Arboricultural Assessment

Lots 18, 54 & 55 Fifty Road, Baldivis

Prepared for

Taylor Burrell Barnett

October 2006

PO Box 66, SUBIACO WA 6904

Lemnos Business Park,

37 Lemnos Street, Shenton Park 6008

Phone (08) 9382 3433 * Fax (08) 9382 4922

COMPANY INFORMATION

Company Name:	ARBOR logic
A.C.N.:	107 194 061
A.B.N.:	66 566 369 687

Street Address:

Lemnos Business Park, 37 Lemnos Street, Shenton Park, Perth, WESTERN AUSTRALIA 6008

Postal Address:

PO Box 66, SUBIACO, WESTERN AUSTRALIA 6904

Contact Details:

Consultant:	**JASON ROYAL**
Mobile:	0409 105 745
Phone:	+61 8 9382 3433
Facsimile:	+61 8 9382 4922
Email:	jason@arborlogic.com.au

Insurance Details:

Public Liability	CGU Insurance Ltd	$20 million
Professional Indemnity:	CGU Insurance Ltd	$5 million
Workers Compensation:	GIO Australia	

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PURPOSE OF THE REPORT

At the request of Taylor Burrell Barnett, I have undertaken an inspection of the identified trees in the area of proposed development currently known as Lots 15, 54, & 55 Fifty Road Baldivis ("Site").

The purpose of the Site inspection was to:

- Provide basic information (i.e. species, height, health condition, structural form etc.) on the tree population present *outside* of the areas of proposed public open space;
- Provide basic information (i.e. species, height, health condition, structural form etc.) on the tree population present on site *inside* the areas of proposed public open space;
- Provide general purposeful and practical recommendations for any design implications that will apply in an effort to minimise the impact of the proposed development (as per plan provided) on any tree that may be identified to be retained; and
- Provide general purposeful and practical recommendations for any tree preservation strategies to be adopted during the construction phases of the development in an effort to minimise the impact on any tree identified to be retained.

The following is a brief of my findings from the Site inspection.

TREES PRESERVATION ~ OVERVIEW

Tree preservation is an important part of responsible development and ecological sustainability.

Whilst not all trees are good candidates for retention, and while preserving every tree on a site may not be feasible, those that are identified for incorporation into the design become valuable assets and require a comprehensive strategy to help ensure their survival.

It is important to note that it is the tree's absorbing root zone that is primarily responsible for the health, vigour, and the overall aesthetic appearance of the trees canopy.

It is also important to note that this absorbing root zone is generally found in the initial 300 – 500 mm of the soil profile, where soil oxygen, water, and nutrient levels are at their highest.

It is therefore essential that the retention of this area of the soil profile becomes the primary concern when designing and constructing an area of development adjacent existing trees, if the trees are desired to be retained. There must be a focus towards protecting an appropriate amount of the trees root mass.

Each individual tree is given a 'zone of protection' ("Tree Preservation Zone", "Preservation Zone", or "Zone") during all phases of the design and construction of the development. This Zone is based on a number of the tree's existing physical attributes, its health condition, and its known species characteristics. Note: Designated Tree Preservation Zones are provided in metres radius of the given trees main stem, and each trees recommended Preservation Zone can be found in Appendix b of this report.

These Zones must be protected throughout all phases of the development, from site clearance works through to soft landscaping so that damage and disturbance to the Zone(s) is minimised.

It is common occurrence for tree preservation strategies to be implemented once root zone damage has occurred. However it has often proven that remedial efforts are of little to no value (depending on the extent of damage that has been caused), and have proven to become a difficult, potentially expensive, and time consuming exercise to implement once the damage has been done.

It is also important to note that in many instances (especially with mature trees) it can take a number of years before the effects of any root zone damage and/or loss becomes evident in the canopy through an increase of deadwood material, and/or apical decline.

Successful preservation of trees on a development site must therefore begin at the design and planning stages of the development.

TREE ASSESSMENT CRITERIA

Whist tree preservation is an important consideration, site safety must become the primary concern when the development of a given area leads to the introducing of (or increase of) the occurrence of people, property and/or structures ("Potential Targets" or "Targets").

Tree hazard assessment incorporates a wide variety of criteria to assess the viability of retaining and successfully managing any given tree in an area of Potential Targets in view of the relevant legal and risk management responsibilities associated with tree 'ownership'.

In view of the above, each tree in the areas adjacent the recent developments have been assessed against a number of criteria:

- Current health condition; adjudged by an inspection of the leaf, overall canopy condition and the presence (or absence) of any pests/disease which may have an adverse effect on the trees health.
- Existing structural characterises; determined from a visual inspection of the main stem, branch unions, and the root zone of the specimen.
- The known natural species characteristics of the specimen,
- Perceived future maintenance (expense) requirements of the specimen, and
- Location of the specimen within the Site in view of Potential Targets, and the potential frequency of use of the area.
- Species suitability for inclusion into an area of urban environment, and the propensity for the given species to cope with the parameters that are created in an urban environment (i.e. decreased soil oxygen due to compaction, increased un-seasonal watering from irrigation, increased pollution, increased radiated heat/light from urban infrastructure (roads, walls, buildings etc.).

Trees are amazing organisms which can adapt to numerous scenarios and changes in their environment.

However, inclusion of potentially high risk species, or poor quality structured trees and/or trees in a poor health condition will lead to an increased likelihood of future tree related issues to arise, and a potential for unnecessary expense to occur due to maintenance requirements and/or potential litigation. There must be a focus towards risk management responsibilities, which may in some instances, need to be at the detriment of an individual tree, or group of specimen trees.

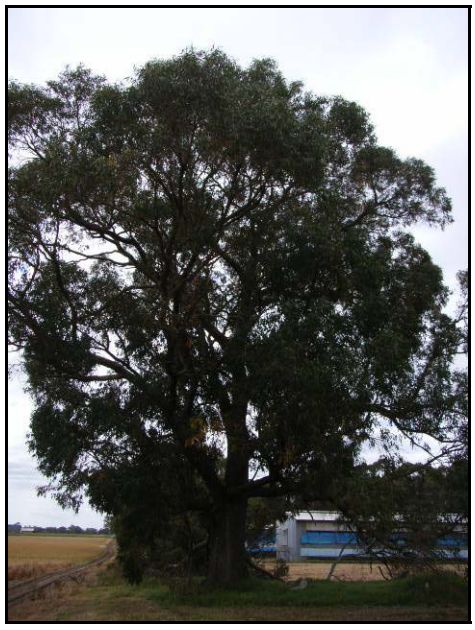
With this information in mind, the following pages provide an overview of the condition of the tree population present on Site.

A full table of the results of the Site inspection can be found in Appendix b of this report.

TREE ASSESSMENT RESULTS

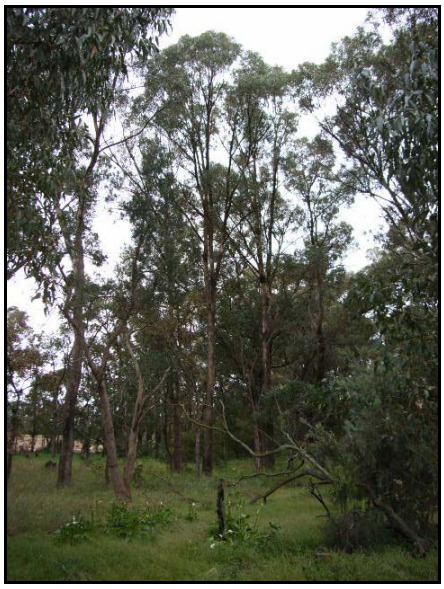
A total of 355 'numbered' trees were located and inspected against the previously mentioned criteria, as part of this survey It was noted however that a relatively large number of other 'un-numbered' trees can also be found on Site (which were not included in the survey plans provided).

Overall, the tree population present on Site is seen to be in a relatively good condition in both health and structure.



There are some very good individual specimens of mature Tuart (*Eucalyptus gomphocephala*) (seen in the above images) and River Red Gum (*Eucalyptus camaldulensis var 'Camaldulensis'*), with some of the larger mature Tuarts estimated at being in excess of 150 years old.

There are also a number of densely populated areas on Site (examples seen in the images below), consisting of a large number of Marri (*Corymbia calophylla*), Bull Banksia (*Banksia grandis*), and Tuart (*Eucalyptus gomphocephala*).



TREE ASSESSMENT RESULTS

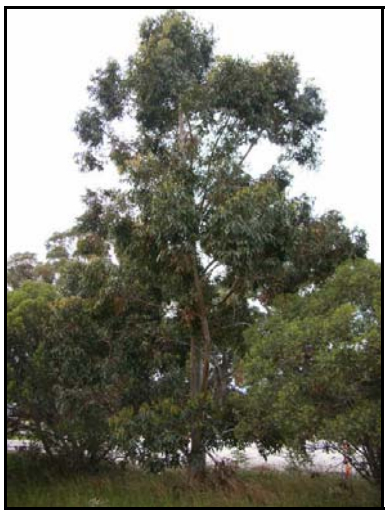
Tree 147; Split in main stem

Dead specimens

As with any tree population there are a number of dead (circled in the above image right) and declining specimens (some numbered, some not) which are strongly recommended to be removed from the Site and omitted from any future part of the development process.

There are also a number of specimens with poor structural form (as seen in the above image left). Retention of trees with a poor structural form has long proven to lead to an increased potential for future tree related issues to arise (i.e. stem failures). As such these specimens are also recommended for removal.

I addition to these trees, a number of other trees are recommended for removal due to their known species traits as a weed species; namely White Cedar (*Melia azedarach*) and Brazilian Pepper (*Schinus terebinthifolius*). A number of other trees are recommend to be removed due to their propensity for unpredictable stem failure; namely the Rose Gums (*Eucalyptus grandis*), and the 'Northern' River Red Gums (*Eucalyptus camaldulensis var 'Obtusa'*).



