus Radiata – Monterey Pine*	M	L	G	G	L	L	25	19	2.3	
230	*Eucalyptus gomphocephala – Tuart Gum*	Y	S	P	P	L	L	8	14	2	Poor declining specimen
	Central Road										Cnr Wyndham and Central Road
231 Number of tree on location plan (E1)	*Corymbia ficifolia – WA Flowering Gum*	M	M	F	P	L	L	7	46	5.5	Impacted by power line clearing
232 (E2)	*Eucalyptus gomphocephala – Tuart Gum*	M	M	P	P	L	L	16	75	9	Dead upper canopy poor specimen
233 (E3)	*Eucalyptus gomphocephala – Tuart Gum*	SM	S	P	P	L	L	8	30	3.6	Poor stunted specimen.
234 (E4)	*Eucalyptus cladocalyx – Sugar Gum*	M	L	F	F	L	L	12	26	3.1	Approx. 12 trees in this group
235 (E5)	*Eucalyptus gomphocephala – Tuart Gum*	SM	L	F	F	L	L	16	AV 60	7.2	Smaller tree in fair condition
236 (E6)	*Eucalyptus gomphocephala – Tuart Gum*	SM	L	F	F	L	L	14	34	4.1	Poor Specimen
237 (E7)	*Eucalyptus cladocalyx – Sugar Gum*	M	L	F	F	L	L	18	87	10.4	Sound Tree
238 (E8)	*Eucalyptus gomphocephala – Tuart Gum*	M	L	F	F	L	L	14	48	2.4	Tree impacted by clearing from power lines.
239 (E9)	*Eucalyptus spathulata – Silver Gum*	M	M	P	P	L	L	10	26	1.9	Tree impacted by clearing from power lines.
240 (E10)	*Eucalyptus spathulata – Silver Gum*	Y	L	F	F	L	L	7	10	1.5	Small Tree

No.	Identification	Est. Age	ULE	Health	Structure	Significance	Hazard	Est. Height	DBH (cm)	TPZ (Radius)	Comment
241 (E11)	*Quercus robur – English Oak*	SM	L	G	G	M	L	10	48	5.8	Sound tree worthy of retention
242 (E12)	*Eucalyptus gomphocephala – Tuart Gum*	M	L	G	G	M	L	12	65	7.8	Sound Tree
243 (E13)	*Corymbia maculata – Spotted Gum*	M	M	F	P	L	L	10	45	5.5	Poor open crowned specimen
244 (E14)	*Eucalyptus leucoxylon – Yellow Gum*	M	L	G	G	M	L	11	34	4.1	Pink flowering form. Good sound tree
245 (E15)	*Eucalyptus cladocalyx – Sugar Gum*	M	S	P	P	L	H	9	19	2.3	Leaning tree half dead on inspection
246 (E16)	*Eucalyptus cladocalyx – Sugar Gum*	M	S	P	P	L	L	10	32	3.8	Tree impacted by clearing from power lines.
247 (E17)	*Eucalyptus cladocalyx – Sugar Gum*	M	S	P	P	L	L	10	32	3.8	Tree impacted by clearing from power lines.
248 (E17b)	*Corymbia maculata – Spotted Gum*	M	M	F	P	L	L	10	35	4.2	Stunted in growth
249 (E18)	*Corymbia maculata – Spotted Gum*	M	M	P	P	L	L	11	21	2.5	Skinny scraggy tree
250 (E19)	*Eucalyptus globulus – Blue Gum*	M	L	G	G	M	L	18	95	11.4	Large sound specimen
251 (E20)	*Eucalyptus leucoxylon – Yellow Gum*	M	L	G	G	M	L	18	60	7.2	Sound tree with bifurcated limb at ground level
252 No number E21 (E22)	*Eucalyptus camaldulensis - River Red Gum*	SM	L	G	G	H	L	19	68	8.2	Sound tree worthy of retention
253 (E23)	*Eucalyptus camaldulensis - River Red Gum*	SM	L	G	G	H	L	19	68	8.2	Sound tree worthy of retention
254 (E24)	*Corymbia ficifolia – WA Flowering Gum*	SM	M	G	G	M	L	10	25	3	Not suitable for this location tree in sound health
255 (E25)	*Eucalyptus gomphocephala – Tuart Gum*	M	S	P	P	L	L	10	28	3.4	Tree in poor health and form
256 (E26)	*Eucalyptus nicholii – Peppermint Gum*	M	M	P	P	L	L	10	35	4.2	Cleared from wires tree has poor form

