PRELIMINARY TREE ASSESSMENT
LOT 9012 JAYES ROAD, PIARA WATERS (REV 1)

PREPARED FOR:
CELSIUS LAND
BRENTON DOWNING
MANAGING DIRECTOR

PREPARED BY:

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1 PURPOSE OF THIS REPORT

To attend site and undertake an Arboricultural inspection of trees with a trunk diameter greater than 300 mm within Lot 9012 Jayes Road, Piara Waters (refer Figure 1 for detail) and provide preliminary tree retention and preservation detail for consideration as part of the proposed development.

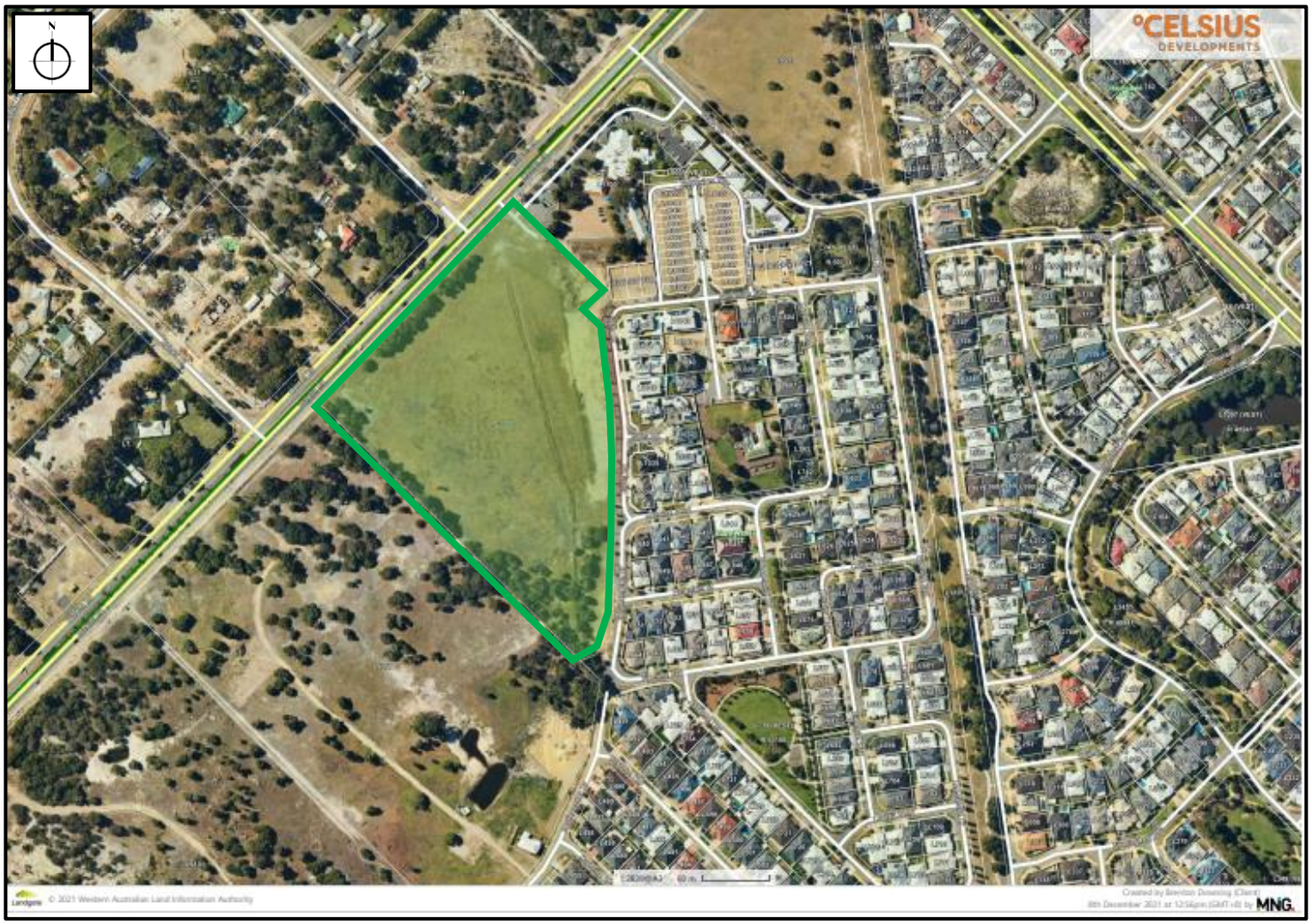


Figure 1. Location Of Lot 9012 Jayes Road, Piara Waters Outlined green. Image supplied by Celsius Developments - Image date 8 December 2021

2 BACKGROUND

2.1 BRIEF

At the request of Brenton Downing (Managing Director Celsius Developments), Arboribus Consulting has been engaged to number and tag trees with a trunk diameter greater than 300 mm within Lot 9012 Jayes Road, Piara Waters and provide the following information:

- Install aluminum tree tags and individually number each tree >300 mm diameter (refer Appendix A & B for detail)
- Identify genus, species and common name
- Comment on current health, structure & age of the subject trees
- Obtain height, canopy spread and trunk diameter measurement(s)
- Provide Tree Protection Zone and Structural Root Zone measurements
- Provide observations and comments for each tree
- Provide a suitability rating for each tree (for incorporation into an urban development)
- Provide background information regarding the Australian Standard AS 4970 '*Protection of Trees on Development Sites'* 2009 and
- Conclusions and Recommendations.