Tree 170~ Rose Gum

Tree 123~ Northern River Red Gum

In all, a total of 42 'numbered' trees are recommended for removal, (although as previously mentioned there are an equally large number of other dead and poor quality trees on Site that also be removed).

Removal of these specimens will not only address the relevant risk management and the legal responsibilities generally associated with tree 'ownership', but also allow any remaining trees on Site that are retained to further mature unimpeded.

TREE ASSESSMENT RESULTS

The remaining trees on Site that were inspected as part of this survey all show an acceptable/good health, and structural form at this time.

Given the large size of the population present on Site, these specimens have been further categorised and given an 'Opinion' rating in an effort to further aid in the decision process for tree retention as part of the design process for the development of the Site:

Opinion '1' Trees

This denotes a specimen that is of particular note and efforts are strongly recommended to be spent during the design and construction process to retain such specimens.

A total of 47 trees were placed in this category.

Tree 245 ~ Tuart

Tree 321 ~ Tuart

These trees are all very good specimens of their species. As such efforts are strongly recommended to be made to incorporate as many of these trees as possible into the proposed development; possibly at the detriment of other trees in their vicinity, or in other areas of the Site.

Note: The location of these trees has been highlighted on the map provided in Appendix a.

Opinion '2' Trees

This denotes a good specimen of its species, and efforts should be made during the design/construction process to incorporate such specimens into the proposed development, as this will be seen as a positive approach to development in today's environmentally conscious community.

The majority of the trees on Site were placed in this category (a total of 175 in all).

Opinion '3' Trees

This denotes an overall average, but acceptable specimen. Incorporating these specimens into the proposed development is also considered a positive approach to tree retention where design/construction allows. This may however also include specimens which can be expected to become a higher maintenance requirement and potential risk to Potential Targets once the development has been completed. As such the Opinion '3' trees are (generally) only recommended to be retained in areas of lower Potential Targets, (i.e. POS areas) and efforts would be better spent on retaining '1' and/or '2' Opinion specimens.

Note: Tables of the results of the assessment have been provided in the appendix of this report.

COMMENTS ON CURRENT DESIGN PROPOSAL

A reasonably large number of the Opinion '1' trees appear to be located within the areas currently designated for Public Open Space ("POS"); specifically towards the 'northern' and 'western' ends of the Site.

However a larger number of them (including the largest and most mature Tuarts that are situated in the central area of the Site) appear to be located into areas currently designated as land Lots, and/or roads.

If as many of the Opinion '1' trees are desired to be retained as possible, then a degree of further Arboricultural input will be required during the planning process to ensure that their retention remains viable in the long term.

If other Site design parameters do not allow for the retention of an Opinion '1' tree then any Opinion '2' tree in the areas designated as road side verge, or POS should be considered for retention in their stead.

Opinion '3' trees are only recommended to be retained in areas where Potential Targets will be limited (i.e. in the POS areas).

POTENTIAL TRANSPLANT SPECIMENS

A small number of specimens on site were noted as being of a species that can be transplanted to suitable locations on (or off) Site; if desired to be incorporated in to the future street scapes.

These included Norfolk Island Pines, Cotton Palms, and Citrus specimens.

Consideration should be given to their use to provide an immediate mature street/amenity tree population throughout the proposed development.

However, a degree of preparation may be required to guarantee their successful relocation and attaining further information on costs, feasibility (i.e. some may be physically too large) and preparation time frame required from a tree transplanting company would be pertinent if they are deemed to be suitable for the needs of the development.

OPINION

Overall the tree population on Site is in a good condition, and there are a number of good specimens of various native species.

As with any tree population, there are a number of specimens that will require removal in view of Site safety implications and risk management responsibilities.

These trees can simply be omitted from any further part of the Site design process.

Successful preservation of any of the remaining trees on Site will however be dependent on Site design and construction activities being able to adopt the appropriate design and construction tree preservation strategies as detailed in Appendix c of this report.

Design of the Site is recommended to take into consideration the retention of as many of the Opinion '1' trees as possible; which will require a degree of further Arboricultural input as the design process continues to allow for the appropriate tree preservation measures to be implemented (although much of the design process can continue with the aid of the tree preservation guidelines as detailed in Appendix c).

Retention of the Opinion '1' trees may also need to come at the detriment of other trees (either Opinion '2' and/or Opinion '3' trees) on Site.

Any Opinion '2' tree in an area of designated roadside verge or POS area should also be considered for retention in the development, providing Site design and construction activities can provide the required tree preservation requirements (refer appendix c); with the main factor being the protection of the given trees designated Preservation Zone.

Opinion '3' trees should only be considered for retention in areas of designated POS.

In the event of other Site design parameters do not permit the adoption of the recommended preservation measures (for any given tree), then the future retention of the given tree within the development would be questionable due to the likely impact of the development on the tree, and its future health, vigour, and structural integrity.

Further Arboricultural advise will be required as the design/planning process continues, to discuss specific tree preservation requirements for those trees chosen for retention within the development Site.

SUMMARY OF RECOMMENDATIONS

At this stage, in view of the evidence gained during the Site inspection, and as detailed in this report, the following recommendations are made:

i. Omit those trees recommended to be removed as detailed in this report from any further part of the design/planning process of the development.

ii. Undertake efforts to retain as many of the Opinion '1' trees as possible within the development.

iii. Undertake efforts to retain as many of the Opinion '2' trees as possible where they are located in areas designated as roadside verge or POS.

iv. Site design is to take into consideration the required tree preservation requirements as detailed in Appendix c of this report.

v. Incorporate further discussions with the consulting Arborist as the planning/design stages of the development progress to determine specific tree preservation requirements for any tree selected to be retained on Site.

If you have any queries regarding the above, or if I can be of further assistance, please do not hesitate to contact me.

Yours sincerely

JASON ROYAL

Appendix a ~ Map Showing Location of Opinion '1' Trees

Appendix b ~ Tree Assessment Results Tables

Glossary of Terms

TREE TAG NO. ~ Provides schedule number of a specimen, corresponding to the survey plan provided by Taylor Burrell Barnett.

BOTANICAL NAME ~ Provides the true botanical name of the specimen.

COMMON NAME ~ Provides the most commonly used name of the specimen

ESTIMATED HEIGHT ~ Provides an estimated height (in metres) of the specimen.

ESTIMATED TRUNK CALLIPER ~ Provides an estimated trunk calliper (in mm, and generally measured at 1.3 metres above ground level) of the specimen.

HEALTH CONDITION ~ Provides a view of the specimen's health/vigour condition at the time of inspection based on a number of predetermined criteria (refer page 3).

STRUCTURAL FORM ~ Provides a view of the specimens structural form at the time of inspection based on a number of predetermined criteria (refer page 3).

PRESERVATION ZONE ~ Provides a recommended area (in metres radius of the main stem or groups of stems) to be treated as a Tree Preservation Zone and treated in a manner as has been detailed in this report.

COMMENT ~ Provides any additional information (seen as relevant) to the individual specimen.

OPINION ~ Provides an overall opinion on the specimen:

1 ~ Denotes a specimen of particular note and efforts are recommended to be spent during the design and construction process to retain such specimens.

2 ~ Denotes a good specimen and efforts should be made during the design/construction process to incorporate such specimens into the proposed development, as this will be seen as a positive approach to development in today's environmentally conscious community.

3 ~ Denotes an overall average specimen. Incorporating these specimens into the proposed development is also considered a positive approach to tree retention where design/construction allows. This may however also include specimens which can be expected to become a higher maintenance requirement and potential risk to Potential Targets once the development has been completed. As such the Opinion '3' trees are (generally) only recommended to be retained in areas of lower Potential Targets, (i.e. POS areas) and efforts would be better spent on retaining '1' and/or '2' Opinion specimens.

REMOVE ~ Denotes a specimen recommended for removal to ground level, based on existing health, structural characteristics (being poor), or known species traits (being 'undesirable for 'urban environments').