No.	Identification	Est. Age	ULE	Health	Structure	Significance	Hazard	Est. Height	DBH (cm)	TPZ (Radius)	Comment
257 (E27)	*Eucalyptus gomphocephala – Tuart Gum*	M	M	P	P	L	L	10	58	7	Tree impacted by clearing from power lines.
258 (E28)	*Eucalyptus gomphocephala – Tuart Gum*	M	L	G	G	M	L	18	63	7.6	Sound tree worthy of retention
259 (W29)	*Cupressus sempervirens and Eucalyptus gomphocephala plantation*	SM	L	F	F	M	L	L	AV 28	3.4	Mixed planting along the second allotment.
260 (W30)	*Eucalyptus leucoxylon – Yellow Gum*	M	L	F	G	M	L	11	52	6.2	Sound bifurcated tree
261 (W31)	*Eucalyptus leucoxylon – Yellow Gum*	M	L	F	G	M	L	9	28	3.4	Sound tree
262 (W32)	*Corymbia ficifolia – WA Flowering Gum*	M	L	G	G	L	L	10	48	5.8	Sound tree lean in main stem
263 (W33)	*Acacia melonoxylon - Blackwood*	M	S	P	P	L	L	11	43	5	Mature sensate tree, short life expectancy
264 (W34)	*Eucalyptus camaldulensis - River Red Gum*	SM	L	F	G	M	L	12	56	6.7	Sound young tree
265 (W35)	*Eucalyptus camaldulensis - River Red Gum*	SM	L	G	G	L	L	10	35	4.2	Sound young tree
266 (W36)	*Cupressus sempervirens – Swains Cypress*	SM	L	G	G	L	L	11	35	4.2	Sound plantation tree
267 (W37)	*Cupressus sempervirens – Swains Cypress*	SM	L	G	G	L	L	11	35	4.2	Sound plantation tree
268 (W38)	*Allocasuarina verticillata – She Oak*	Y	L	G	G	H	L	8	14	2	Young She Oak
269 (W39)	*Corymbia maculata – Spotted Gum*	Y	L	G	G	H	L	11	21	2.5	Young Sound Tree
270 (W40)	*Schinus mollie - Peppercorn*	Y	L	G	G	L	L	12	34	4.1	Sound tree
271 (W41)	*Acacia melonoxylon - Blackwood*	M	L	G	G	M	L	11	26	3.1	Sound young tree
272 (W42)	*Acacia melonoxylon - Blackwood*	M	L	G	G	M	L	9	23	2.8	Sound young tree

No.	Identification	Est. Age	ULE	Health	Structure	Significance	Hazard	Est. Height	DBH (cm)	TPZ (Radius)	Comment
273 (W43)	*Fraxinus raywoodii – Desert Ash*	SM	L	G	G	L	L	9	21	2.5	Sound young tree
274 (W44)	*Fraxinus raywoodii – Desert Ash*	SM	L	G	G	L	L	9	21	2.5	Sound young tree
275 (W45)	*Fraxinus raywoodii – Desert Ash*	SM	L	G	G	L	L	9	21	2.5	Sound young tree
276 (W46)	*Fraxinus raywoodii – Desert Ash*	SM	L	G	G	L	L	9	21	2.5	Sound young tree
277 (W47)	*Corymbia ficifolia – WA Flowering Gum*	Y	L	G	G	M	L	10	26	3.1	Young Tree
278 (W48)	*Eucalyptus botryoides – Blue Gum*	Y	L	G	G	L	L	11	23	2.8	Young tree x4
279 (W49)	*Eucalyptus camaldulensis - River Red Gum*	Y	L	G	G	M	L	10	21	2.5	Group of 9 Trees
280 (W50)	*Eucalyptus cladocalyx – Sugar Gum*	SM	L	G	G	L	L	10	34	4.1	Sound tree
281 (W51)	*Eucalyptus cladocalyx – Sugar Gum*	SM	L	G	G	L	L	10	34	4.1	Sound tree
282 (W51b)	*Melaleuca armillaris – Honey Bracelet Myrtle*	M	L	G	G	L	L	11	31	3.7	Hedge into property