TREE TAG No.	BOTANICAL NAME	COMMON NAME	ESTIMATED HEIGHT (metres)	ESTIMATED TRUNK CALLIPER (mm)	HEALTH CONDITION	STRUCTURAL FORM	PRESERVATION ZONE (metres radius)	COMMENT	OPINION
4	*Eucalyptus gomphocephala*	Tuart	24	1100	Good	Good	10	Half of its root zone has been buried	1
54	*Eucalyptus gomphocephala*	Tuart	26	500	Good	Good	6	Good specimen of the species	1
61	*Eucalyptus gomphocephala*	Tuart	26	600	Good	Good	6	Good specimen of the species	1
79	*Eucalyptus gomphocephala*	Tuart	26	1000	Good	Good	10	Good specimen of the species	1
84	*Banksia grandis*	Bull Banksia	8	300	Good	Good	5	Species does not readily tolerate root zone disturbance	1
88	*Eucalyptus gomphocephala*	Tuart	24	700	Good	Good	7	Good specimen of the species	1
89	*Eucalyptus gomphocephala*	Tuart	26	900	Good	Good	10	Good specimen of the species	1
92	*Eucalyptus gomphocephala*	Tuart	26	1000	Good	Good	10	Good specimen of the species	1
94	*Eucalyptus gomphocephala*	Tuart	26	800	Good	Good	8	Good specimen of the species	1
95	*Eucalyptus gomphocephala*	Tuart	26	1300	Good	Good	10	Good specimen of the species	1
98	*Eucalyptus gomphocephala*	Tuart	26	1100	Good	Good	10	Good specimen of the species	1
100	*Eucalyptus gomphocephala*	Tuart	26	600	Good	Good	6	Good specimen of the species	1
101	*Eucalyptus gomphocephala*	Tuart	24	1000	Good	Good	10	Multi-stemmed specimen	1
106	*Eucalyptus gomphocephala*	Tuart	24	600	Good	Good	6	Good specimen of the species	1
108	*Eucalyptus gomphocephala*	Tuart	26	1000	Good	Good	10	Good specimen of the species	1
110	*Eucalyptus gomphocephala*	Tuart	24	1000	Good	Good	10	Good specimen of the species	1
120	*Eucalyptus gomphocephala*	Tuart	26	1000	Good	Good	10	Good specimen of the species	1
133	*Eucalyptus gomphocephala*	Tuart	26	1000	Good	Good	10	Small basal cavity, but good specimen of the species	1
135	*Eucalyptus gomphocephala*	Tuart	26	1000	Good	Good	10	Good specimen of the species	1
146	*Corymbia calophylla*	Marri	20	600	Good	Good	6	Good specimen of the species	1
149	*Eucalyptus gomphocephala*	Tuart	28	1600	Good	Good	10	Old large specimen. possible termites in base of main stem	1
150	*Corymbia calophylla*	Marri	20	800	Good	Good	7	Good specimen of the species	1
156	*Eucalyptus gomphocephala*	Tuart	26	1200	Good	Good	10	Evidence of stem failures, but still a good specimen of the species	1
159	*Eucalyptus gomphocephala*	Tuart	28	1200	Good	Good	10	Good specimen of the species	1
162	*Corymbia calophylla*	Marri	20	700	Good	Good	6	Good specimen of the species	1
167	*Corymbia calophylla*	Marri	24	700	Good	Good	6	Good specimen of the species	1
176	*Corymbia calophylla*	Marri	20	1000	Good	Good	8	Good specimen of the species	1
183	*Eucalyptus gomphocephala*	Tuart	24	1000	Good	Good	10	Good specimen of the species	1
197	*Corymbia calophylla*	Marri	20	600	Good	Good	6	Good specimen of the species	1
202	*Eucalyptus gomphocephala*	Tuart	18	800	Good	Good	8	Good specimen of the species	1
215	*Eucalyptus marginata*	Jarrah	20	700	Good	Good	7	Good specimen of the species	1
235	*Corymbia calophylla*	Marri	18	450	Good	Good	5	Good specimen of the species	1
245	*Eucalyptus gomphocephala*	Tuart	30	2000	Good	Good	10	Old large specimen. possible termites in base of main stem	1
250	*Corymbia calophylla*	Marri	18	400	Good	Good	4	Good specimen of the species	1
255	*Eucalyptus gomphocephala*	Tuart	28	1200	Good	Good	10	Good specimen of the species	1
268	*Corymbia ficifolia*	Red Flowering Gum	10	500	Good	Good	5	Good specimen of the species	1

TREE TAG No.	BOTANICAL NAME	COMMON NAME	ESTIMATED HEIGHT (metres)	ESTIMATED TRUNK CALLIPER (mm)	HEALTH CONDITION	STRUCTURAL FORM	PRESERVATION ZONE (metres radius)	COMMENT	OPINION
270	*Eucalyptus gomphocephala*	Tuart	30	2000	Good	Acceptable	10	Very large, old specimen. Main stem cavity and decay. Termites	1
271	*Eucalyptus gomphocephala*	Tuart	30	2000	Good	Acceptable	10	Very large, old specimen. Main stem cavity and decay. Termites	1
275	*Eucalyptus marginata*	Jarrah	16	1000	Good	Good	8	Basal cavity, but still a good specimen of the species	1
292	*Eucalyptus marginata*	Jarrah	18	1000	Good	Good	8	Old specimen. Basal cavity; monitor	1
299	*Eucalyptus gomphocephala*	Tuart	28	1200	Good	Good	10	Evidence of stem failure, but still a good specimen of the species	1
303	*Corymbia calophylla*	Marri	22	500	Good	Good	5	Good specimen of the species	1
321	*Eucalyptus gomphocephala*	Tuart	26	1300	Good	Good	10	Good specimen of the species	1
359	*Eucalyptus marginata*	Jarrah	22	700	Good	Good	7	Possible termites in outer bark, but still a good specimen	1
363	*Eucalyptus camaldulensis 'Camaldulensis'*	River Red Gum	24	1100	Good	Good	8	Bi-furcated main stem, but still a good specimen of the species	1
366	*Eucalyptus marginata*	Jarrah	15	500	Good	Good	6	Good specimen of the species	1
368	*Eucalyptus camaldulensis 'Camaldulensis'*	River Red Gum	24	1000	Good	Good	8	Good specimen of the species	1

TREE TAG No.	BOTANICAL NAME	COMMON NAME	ESTIMATED HEIGHT (metres)	ESTIMATED TRUNK CALLIPER (mm)	HEALTH CONDITION	STRUCTURAL FORM	PRESERVATION ZONE (metres radius)	COMMENT	OPINION
1	*Corymbia calophylla*	Marri	17	350	Good	Good	4		2
2	*Corymbia calophylla*	Marri	18	350	Good	Good	5		2
3	*Corymbia calophylla*	Marri	18	200	Good	Good	3		2
5	*Corymbia calophylla*	Marri	18	500	Good	Good	5		2
7	*Corymbia calophylla*	Marri	10	300	Good	Good	3	Multi-stemmed specimen	2
9	*Corymbia calophylla*	Marri	12	300	Good	Good	4		2
10	*Eucalyptus gomphocephala*	Tuart	18	900	Good	Good	9	Half of its root zone is exposed	2
11	*Eucalyptus gomphocephala*	Tuart	20	800	Good	Good	5	Canopy works required. Small basal wound.	2
12	*Corymbia calophylla*	Marri	20	350	Good	Good	4		2
15	*Corymbia calophylla*	Marri	16	300	Good	Good	3		2
16	*Corymbia calophylla*	Marri	20	500	Good	Good	6		2
18	*Corymbia calophylla*	Marri	18	450	Good	Good	5		2
19	*Corymbia calophylla*	Marri	15	350	Good	Good	4	Large amount of deadwood	2
22	*Corymbia calophylla*	Marri	20	600	Good	Good	6	Nice specimen of the species	2
23	*Corymbia calophylla*	Marri	20	600	Good	Good	6		2
25	*Corymbia calophylla*	Marri	20	700	Good	Good	7	Suppressing adjacent tree	2
27	*Corymbia calophylla*	Marri	20	350	Good	Good	3		2
29	*Corymbia calophylla*	Marri	20	500	Good	Good	5		2
30	*Corymbia calophylla*	Marri	20	500	Good	Good	6	ALSO MARKED AS TREE 16!	2
31	*Corymbia calophylla*	Marri	20	400	Good	Good	3	Multi-stemmed specimen	2
32	*Corymbia calophylla*	Marri	10	350	Good	Good	3	Canopy works required	2
33	*Corymbia calophylla*	Marri	18	350	Good	Good	3		2
36	*Corymbia calophylla*	Marri	12	350	Good	Good	4		2
38	*Corymbia calophylla*	Marri	15	250	Good	Good	4		2
40	*Corymbia calophylla*	Marri	15	250	Good	Good	4		2
42	*Corymbia calophylla*	Marri	15	500	Good	Good	5		2
46	*Corymbia calophylla*	Marri	15	250	Good	Good	4		2
48	*Corymbia calophylla*	Marri	17	500	Good	Good	5		2
48	*Corymbia calophylla*	Marri	16	1000	Acceptable	Good	7	Canopy works required	2
49	*Corymbia calophylla*	Marri	20	450	Good	Good	4		2
50	*Corymbia calophylla*	Marri	18	450	Good	Good	6	Multi-stemmed specimen	2
51	*Corymbia calophylla*	Marri	18	700	Good	Good	6	Canopy works required	2
52	*Eucalyptus gomphocephala*	Tuart	26	1000	Good	Good	10	Wound on main stem, possible termites; monitor.	2
55	*Corymbia calophylla*	Marri	22	1000	Good	Good	7	Suggest remove adjacent smaller specimen	2
56	*Eucalyptus gomphocephala*	Tuart	20	600	Good	Good	6		2
57	*Eucalyptus gomphocephala*	Tuart	20	600	Good	Good	6		2

TREE TAG No.	BOTANICAL NAME	COMMON NAME	ESTIMATED HEIGHT (metres)	ESTIMATED TRUNK CALLIPER (mm)	HEALTH CONDITION	STRUCTURAL FORM	PRESERVATION ZONE (metres radius)	COMMENT	OPINION
58	*Eucalyptus gomphocephala*	Tuart	22	500	Good	Good	6		2
59	*Corymbia calophylla*	Marri	18	300	Good	Good	5		2
60	*Corymbia calophylla*	Marri	10	300	Good	Acceptable	3		2
63	*Eucalyptus gomphocephala*	Tuart	23	800	Good	Good	8		2
64	*Banksia grandis*	Bull Banksia	7	300	Good	Good	5	Species does not readily tolerate root zone disturbance	2
65	*Corymbia calophylla*	Marri	18	500	Good	Good	5		2
66	*Corymbia calophylla*	Marri	20	450	Good	Good	4		2
68	*Corymbia calophylla*	Marri	12	400	Acceptable	Good	3	Canopy works required	2
69	*Corymbia calophylla*	Marri	13	600	Good	Good	5		2
71	*Eucalyptus gomphocephala*	Tuart	24	600	Good	Good	6		2
72	*Corymbia calophylla*	Marri	20	450	Good	Good	5		2
73	*Corymbia calophylla*	Marri	16	600	Good	Good	5		2
74	*Corymbia calophylla*	Marri	9	400	Good	Good	4	Multi-stemmed specimen	2
75	*Corymbia calophylla*	Marri	18	600	Good	Good	6	Multi-stemmed specimen	2
76	*Corymbia calophylla*	Marri	15	400	Good	Good	4		2
78	*Corymbia calophylla*	Marri	22	300	Good	Good	5		2
80	*Corymbia calophylla*	Marri	20	450	Good	Good	4		2
82	*Eucalyptus marginata*	Jarrah	15	450	Good	Acceptable	5	Bi-furcated	2
85	*Corymbia calophylla*	Marri	9	300	Good	Good	2		2
86	*Corymbia calophylla*	Marri	9	300	Acceptable	Good	2	Canopy works required	2
87	*Eucalyptus gomphocephala*	Tuart	24	900	Good	Acceptable	10	adjacent tree	2
91	*Corymbia calophylla*	Marri	18	300	Good	Good	5		2
93	*Corymbia calophylla*	Marri	18	450	Good	Good	6		2
96	*Corymbia calophylla*	Marri	13	200	Good	Good	3		2
99	*Corymbia calophylla*	Marri	16	600	Good	Good	6		2
105	*Eucalyptus gomphocephala*	Tuart	16	500	Good	Good	5	Slightly suppressed by adjacent trees	2
107	*Corymbia calophylla*	Marri	18	400	Good	Good	5	Multi-stemmed specimen	2
111	*Eucalyptus gomphocephala*	Tuart	26	1000	Good	Good	10		2
112	*Eucalyptus gomphocephala*	Tuart	23	1000	Good	Good	10	Multi-stemmed specimen	2
115	*Corymbia calophylla*	Marri	8	400	Good	Good	3		2
117	*Eucalyptus gomphocephala*	Tuart	24	500	Good	Good	6		2
118	*Corymbia calophylla*	Marri	18	400	Good	Good	5		2
121	*Eucalyptus gomphocephala*	Tuart	26	700	Good	Acceptable	7	Termites noted in main stem	2
122	*Eucalyptus gomphocephala*	Tuart	26	900	Good	Acceptable	8	Termites noted in main stem	2
124	*Eucalyptus gomphocephala*	Tuart	26	500	Good	Acceptable	7	Termites noted in main stem	2
125	*Eucalyptus gomphocephala*	Tuart	26	900	Good	Acceptable	10	monitor	2