4.0 Conclusion

In conclusion; this report offers comments on the trees of the site. Tree Protection Zones are offered for each tree. These should be used in conjunction with the comments referring to each tree to determine the trees useful retention to the site post development.

Replacement of removed specimens should be highly considered so as to not lose the tree amenity of the site over the coming years. Staggered planting of replacements ensures an ongoing landscape.

Whilst the process of redevelopment can be expensive if using large advanced replacement trees, younger less expensive trees often establish more soundly and better suit often restricted budgets. Let's Talk About Trees encourages using smaller trees and working with the asset over time.

The grounds also have many sound assets and carrying out the maintenance as described will see these assets improve and become sound arboricultural assets of the grounds for many years to come.

5.0 Recommendations

1. The two Australian Standards AS4970 –2009 Protection of Trees on Construction Sites, and AS 4373—2007 Pruning of Amenity Trees should be used in the ongoing management of the tree assets of this site.

2. All works carried out to the trees should be undertaken by qualified certificate 3, 4 or 5 arborist as per the guideline of Australian Standard AS4970 –2009 Protection of Trees on Construction Sites.

6.0 Appendices

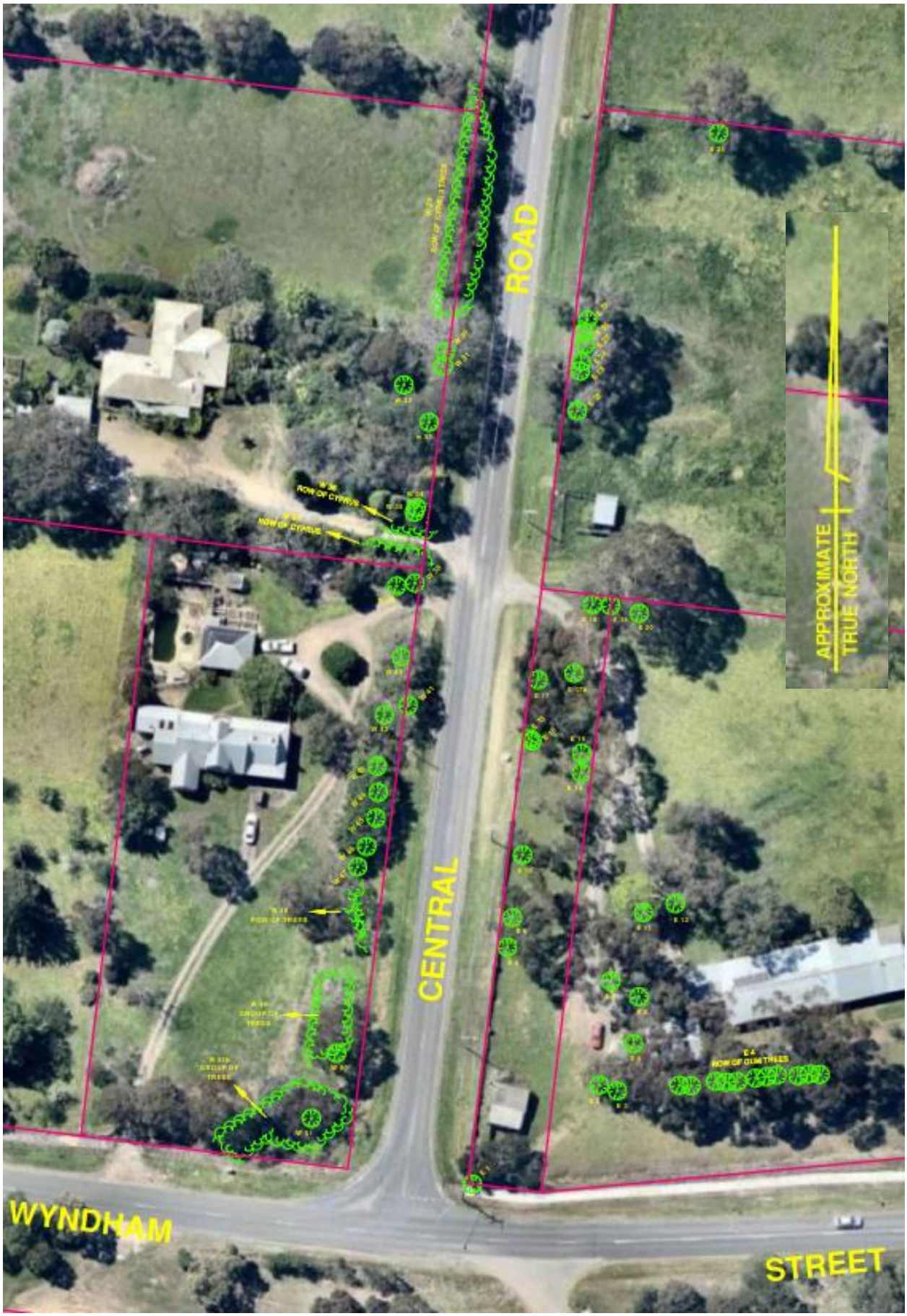
6.1 Photographs - Appendix One.