TREE TAG No.	BOTANICAL NAME	COMMON NAME	ESTIMATED HEIGHT (metres)	ESTIMATED TRUNK CALLIPER (mm)	HEALTH CONDITION	STRUCTURAL FORM	PRESERVATION ZONE (metres radius)	COMMENT	OPINION
127	*Eucalyptus gomphocephala*	Tuart	26	450	Good	Good	6		2
128	*Eucalyptus gomphocephala*	Tuart	26	600	Good	Good	6		2
131	*Eucalyptus gomphocephala*	Tuart	22	350	Good	Good	4		2
132	*Corymbia calophylla*	Marri	15	400	Good	Good	5	Multi-stemmed specimen	2
134	*Corymbia calophylla*	Marri	18	400	Good	Good	5		2
135	*Eucalyptus gomphocephala*	Tuart	24	1000	Good	Good	9	Good specimen of the species	2
136	*Eucalyptus gomphocephala*	Tuart	26	600	Good	Good	6	Remove co-dominant stem	2
137	*Eucalyptus gomphocephala*	Tuart	24	450	Good	Good	5		2
138	*Eucalyptus gomphocephala*	Tuart	24	600	Good	Good	6	Multi-stemmed specimen	2
139	*Eucalyptus gomphocephala*	Tuart	26	1100	Good	Acceptable	10	monitor	2
142	*Corymbia calophylla*	Marri	18	450	Good	Good	5	Good specimen of the species	2
152	*Corymbia calophylla*	Marri	20	450	Good	Good	5	Good specimen of the species	2
158	*Eucalyptus robusta*	Swamp Mahogany	20	800	Good	Good	7		2
162	*Corymbia calophylla*	Marri	13	350	Good	Good	4		2
166	*Eucalyptus gomphocephala*	Tuart	9	300	Good	Acceptable	4	Remove co-dominant stem	2
169	*Eucalyptus gomphocephala*	Tuart	18	600	Good	Good	6		2
172	*Corymbia calophylla*	Marri	13	350	Acceptable	Good	3		2
173	*Corymbia calophylla*	Marri	15	500	Good	Good	5	Nice specimen of the species	2
175	*Corymbia calophylla*	Marri	20	700	Good	Good	6	Nice specimen of the species	2
178	*Corymbia calophylla*	Marri	10	500	Good	Good	4	Nice specimen of the species	2
180	*Corymbia calophylla*	Marri	11	250	Good	Good	3		2
181	*Corymbia calophylla*	Marri	18	500	Good	Good	5	Remove adjacent dead specimen(s)	2
183	*Corymbia calophylla*	Marri	13	350	Good	Good	3		2
184	*Corymbia calophylla*	Marri	11	250	Good	Good	2		2
185	*Corymbia calophylla*	Marri	12	350	Good	Good	3		2
186	*Corymbia calophylla*	Marri	16	300	Good	Good	3		2
187	*Corymbia calophylla*	Marri	18	500	Good	Good	5		2
188	*Corymbia calophylla*	Marri	13	400	Good	Good	4		2
189	*Corymbia calophylla*	Marri	15	600	Good	Good	5	Nice specimen of the species	2
190	*Corymbia calophylla*	Marri	16	400	Good	Good	4	Remove adjacent dead specimen(s)	2
191	*Corymbia calophylla*	Marri	16	500	Good	Good	5		2
192	*Corymbia calophylla*	Marri	9	200	Good	Good	2		2
193	*Corymbia calophylla*	Marri	18	600	Good	Good	5	Good specimen of the species	2
194	*Corymbia calophylla*	Marri	15	250	Good	Good	2		2
195	*Corymbia calophylla*	Marri	18	400	Good	Good	4		2
196	*Corymbia calophylla*	Marri	10	200	Good	Good	2		2

TREE TAG No.	BOTANICAL NAME	COMMON NAME	ESTIMATED HEIGHT (metres)	ESTIMATED TRUNK CALLIPER (mm)	HEALTH CONDITION	STRUCTURAL FORM	PRESERVATION ZONE (metres radius)	COMMENT	OPINION
198	*Corymbia calophylla*	Marri	18	350	Good	Good	3		2
199	*Corymbia calophylla*	Marri	15	200	Good	Good	2		2
200	*Corymbia calophylla*	Marri	18	600	Good	Good	5	Good specimen of the species	2
206	*Corymbia calophylla*	Marri	13	200	Good	Good	3		2
209	*Eucalyptus marginata*	Jarrah	10	300	Good	Good	3		2
211	*Corymbia calophylla*	Marri	20	600	Good	Good	5	Remove adjacent dead specimen(s)	2
213	*Corymbia calophylla*	Marri	20	600	Good	Good	5	Remove adjacent dead specimen(s)	2
214	*Corymbia calophylla*	Marri	14	550	Acceptable	Good	5	Canopy slightly sparse; possible indication of decline	2
217	*Eucalyptus marginata*	Jarrah	11	350	Good	Good	5	Nice specimen of the species	2
218	*Eucalyptus marginata*	Jarrah	12	300	Good	Acceptable	5	Regrowth from an old stump	2
219	*Corymbia calophylla*	Marri	20	500	Good	Good	5	Nice specimen of the species	2
220	*Corymbia calophylla*	Marri	17	450	Good	Good	5		2
221	*Corymbia calophylla*	Marri	18	500	Acceptable	Good	5	Canopy slightly sparse; possible indication of decline	2
222	*Corymbia calophylla*	Marri	16	400	Good	Good	3		2
223	*Eucalyptus marginata*	Jarrah	10	350	Good	Acceptable	5	Regrowth from an old stump	2
224	*Corymbia calophylla*	Marri	16	400	Acceptable	Good	3		2
227	*Corymbia calophylla*	Marri	17	400	Good	Good	4		2
228	*Corymbia calophylla*	Marri	12	300	Good	Acceptable	3	Part of tree 227.	2
230	*Corymbia calophylla*	Marri	16	350	Good	Good	3		2
231	*Eucalyptus gomphocephala*	Tuart	20	1100	Good	Acceptable	10	Slightly suppressed by adjacent tree.	2
234	*Eucalyptus gomphocephala*	Tuart	16	400	Good	Good	5		2
238	*Corymbia calophylla*	Marri	20	900	Good	Good	7		2
239	*Melaleuca quinquenervia*	Paperbark	18	300	Good	Acceptable	3		2
240	*Eucalyptus gomphocephala*	Tuart	17	400	Good	Good	5		2
241	*Corymbia calophylla*	Marri	20	500	Good	Good	5		2
243	*Eucalyptus gomphocephala*	Tuart	11	300	Good	Good	4		2
246	*Corymbia calophylla*	Marri	13	350	Good	Good	4		2
247	*Corymbia calophylla*	Marri	11	350	Good	Good	3		2
248	*Corymbia calophylla*	Marri	20	500	Good	Good	5		2
248	*Corymbia calophylla*	Marri	11	350	Good	Good	3	Nice specimen of the species	2
249	*Eucalyptus gomphocephala*	Tuart	16	500	Good	Good	5	Development slightly affected by adjacent specimen	2
251	*Eucalyptus gomphocephala*	Tuart	18	600	Good	Good	6		2
253	*Eucalyptus gomphocephala*	Tuart	16	500	Good	Good	5	Development slightly affected by adjacent specimen	2
254	*Eucalyptus gomphocephala*	Tuart	26	1000	Good	Acceptable	10	Canopy one sided due to adjacent tree.	2
256	*Eucalyptus gomphocephala*	Tuart	16	450	Good	Good	6		2
257	*Eucalyptus gomphocephala*	Tuart	24	1200	Good	Acceptable	10	Canopy one sided due to adjacent tree. Evidence of stem failure.	2

TREE TAG No.	BOTANICAL NAME	COMMON NAME	ESTIMATED HEIGHT (metres)	ESTIMATED TRUNK CALLIPER (mm)	HEALTH CONDITION	STRUCTURAL FORM	PRESERVATION ZONE (metres radius)	COMMENT	OPINION
260	*Eucalyptus marginata*	Jarrah	9	500	Good	Acceptable	6	Regrowth from an old specimen	2
266	*Corymbia calophylla*	Marri	13	500	Good	Good	5		2
272	*Corymbia ficifolia*	Red Flowering Gum	8	350	Good	Good	4		2
274	*Corymbia calophylla*	Marri	9	400	Good	Good	4		2
287	*Eucalyptus gomphocephala*	Tuart	18	400	Good	Good	5		2
293	*Eucalyptus gomphocephala*	Tuart	10	400	Good	Good	4		2
294	*Eucalyptus gomphocephala*	Tuart	16	400	Good	Good	5	Remove co-dominant stem	2
295	*Eucalyptus camaldulensis 'Camaldulensis'*	River Red Gum	20	500	Good	Good	6	ALSO TAGGED AS TREE 360!	2
297	*Eucalyptus marginata*	Jarrah	15	450	Good	Acceptable	5	Bi-furcated	2
304	*Eucalyptus globulus*	Gum	20	500	Good	Good	5		2
320	*Corymbia calophylla*	Marri	16	450	Acceptable	Good	5		2
323	*Corymbia calophylla*	Marri	20	600	Good	Good	5		2
325	*Eucalyptus gomphocephala*	Tuart	24	900	Good	Good	9		2
327	*Corymbia calophylla*	Marri	13	300	Good	Good	3		2
330	*Eucalyptus gomphocephala*	Tuart	22	600	Good	Acceptable	6	Regrowth from an old stump	2
331	*Corymbia calophylla*	Marri	15	350	Good	Good	3		2
333	*Corymbia calophylla*	Marri	16	350	Good	Good	4		2
334	*Corymbia calophylla*	Marri	20	600	Good	Acceptable	6	Twin stemmed specimen	2
335	*Eucalyptus marginata*	Jarrah	15	400	Good	Acceptable	4		2
336	*Eucalyptus gomphocephala*	Tuart	23	1100	Good	Acceptable	10	Evidence of previous stem failures.	2
337	*Eucalyptus gomphocephala*	Tuart	22	600	Good	Acceptable	6	Regrowth from an old stump	2
343	*Agonis flexuosa*	WA Peppermint	10	600	Good	Good	4		2
344	*Cupressus macrocarpa*	Monterey Cypress	13	500	Good	Good	6		2
348	*Corymbia calophylla*	Marri	16	450	Good	Acceptable	5	Canopy one sided due to adjacent trees.	2
351	*Eucalyptus marginata*	Jarrah	15	450	Good	Good	5	Multi-stemmed specimen	2
360	*Eucalyptus camaldulensis 'Camaldulensis'*	River Red Gum	20	500	Good	Good	6	ALSO TAGGED AS TREE 295!	2
361	*Eucalyptus robusta*	Swamp Mahogany	20	600	Good	Good	6		2
364	*Eucalyptus marginata*	Jarrah	18	500	Good	Acceptable	6	Development has been affected by adjacent tree	2
365	*Cupressus macrocarpa*	Monterey Cypress	13	500	Good	Good	6		2
370	*Eucalyptus camaldulensis 'Camaldulensis'*	River Red Gum	20	500	Good	Good	5	Good specimen of the species	2
371	*Eucalyptus gomphocephala*	Tuart	18	450	Good	Good	6		2

TREE TAG No.	BOTANICAL NAME	COMMON NAME	ESTIMATED HEIGHT (metres)	ESTIMATED TRUNK CALLIPER (mm)	HEALTH CONDITION	STRUCTURAL FORM	PRESERVATION ZONE (metres radius)	COMMENT	OPINION
13	*Eucalyptus gomphocephala*	Tuart	18	500	Good	Acceptable	5	Canopy works required. Basal cavities.	3
14	*Corymbia calophylla*	Marri	12	500	Good	Acceptable	5	Suppressed by adjacent tree	3
17	*Corymbia calophylla*	Marri	18	500	Acceptable	Good	5	Canopy indicating decline	3
20	*Corymbia calophylla*	Marri	18	450	Acceptable	Good	5	Canopy sparse; possible indication of decline	3
28	*Eucalyptus gomphocephala*	Tuart	8	300	Good	Acceptable	3	Half of its root zone has been buried. Suppressed by adjacent tree.	3
34	*Corymbia calophylla*	Marri	18	450	Good	Good	5	Termites noted in outer bark	3
35	*Corymbia calophylla*	Marri	16	300	Good	Acceptable	5		3
37	*Corymbia calophylla*	Marri	10	300	Good	Acceptable	3	Canopy works required	3
41	*Corymbia calophylla*	Marri	12	700	Good	Acceptable	7	Slightly suppressed by adjacent tree	3
67	*Corymbia calophylla*	Marri	18	300	Acceptable	Good	5		3
70	*Corymbia calophylla*	Marri	10	300	Acceptable	Acceptable	3	Suppressed by adjacent tree; maybe view to remove	3
77	*Eucalyptus marginata*	Jarrah	10	350	Acceptable	Good	3	Canopy sparse; possible indication of decline	3
81	*Eucalyptus marginata*	Jarrah	10	400	Acceptable	Acceptable	4	Canopy indicating stress/decline	3
90	*Eucalyptus gomphocephala*	Tuart	10	400	Good	Acceptable	5	Suppressed by adjacent tree	3
97	*Corymbia calophylla*	Marri	12	250	Acceptable	Good	4	Canopy shows some decline in health/vigour.	3
103	*Corymbia calophylla*	Marri	20	600	Good	Acceptable	4	Possible termites	3
113	*Corymbia calophylla*	Marri	10	400	Good	Acceptable	3	Slightly suppressed by adjacent tree	3
114	*Eucalyptus gomphocephala*	Tuart	12	500	Good	Acceptable	5	Multi-stemmed specimen, suppressed by adjacent tree	3
126	*Eucalyptus conferruminata*	Bald Island Marlock	5	300	Good	Acceptable	4		3
129	*Eucalyptus gomphocephala*	Tuart	20	400	Good	Good	4		3
130	*Corymbia calophylla*	Marri	10	400	Good	Good	5	Suppressed by adjacent tree	3
140	*Eucalyptus gomphocephala*	Tuart	12	500	Good	Acceptable	5	Multi-stemmed specimen	3
143	*Eucalyptus conferruminata*	Bald Island Marlock	5	250	Good	Acceptable	4		3
144	*Eucalyptus gomphocephala*	Tuart	23	1100	Good	Acceptable	10	Monitor wound on main stem	3
148	*Eucalyptus leucoxylon 'Rosea'*	Gum	8	300	Good	Acceptable	4		3
151	*Eucalyptus conferruminata*	Bald Island Marlock	6	300	Good	Acceptable	4		3
155	*Eucalyptus leucoxylon 'Rosea'*	Gum	8	300	Good	Acceptable	4	Part of a row of 12 specimens	3
157	*Eucalyptus robusta*	Swamp Mahogany	9	300	Good	Acceptable	3		3
160	*Corymbia calophylla*	Marri	16	400	Acceptable	Good	4	Canopy shows some decline in health/vigour. Termites noted	3
161	*Eucalyptus robusta*	Swamp Mahogany	9	350	Good	Acceptable	3	Undesirable species	3
165	*Eucalyptus conferruminata*	Bald Island Marlock	5	350	Good	Acceptable	4		3
171	*Corymbia calophylla*	Marri	8	250	Acceptable	Good	3	Canopy indicates some stress/decline.	3
174	*Corymbia calophylla*	Marri	8	300	Good	Acceptable	4	Multi-stemmed specimen. Suppressed by adjacent tree.	3
179	*Corymbia calophylla*	Marri	13	350	Good	Acceptable	3	Leaning specimen	3
182	*Corymbia calophylla*	Marri	11	350	Good	Good	2	Suppressed by adjacent tree	3

TREE TAG No.	BOTANICAL NAME	COMMON NAME	ESTIMATED HEIGHT (metres)	ESTIMATED TRUNK CALLIPER (mm)	HEALTH CONDITION	STRUCTURAL FORM	PRESERVATION ZONE (metres radius)	COMMENT	OPINION
201	*Corymbia calophylla*	Marri	9	300	Good	Acceptable	3	Reasonably undesirable form for species	3
203	*Corymbia calophylla*	Marri	13	250	Good	Acceptable	3	Decay in main stem	3
204	*Eucalyptus marginata*	Jarrah	15	500	Acceptable	Good	6	Sections of the canopy have decline.	3
205	*Corymbia calophylla*	Marri	18	450	Good	Acceptable	4	Large wound on main stem	3
208	*Corymbia calophylla*	Marri	10	250	Good	Acceptable	3	Undesirable form for species	3
212	*Eucalyptus marginata*	Jarrah	12	450	Acceptable	Good	5	Canopy indicating decline	3
216	*Eucalyptus marginata*	Jarrah	10	500	Good	Acceptable	5	Decay in main stem	3
225	*Eucalyptus gomphocephala*	Tuart	20	300	Good	Acceptable	4	Undesirable form for species; swoop in main stem	3
226	*Corymbia calophylla*	Marri	18	600	Good	Acceptable	5	Decay in main stem, possible termites.	3
232	*Cupressus macrocarpa*	Monterey Cypress	18	600	Good	Acceptable	5	Canopy one sided due to adjacent overhead wires.	3
233	*Corymbia calophylla*	Marri	9	350	Good	Acceptable	4	Suppressed by adjacent tree	3
236	*Eucalyptus robusta*	Swamp Mahogany	16	250	Good	Acceptable	3	Undesirable form for species	3
237	*Corymbia calophylla*	Marri	8	250	Good	Good	3		3
242	*Corymbia calophylla*	Marri	12	350	Good	Good	4	Cavity in main stem; possible termites.	3
244	*Eucalyptus gomphocephala*	Tuart	16	450	Good	Good	5	Undesirable form for species	3
252	*Eucalyptus gomphocephala*	Tuart	11	300	Good	Good	4	Undesirable form for species	3
258	*Corymbia calophylla*	Marri	10	400	Good	Acceptable	4	Undesirable form for species	3
259	*Eucalyptus gomphocephala*	Tuart	11	300	Good	Good	5	Development slightly affected by adjacent specimen	3
261	*Eucalyptus gomphocephala*	Tuart	16	300	Good	Good	5	Undesirable form for species	3
262	*Eucalyptus gomphocephala*	Tuart	16	450	Good	Acceptable	7	Multi-stemmed specimen	3
264	*Eucalyptus conferruminata*	Bald Island Marlock	5	250	Good	Good	4		3
265	*Eucalyptus robusta*	Swamp Mahogany	8	350	Good	Acceptable	4	Multi-stemmed specimen	3
267	*Eucalyptus camaldulensis 'Camaldulensis'*	River Red Gum	12	300	Good	Good	4		3
273	*Eucalyptus conferruminata*	Bald Island Marlock	6	200	Good	Acceptable	3		3
276	*Eucalyptus marginata*	Jarrah	20	1200	Acceptable	Acceptable	8	Canopy sparse; possible indication of decline; monitor	3
277	*Corymbia calophylla*	Marri	18	800	Acceptable	Good	7	Canopy sparse; possible indication of decline; monitor	3
279	*Corymbia ficifolia*	Red Flowering Gum	10	350	Good	Acceptable	5	Multi-stemmed specimen	3
280	*Eucalyptus botryoides*	Bangalay	10	400	Good	Acceptable	4		3
281	*Eucalyptus rudis*	Flooded Gum	10	200	Good	Acceptable	3	Undesirable form	3
282	*Eucalyptus gomphocephala*	Tuart	15	400	Good	Acceptable	5	Bi-furcated specimen	3
285	*Washingtonia robusta*	Cotton Palm	20	350	Good	Good	2		3
288	*Eucalyptus gomphocephala*	Tuart	16	400	Good	Acceptable	5	Multi-stemmed specimen	3
289	*Washingtonia robusta*	Cotton Palm	22	350	Good	Good	2		3
291	*Eucalyptus robusta*	Swamp Mahogany	18	450	Good	Good	5	ALSO TAGGED AS TREE 357!	3
296	*Eucalyptus gomphocephala*	Tuart	18	450	Good	Acceptable	5	Bi-furcated specimen	3
298	*Eucalyptus conferruminata*	Bald Island Marlock	7	300	Good	Acceptable	4		3
300	*Cupressus macrocarpa*	Monterey Cypress	18	400	Good	Acceptable	4	Canopy one sided due to adjacent overhead wires.	3