Epicormic management is required in some trees in order to retain managed tree structural integrity. This should be undertaken as required.


ROAD
APPROXIMATE
TRUE NORTH
151 Jetty Rd

161 Jetty rd

171 Jetty Road



6.3 Terms of Descriptor's

Definitions Descriptor's used for throughout this report.

AGE

Category	Description
Young	Juvenile or recently planted approximately 1-7 years.
Semi Mature	Tree actively growing.
Mature	Tree has reached expected size in situation.
Senescent	Tree is over mature and has started to decline.

HEALTH

Good	Foliage of tree is entire, with good colour, very little sign of pathogens and of good density. Growth indicators are good ie. Extension growth of twigs and wound wood development. Minimal or no canopy die back (deadwood).
Fair	Tree is showing one or more of the following symptoms; < 25% dead wood, minor canopy die back, foliage generally with good colour though some imperfections may be present. Minor pathogen damage present, with growth indicators such as leaf size, canopy density and twig extension growth typical for the species in this location.
Poor	Tree is showing one or more of the following symptoms of tree decline; > 25% deadwood, canopy die back is observable, discoloured or distorted leaves. Pathogens present, stress symptoms are observable as reduced leaf size, extension growth and canopy density.
Dead or dying	Tree is in severe decline; > 55% deadwood, very little foliage, possibly epicormic shoots, minimal extension growth.

STRUCTURE

Good	Trunk and scaffold branches show good taper and attachment with minor or no structural defects. Tree is a good example of the species with a well-developed form showing no obvious root problems or pests and diseases.
Fair	Tree shows some minor structural defects or minor damage to trunk eg. bark missing, there could be cavities present. Minimal damage to structural roots. Tree could be seen as typical for this species.
Poor	There are major structural defects, damage to trunk or bark missing. Co-dominant stems could be present or poor structure with likely points of failure. Girdling or damaged roots obvious. Tree is structurally problematic.
Hazardous	Tree is an immediate hazard with potential to fail, this should be rectified as soon as possible.