TREE TAG No.	BOTANICAL NAME	COMMON NAME	ESTIMATED HEIGHT (metres)	ESTIMATED TRUNK CALLIPER (mm)	HEALTH CONDITION	STRUCTURAL FORM	PRESERVATION ZONE (metres radius)	COMMENT	OPINION
305	*Cupressus macrocarpa*	Monterey Cypress	18	500	Good	Acceptable	5	Canopy one sided due to adjacent overhead wires.	3
306	*Corymbia calophylla*	Marri	26	900	Acceptable	Acceptable	8	decline; monitor	3
322	*Washingtonia robusta*	Cotton Palm	8	500	Good	Good	2		3
324	*Washingtonia robusta*	Cotton Palm	16	400	Good	Good	2		3
328	*Agonis flexuosa*	WA Peppermint	9	900	Good	Acceptable	5	Canopy one sided due to overhead wires.	3
329	*Eucalyptus globulus*	Gum	20	800	Good	Acceptable	6	Canopy one sided due to adjacent overhead wires.	3
332	*Corymbia calophylla*	Marri	16	450	Acceptable	Good	5	Canopy sparse; possible indication of decline	3
338	*Eucalyptus gomphocephala*	Tuart	18	600	Good	Acceptable	8		3
339	*Corymbia calophylla*	Marri	12	300	Good	Acceptable	4	Slightly suppressed by adjacent trees	3
342	*Washingtonia robusta*	Cotton Palm	8	500	Good	Good	2		3
352	*Eucalyptus marginata*	Jarrah	13	600	Good	Acceptable	6	Development has been affected by adjacent trees.	3
353	*Eucalyptus robusta*	Swamp Mahogany	18	450	Good	Acceptable	5	Bi-furcated specimen	3
354	*Eucalyptus camaldulensis 'Camaldulensis'*	River Red Gum	20	700	Good	Acceptable	7		3
356	*Corymbia calophylla*	Marri	15	600	Good	Good	6		3
357	*Eucalyptus robusta*	Swamp Mahogany	18	450	Good	Good	5	ALSO TAGGED AS TREE 291!	3
362	*Corymbia calophylla*	Marri	18	500	Good	Acceptable	6	Evidence of major stem failure.	3
367	*Corymbia calophylla*	Marri	16	500	Good	Acceptable	4		3
369	*Washingtonia robusta*	Cotton Palm	8	500	Good	Good	2		3

TREE TAG No.	BOTANICAL NAME	COMMON NAME	ESTIMATED HEIGHT (metres)	ESTIMATED TRUNK CALLIPER (mm)	HEALTH CONDITION	STRUCTURAL FORM	PRESERVATION ZONE (metres radius)	COMMENT	OPINION
6	*Corymbia calophylla*	Marri	8	300	Acceptable	Good	2	Canopy indicating decline	Remove
8	*Corymbia calophylla*	Marri	8	300	Acceptable	Acceptable	3	Canopy indicating decline. Roots exposed.	Remove
24	*Corymbia calophylla*	Marri	10	1100	Acceptable	Poor	6	Top snapped	Remove
26	*Corymbia calophylla*	Marri	18	350	Good	Poor	3	Top snapped	Remove
39	*Eucalyptus gomphocephala*	Tuart	10	250	Good	Acceptable	3	Suppressed by adjacent tree	Remove
44	*Corymbia calophylla*	Marri	16	1000	Dead	Acceptable	0	Dead specimen	Remove
45	*Eucalyptus marginata*	Jarrah	9	450	Poor	Acceptable	5	Canopy indicating decline	Remove
47	*Corymbia calophylla*	Marri	17	350	Acceptable	Acceptable	4	Canopy indicating decline	Remove
104	*Corymbia calophylla*	Marri	15	500	Good	Poor	4	Top previously snapped; column of decay in main stem.	Remove
116	*Corymbia calophylla*	Marri	10	450	Poor	Acceptable	5	Canopy indicating decline	Remove
119	*Eucalyptus gomphocephala*	Tuart	20	500	Good	Acceptable	5	Termites noted, evidence of major stem failure.	Remove
123	*Eucalyptus camaldulensis 'Obtusa'*	River Red Gum	10	700	Good	Poor	5	Undesirable species; prone to stem failure	Remove
141	*Eucalyptus robusta*	Swamp Mahogany	7	250	Good	Poor	4	Poor form	Remove
145	*Eucalyptus camaldulensis 'Obtusa'*	River Red Gum	16	800	Good	Acceptable	6	Undesirable species; prone to stem failure	Remove
146	*Eucalyptus robusta*	Swamp Mahogany	7	350	Good	Poor	4	Poor form	Remove
147	*Allocasuarina fraseriana*	Common Sheoak	8	400	Good	Poor	3	Split in main stem	Remove
153	*Eucalyptus camaldulensis 'Obtusa'*	River Red Gum	12	400	Good	Acceptable	5	Undesirable species; prone to stem failure	Remove
154	*Eucalyptus robusta*	Swamp Mahogany	10	450	Good	Poor	4	Poor form	Remove
164	*Corymbia calophylla*	Marri	16	400	Acceptable	Poor	4	Canopy shows some decline in health/vigour. Termites noted.	Remove
168	*Eucalyptus robusta*	Swamp Mahogany	7	350	Good	Poor	4	Poor form	Remove
170	*Eucalyptus grandis*	Rose Gum	12	500	Good	Acceptable	4	Undesirable species; prone to stem failure	Remove
210	*Corymbia calophylla*	Marri	16	500	Good	Poor	4	Undesirable form for species, previously lopped.	Remove
229	*Eucalyptus gomphocephala*	Tuart	16	350	Acceptable	Poor	4	Undesirable form for species, main leader is dead	Remove
263	*Eucalyptus robusta*	Swamp Mahogany	5	350	Good	Poor	3	Poor form	Remove
269	*Eucalyptus grandis*	Rose Gum	13	500	Good	Acceptable	5	Undesirable species; prone to stem failure	Remove
278	*Eucalyptus robusta*	Swamp Mahogany	15	400	Good	Poor	4	Undesirable form for species, could cause future issues	Remove
283	*Eucalyptus grandis*	Rose Gum	18	400	Good	Acceptable	5	Undesirable species; prone to stem failure	Remove
284	*Eucalyptus robusta*	Swamp Mahogany	9	350	Good	Acceptable	3	Undesirable form for species	Remove
286	*Melia azedarach*	White Cedar	23	900	Good	Acceptable	5	Undesirable species	Remove
290	*Melia azedarach*	White Cedar	20	700	Good	Acceptable	5	Undesirable species	Remove
301	*Schinus terebinthifolius*	Brazilian Pepper	8	500	Good	Acceptable	3	Undesirable species	Remove
302	*Schinus terebinthifolius*	Brazilian Pepper	8	500	Good	Acceptable	3	Undesirable species	Remove
326	*Eucalyptus gomphocephala*	Tuart	16	450	Poor	Acceptable	6	Mostly dead specimen. Termites.	Remove
340	*Eucalyptus robusta*	Swamp Mahogany	13	350	Good	Acceptable	3	Group of self sown specimens	Remove
341	*Eucalyptus gomphocephala*	Tuart	16	1100	Good	Poor	8	Previously lopped.	Remove
346	*Corymbia calophylla*	Marri	12	300	Poor	Acceptable	4	Canopy indicates a decline in health/vigour	Remove

TREE TAG No.	BOTANICAL NAME	COMMON NAME	ESTIMATED HEIGHT (metres)	ESTIMATED TRUNK CALLIPER (mm)	HEALTH CONDITION	STRUCTURAL FORM	PRESERVATION ZONE (metres radius)	COMMENT	OPINION
347	*Corymbia calophylla*	Marri	15	400	Poor	Acceptable	4	Canopy indicates a decline in health/vigour	Remove
349	*Eucalyptus gomphocephala*	Tuart	18	800	Good	Poor	7	Previously lopped.	Remove
350	*Ficus elastica*	Rubber Tree	10	350	Good	Good	3	Undesirable species	Remove
355	*Eucalyptus camaldulensis 'Camaldulensis'*	River Red Gum	20	800	Good	Poor	5	Undesirable form for species, could cause future issues	Remove
358	*Corymbia calophylla*	Marri	8	250	Good	Poor	3	Poor form	Remove

Appendix c ~ Tree Preservation Guidelines

TREES PRESERVATION CONSIDERATIONS

As previously mentioned in this report, successful tree preservation must begin at the design and planning stages of any development process.