HAZARD

Hazard is rated into three levels; **LOW, MEDIUM,** and **HIGH**.

1. **LOW;** Tree appears to be structurally sound, is healthy with no signs of pests or disease, has good vigour and is clear of any hazards.
2. **MEDIUM;** Tree displays signs of structural problems, evidence of pests or disease, signs of low vigour, deadwood, decay, may be growing into an area that could create a hazard.
3. **HIGH;** Tree is an immediate hazard with the potential to fail, this should be rectified as soon as possible.

USEFUL LIFE EXPEECTANCY – ULE

LONG ULE; Trees that appears to be retainable with an acceptable level of risk for more than 40 years.

1. Structurally sound trees located in positions that can accommodate future growth.
2. Storm damaged or defective trees that could be made suitable for retention in the long term by remedial tree surgery.
3. Trees of special significance for historical, commemorative or rarity reasons that would warrant extraordinary efforts to secure their long-term retention.

MEDIUM ULE; Trees that appear to be retainable with an acceptable level of risk for 15 to 40 years.

1. Trees that may only live between 15 and 40 years.
2. Trees that may live for more than 40 years but would be removed to allow the safe development of more suitable individuals.
3. Trees that may live for more than 40 years but would be removed during the course of normal management for safety and nuisance reasons.
4. Storm damage or defective trees that can be made suitable for retention in the medium term by remedial work.

SHORT ULE; Trees that appear to be retainable with an acceptable level of risk for 5 to 15 years.

1. Trees that may live for 5 to 15 years.
2. Trees that may live for more than 15 years but would be removed to allow the safe development of more suitable individuals.
3. Trees that may live for more than 15 years but would be removed during the course of normal management for safety and nuisance reasons.
4. Storm damaged or defective trees that require substantial remedial work to make safe and are only suitable for retention in the short term.

REMOVE; Trees with a high level of risk that would need removal within the next 5 years.

1. Dead trees.
2. Dying or suppressed and declining trees through disease or inhospitable conditions.
3. Dangerous trees through instability or recent loss of adjacent trees.
4. Dangerous trees through structural defects including cavities, decay, included bark, wounds or poor form.
5. Damaged trees that are considered unsafe to retain.
6. Trees that will become dangerous after removal of other trees for the above reasons.

SIGNIFICANCE / RETENTION VALUE

Significance is rated into three levels; **LOW, MEDIUM, HIGH**.

LOW; Trees that offer little in terms of contributing to the future landscape for the reasons of poor health or structural condition, species suitability in relation to unacceptable growth habit, noxious, poisonous or weed species or ULE, or a combination of these characteristics. Should be considered for removal.

MODERATE; Trees with some beneficial attributes that may benefit the site in relation to botanical, horticultural, historical or local significance but may be limited to some degree by their future growth potential at the site by maintenance requirements now or in the future. These trees should be considered for retention if possible within the development design, they may be modified to allow for construction. (eg. pruning, etc;)

HIGH; Trees with the potential to positively contribute to the site due to their botanical, horticultural, historical or local significance in combination with good characteristics of structure, health and future development. Should be considered for inclusion within development plans.

6.4 Indicative Stages in Development and the Tree Management Process

Stage in Development	Tree Management Process	
	Matters for Consideration	**Actions and Certificates**
Planning (Sections 2 and 3)		
Site acquisition	Legal constraints	
Detail surveys	Council plans and policies Planning instruments and controls Heritage Threatened species	Existing trees accurately plotted on survey plan.
Preliminary tree assessment	Hazard/risks Tree retention value	Evaluate trees suitable for retention and mark on plan Provide preliminary arboricultural report and indicative TPZs to guide development layout.
Preliminary development design	Condition of trees Proximity to buildings Location of services Roads Level changes Building operations space Long-term management	Planning selection of trees for retention Design review by proponent Design modifications to minimise impact to trees.
Development submission	Identify trees for retention through comprehensive arboricultural impact assessment of proposed construction. Determine tree protection measures. Landscape design.	Provide arboricultural impact assessment including tree protection plan (drawing) and specification.
Development approval	Development controls Conditions of consent	Review consent conditions relating to trees.
Pre-construction (Sections 4 and 5)		
Initial site preparation	State based OHS requirements for tree work Approved retention/removal Refer to AS 4373 for the requirements on the pruning of amenity trees Specifications for tree protection measures.	Compliance with conditions of consent. Tree removal/tree retention/transplanting Tree pruning Certification of tree removal and pruning. Establish/delineate TPZ Install protective measures Certification of tree protection measures.