Further arboricultural input will be required during the remainder of the design and planning stages to discuss;

i. Proposed resulting levels in the vicinity of trees identified to be retained;

ii. Drainage delineation and installation in the vicinity of trees identified to be retained;

iii. Underground services delineation and installation in the vicinity of trees identified to be retained;

iv. Building restrictions in the vicinity of trees in the vicinity of trees identified to be retained;

v. Landscaping restrictions (including irrigation design and installation) within designated preservation zones of trees identified to be retained;

vi. Erosion and siltation control in the vicinity of trees identified to be retained (if applicable);

vii. Watering requirements during construction for any trees identified to be retained;

viii. Specific root zone protection requirements prior to, and during, construction phases.

ix. Extent of canopy works on retained trees required to facilitate construction works and any building clearances.

The following pages provide general guidelines for designing and constructing around any tree highlighted for retention.

As previously mentioned, an extent of further Arboricultural input will however be required throughout the development design process to make comment on individual trees 'earmarked' for retention and any specific individual requirements during the construction phases.

NOTE: In the event site design parameters do not allow for the adoption of the recommended tree preservation measures in a trees recommended preservation zone, then further Arboricultural input would be pertinent to discuss the development measures required and the future retention of the specimen(s) in question.

DESIGN GUIDELINES FOR TREE PRESERVATION

1. GROUND LEVELS

As previously mentioned in this report, the majority of 'feeding' roots can be found in the top 300 – 500mm of the soil profile, where the soil oxygen, water, and nutrient levels are at their highest.

Retention of this zone of the current existing soil profile is therefore the most vital component for successful tree preservation.

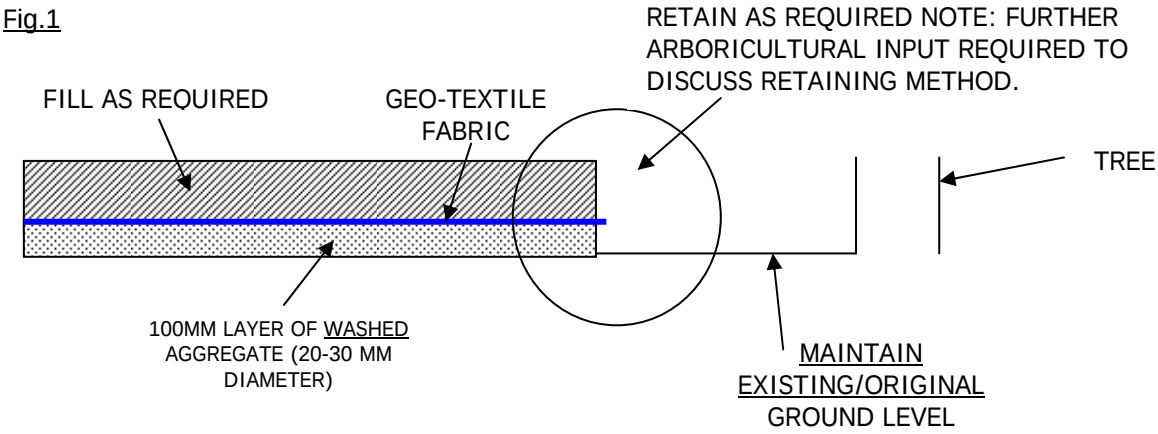
Therefore, the retention of current existing ground levels within the prescribed preservation zone areas will be required during all stages of the development to ensure successful preservation of any given specimen.

In the event of ground level alterations (i.e. lowering) occurring immediately outside of a prescribed preservation zone, root pruning will need to be undertaken using approved Arboricultural methods and equipment along the perimeter of the preservation zone.

Raising ground levels can also affect the long-term health and vigour of a tree due to a reduction in gas exchange and water levels.

If soil levels are to be raised by a large amount (i.e. more than 300mm) over extensive areas of a trees root-zone (i.e. 40% or more) then consideration must be given to the use of an aggregate layer to allow for gas exchange to continue to occur (refer Fig 1.) whilst the tree adapts to the new environment and attempts to develop a new absorbing root system within the areas of fill.

Fig.1



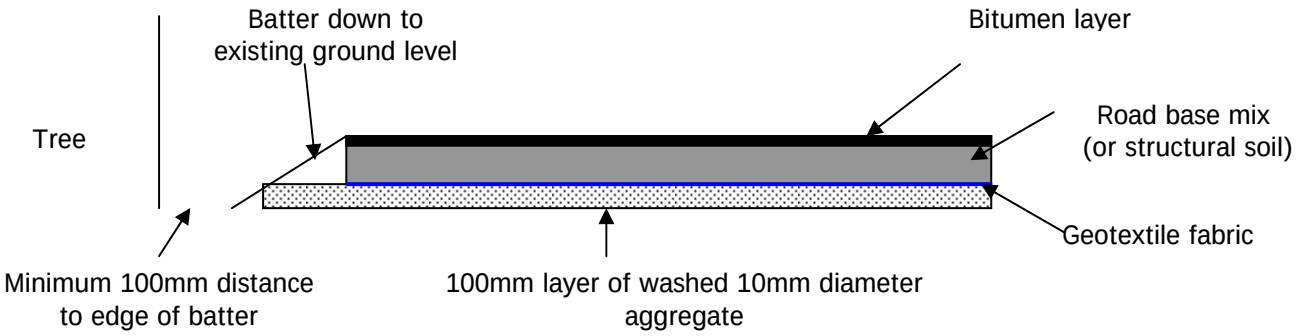
It is also important not to allow for any build up of fill to occur around a trees main stem as this can cause collar rot to occur, effectively ring barking the tree (albeit long-term).

Any required alterations to the ground level within a designated preservation zone will therefore require a degree of further Arboricultural input to discuss extent of excavation permissible and any required remedial/compensatory actions to be undertaken.

2. ROAD DELINEATION/CONSTRUCTION

In the event of a road being delineated through a trees' preservation zone, general road construction methods will often result in an unacceptable level of root loss/damage. To this extent any proposed road to be delineated through a trees preservation zone is to be constructed on top of existing ground level (i.e. no excavations/boxing out). *NOTE: To prevent fill around base of trees (which will lead to the onset of decay), either grade down from back of kerbing to existing ground level, or use of a washed aggregate (30-40mm diameter) for this area.*

FIG. 1.

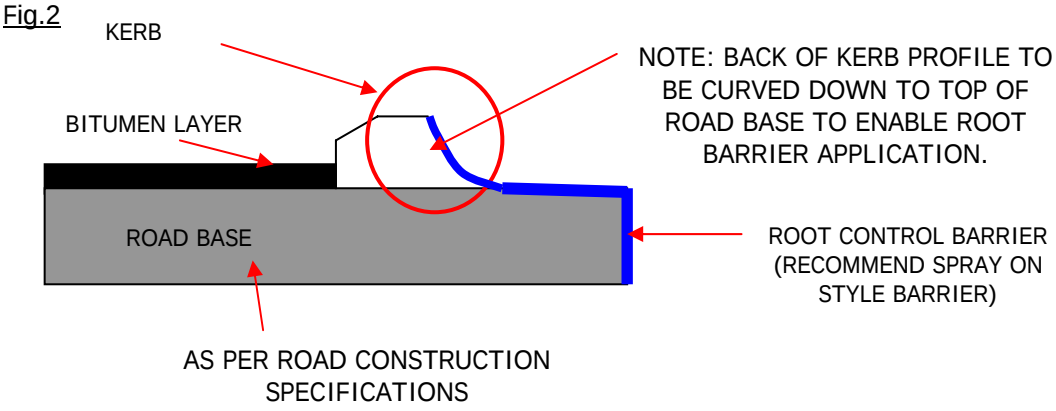


NOTE: Alternatively a structural soil mix can be used as a road base, which is considered the preferable option as this material will not require the use of an additional aggregate layer.

The use of a structural soil mix for the construction of roads becomes important when the road passes through the preservation zone of a tree which is known to have a fibrous root system (i.e. over the zone where the trees hair roots (which are utilised for the uptake of water /nutrients essential for tree health, vigour and overall aesthetic appearance of the tree) are found. Tuarts are however of species of tree which are known to have an extensive arterial root system with the majority of hair (feeding) roots being located at the end of these major roots (i.e.). In these instances, where the road can effectively 'bridge over' the major lateral root growth, general road base material can be used. The treatment of the verge areas on the opposite side of the road will however become important to the future of the tree.

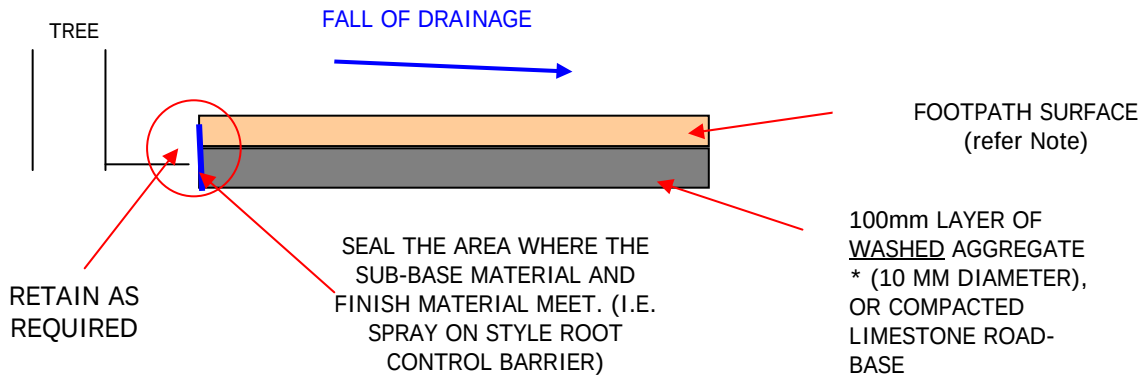
Consideration should also be given to the installation of kerb protection measures to prevent future disturbance occurring through surface root 'invasion' (Refer Fig.2)

Fig.2



Alternative design and construction methods will also be required in the event of footpaths being constructed within a given preservation zone. (Refer Fig.3), with the footpath constructed on top of existing ground level.

Fig. 3



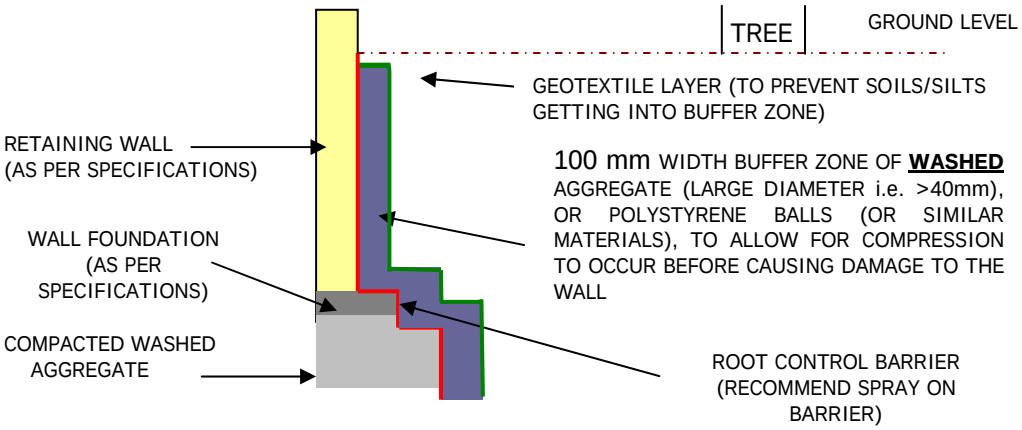
* Note: In instances where the footpath and road pass over a trees preservation zone, alternative surface materials (i.e. porous paving on an aggregate sub-base) for the footpath will need to be considered to allow for water and gaseous exchange to occur. Furthermore, the footpath may need to be narrowed or delineated around the main stems of trees to allow for main stem and structural root expansion to occur without causing disruption to the 'urban infrastructure' (i.e. path).

3. RETAINING WALLS

Preferably, all retaining walls on site are to be constructed outside of prescribed preservation zone(s). In the event a retaining wall is required to be constructed within a prescribed preservation zone a degree of further Arboricultural input will be pertinent to discuss wall delineation and extent of excavation permissible within a preservation zone and provide any remedial/compensatory actions required to be undertaken prior to wall construction commencing.

Further to this wall design may require a degree of protection measures to prevent future disturbance occurring through surface root 'invasion'. (Refer Fig. 4)

FIG. 4



4. DRAINAGE/SEWERAGE DELINEATION/CONSTRUCTION

Drainage installation (stormwater, sewerage etc.) will often require major excavations which can also cause excessive root loss/damage. In an effort to preserve the appropriate root mass **all stormwater/sewerage required are to be delineated outside of prescribed preservation zones**, **unless drainage can be installed utilising bore/underground drilling methods.**

NOTE: Root pruning will need to be to be undertaken using approved Arboricultural methods and equipment along the perimeter of the preservation zone, in the event of drainage/sewer installation occurring immediately outside of a prescribed preservation zone.

Road stormwater and gully traps are to be installed at furtherest point from the tree (i.e. on the opposite side of the road to a tree where applicable, or in the middle of the road in the event of trees being on both sides of the road), with the fall of drainage for the road to be away from the tree to be retained.

5. UNDERGROUND SERVICES DELINEATION/INSTALLATION

Preferably all services (i.e. telecom, gas, power, water and other telecommunications) are to be delineated/installed outside of a prescribed preservation zone. In the event of services being required to pass through a preservation zone, all services are to be installed utilising underground drilling/boring methods. NOTE: **This includes all services required for the Lots** (i.e. Telstra, power, gas, water, Foxtel, irrigation etc.).

In the event of such methods becoming impractical, further Arboricultural input will be required to discuss extent of excavation permissible within a preservation zone and any required remedial/compensatory actions to be undertaken.

6. EROSION CONTROL

In the event of retained trees being located in or adjacent to a slope of greater than 25 degrees, it is recommended that an approved erosion control or silt barriers be installed outside the preservation zone to prevent erosion/silting within a preservation zone.

7. SOFT LANDSCAPING

Any soft landscaping works required within previous preservation zones are to be subject to the approval of the consulting Arborist, and all soft landscaping works required within a tree preservation zone are to be completed in a tree sensitive manner, without the use of heavy impact machinery (excavators, bobcats etc.)

Permanent irrigation design and watering program for the area will also need to be subject to the opinion and approval of the consulting Arborist to prevent unnecessary root loss/damage occurring prior to installation.

PRESERVATION GUIDELINES DURING CONSTRUCTION

8. SITE CLEARING

The location of trees to be retained is to be marked on site maps and provided to all contractors/sub-contractors utilised on site with details of regulations specific to tree preservation.

Physical fencing of the prescribed preservation zone area is recommended with minimum 1.8 metre cycle fencing (or similar), in conjunction with clear identifiable flagging tape on posts. NOTE: In instances where trees are directly adjacent each other (i.e. the area along Great Eastern Highway), treat the entire area as a single preservation zone.

These preservation zones are to be clearly marked as NO-GO zones during construction works without prior written consent from the consulting Arborist. During demolition/site clearing works, ensure contact does not occur with the canopy/main stem of the specimen from plant machinery.

In the event of trees requiring removal adjacent a specimen to be retained, the removal must be undertaken by hand (i.e. without the use of heavy impact machinery) to avoid any possibility of unnecessary damage occurring.

9. TREE CANOPY WORKS

Minor canopy works to remove major deadwood material (for site safety reasons), and to raise canopies (only where required to accommodate plant machinery) is recommended for any tree retained on site.

Once major civil works have been completed, selective pruning works to thin canopies and enhance the aesthetics of the trees, and to provide greater clearances over the buildings can also be undertaken if desired.

All tree works are to be undertaken by suitably qualified and experienced tree surgeons, and must comply with Australian Standards 4373 (1996) ~ *Pruning of Amenity Trees*.

A degree of site supervision by a consulting Arborist is pertinent to ensure appropriate standards are utilised.

10. WATERING REQUIREMENTS

To compensate for any root loss and site disturbance during development construction, compensatory watering regimes will need to be implemented.

Water volumes and frequency are to be determined on a specimen specific basis and/or pending results of any root pruning undertaken.

Water volumes are to be broadcast evenly over given preservation zones via conventional irrigation methods or hand watering methods.

11. SPECIFIC PRESERVATION ZONE PROTECTION REQUIREMENTS

At all stages of the development measures must be undertaken to protect any prescribed preservation zone. This will need to include:

- Maintain protective fencing (recommend 1.8metre cyclone or similar) to prevent access/egress. NOTE: This also enables the clear delineation of preservation zones. NOTE: Fencing is not to be removed or altered without prior consent from the consulting Arborist.
- Use of 100mm layer decomposed wood chip mulch (to aid in water retention and to act as a protective barrier against tree related issues e.g. compaction, possible toxin spills (if risk of contamination, then replenish in a tree sensitive manner i.e. without use of heavy impact machinery such as bobcats, excavators, loaders etc.) in areas directly adjacent the development.
- Maintain vehicular, plant and construction equipment outside of prescribed preservation/protected zones.
- Building materials are not to be stored within the protection zone.
- Signage to clearly identify that the area is for tree preservation purposes only

12. ACCOUNTABILITY

All contractors/sub-contractors utilised on site are to be made aware of location of preserved specimen trees and general preservation guideline requirements (suggest include in the site induction process), and are to 'sign off' that they have read and understood tree preservation zone guideline requirements. (To be provided.)

To ensure a degree of accountability from all contractors/sub-contractors utilised on site, penalties (amounts to be agreed) must be implemented for any damages (wilful or other wise) caused to any tree clearly situated in a prescribed preservation zone.

All damages to retained specimens with dates, offender and extent of damaged caused must be documented and reported to the consulting Arborist at the time of damage occurring, and any damaged specimen is to be inspected by the consulting Arborist, with details of extent of damage caused and remedial actions required.

During the periodic inspections, any discrepancies noted occurring in a preservation zone will, be documented and reported on accordingly. Discrepancies are to be rectified to the consulting Arborist's specifications within 24 hours of notice. All costs incurred for re-instating preservation zones and site inspections will be at the contractors own expense.

Repeated offences should incur increasing penalties (amounts to be determined).

13. MONITORING

Periodic inspections (suggest fortnightly) by the consulting Arborist throughout the development process are recommended to comment on the trees progress/preservation zone maintenance. *NOTE: Frequency of the inspections will be subject to the consulting Arborist's discretion depending on the maintenance of the tree preservation zone, and the co-operation of the civil/building works contractor.*

Pending the result of inspections remedial/preservation measures can be provided as necessary.

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The advice contained herein has been provided in good faith and based upon the material information available, provided, and pertinent at the time the advice was given.

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- The uses of this advice in circumstances or situations other than the specific subject of this advise.
- Failure by the Client to follow this advice.
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