Stage in Development	Tree Management Process	
	Matters for Consideration	**Actions and Certificates**
Construction (Sections 4 and 5)		
Site establishment	Temporary infrastructure Demolition, bulk earthworks, hydrology	Locate temporary infrastructure to minimise impact on related trees. Maintain protective measures Certification of tree protection measures.
Construction work	Liaison with site manager, compliance Deviation from approved plan	Maintain or amend protective measures Supervision and monitoring
Implement hard and soft landscape works	Installation of irrigation services Control of compaction work Installation of pavement and retaining walls	Remove selected protective measures as necessary Remedial tree works Supervision and monitoring
Practical completion	Tree vigour and structure	Remove all remaining tree protection measures Certification of tree protection
Post Construction (Section 5)		
Defects liability / maintenance period	Tree vigour and structure	Maintenance and monitoring Final remedial tree works Final certification of tree condition

NOTES:
1. Owing to variations in planning legislation, this Table is a general indication of the process only
2. Certification of tree protection and condition should be carried out by the project Arborist.

Extract from Australian Standard 4970 – 2009 – Protection of Trees on Development Sites.

The above Table shows clearly the process of tree protection on development sites as set out in the Australian Standard.

This Table should be followed in the management of all trees on development sites.

Depending on the stage of the project you are undertaking, the type of project you are undertaking and specific other requirements of various planning departments, in some instances additional reports may be required.

The above Table serves as an indicative guide to the process of managing and protecting trees.

7.0 References

Australian Standard® ***AS4970-2009, Protection of trees on development sites,*** *2009, Sydney*

Australian Standard® ***AS4373-2007,Pruning of Amenity Trees,*** *2007, Sydney*

Alex L. Shigo, ***A New Tree Biology***. 1986. USA

Alex L. Shigo, ***Modern Arboriculture.*** 1991. USA

Writings within the report are of the author's personal knowledge and belief. The information and knowledge released in the report when referenced should be referenced to

Matt Branagh, Dip.App.Scl – Horticulture/Arboriculture – Let's Talk About Trees.

8.0 Terms and Limitations of the Report

- Any legal information in the report has been provided to Let's Talks About Trees by an external source and it is assumed to be correct. All references to property title and/or control or ownership of land are assumed to be correct as Let's Talk About Trees has been advised.

- Great care has been taken in sourcing information for this report so as it is correct. Let's Talk About Trees cannot be responsible for information provided which is not directly under control of its staff.

- No Let's Talk About Trees employee shall be required to give testimony or attend court for any matter in relation to this report, unless further contractual arrangements have been made.

- This report must not be altered in any shape or form. It has been written as a whole document and is intended for use as a whole document. Any changes or modifications to this report not undertaken Let's Talk About Trees by shall render this report invalid in its entirety.

- In no way is this report biased or weighted. The content of the report is written in the full, honest opinion of the Let's Talk About Trees Consulting Arborist.

- No diagrams, pictures, graphs or other reference material in this report is said to be to scale or value unless stipulated. All measurements and values are made to the best of the author's ability at the time of reporting and should be checked before using as final measurements for whatever reason.

- This report is developed around the information provided by our client in the project brief. Only issues covered by the project brief are discussed in this report.

- All details, information and advice contained in this report have been researched and referenced. Where no reference is included, it is the author's learned opinion, experience and observations.