2.2 ARBORICULTURAL INSPECTION

Arboribus Consulting undertook a ground level assessment of the 88 identified trees over the 8th, 9th, 10th & 11th of January 2022.

2.3 LIMITATIONS OF THIS REPORT

- A total of x 88 trees were specified for assessment within Lot 9012 Jayes Road, Piara Waters. It should be noted that a number of semi mature/juvenile trees within the area of assessment (with trunk diameters less than 300 mm in diameter) were not identified, assessed or included in this report.
- The Arboricultural assessment was undertaken at ground level and did not incorporate any aerial inspection or below ground or specialist investigation for the subject trees.
- The information contained within this report is preliminary in nature and is not intended to be used as a 'Tree Protection Plan (TPP)' for the proposed Jayes Road development. Further inputs by an AQF 5 Arborist will be required to develop a site-specific TPP in accordance with AS 4970-2009 for implementation by the contractors nominated for the works.

3 SUMMARY OF FINDINGS

3.1 GENERAL SITE OVERVIEW

- The area assessed is bordered by Warton Road to the north/northwest and Jayes road to the east. A new development/construction site borders Lot 9012 to the south and west.
- Topography was somewhat flat within the central portion of site, tapers up sharply adjacent Warton and Jayes Road verges, and gently slopes toward the low point at the southern end of the site.
- Existing swales run through the site to the west, south and lower eastern areas. No irrigation was noted at the time of inspection. Ground cover was noted to be a mix of heavy weed cover and grey sandy soil. The majority of mature trees within the site were noted to be situated along the northern, western and southern boundaries of lot 9012.
- At the time of inspection (January 2022), earthworks and civils construction were being undertaken within the adjacent construction site. Works included dewatering (with holding ponds situated at the southern end of the site), road construction, installation of below ground services, cut and fill, and general construction activities.

3.2 TOTAL NUMBER OF TREES INSPECTED

- A total of x 88 trees were numbered, tagged (refer figure 2) and assessed for the Jayes Road project (refer *Appendix A Tree Location Drawing Appendix B Table of Results* for detail).

Figure 2. Showing metal tree tag and numbering of the trees > 300 mm trunk diameter

3.3 TREE SPECIES INSPECTED

Of the 88 trees assessed, the following species were documented:

- *Eucalyptus rudis* (Flooded Gum) x 34
- *Eucalyptus camaldulensis* (River Red Gum) x 28
- *Melaleuca preissiana* (Stout Paperbark) x 18
- *Eucalyptus marginata* (Jarrah) x 3
- *Eucalyptus species* (Eucalyptus) x 2
- *Allocasuarina fraseriana* (WA Sheoak) x 2
- *Eucalyptus botryoides* (Southern Mahogany) x1

All trees assessed are Australian native (no introduced species). The Southern Mahogany (tree tag 59) is endemic to the east coast of Austarlia – the remaining 87 trees assessed are endemic to the south west of Western Australia and their species are considered well suited to the Piara Waters locale.

3.4 AGE STATUS

Synopsis of general age status for the assessed trees was broken down into the following:

- Juvenile = x 0
- Semi Mature = x 0
- Early Mature = x 30
- Mature = x 58
- Post Mature = x 0

It should be noted that a number of juvenile and semi mature trees exist within the site however due to the assessment parameters, these smaller trees have been omitted from the assessment.

3.5 USEFUL LIFE EXPECTANCY (ULE)

Synopsis of Useful Life Expectancy (ULE) for the assessed trees was broken down into the following:

- Dead (no chance of recovery) = x 5
- <5 Years = x 1
- 5 - 15 Years = x 10
- 15 – 40 Years = x 29
- 40 + Years = x 43

3.6 SUMMARY OF CANOPY HEALTH

- Synopsis of canopy health for the assessed trees was broken down into the following:
    - Good = x 41
    - Reasonable = x 29
    - Questionable = x 12

- Poor = x 1
- Dead (no chance of recovery) = x 5

Refer Appendix B Definitions Canopy Health for detail.

- The Majority of trees assessed were considered to be in Good or Reasonable health status. Various (minor) health issues identified are considered manageable within the scope of general horticultural management for the proposed site.
- 13 trees displayed Questionable or Poor health status. If identified for retention into the development, these 13 trees will require specific Arboricultural input and/or targeted remedial treatments to improve general health status – refer Appendix B for detail.

3.7 SUMMARY OF CANOPY STRUCTURE

- Synopsis of individual canopy structure for the assessed trees was broken down into the following:
  - Good = x 10
  - Reasonable = x 61
  - Questionable = x 17
  - Poor = x 0

Refer Appendix B Definitions Canopy Structure for detail.

- The Majority of trees assessed displayed Good or Reasonable canopy structure. A number of minor structural problems were identified; however, are considered manageable as part of general tree pruning maintenance responsibilities for the proposed site – refer *3.10 Canopy Management Considerations and Appendix B* for further detail.
- 17 trees were classified as having Questionable Canopy Structure. If identified for retention into the development, these 17 trees will require further specific Arboricultural input and/or targeted remedial treatments implemented to address identified issues and improve site safety – refer Appendix B for detail.

3.8 PEST AND DISEASES

- Termite mud was noted on the main stems of trees 0057 & 0058 however no active termites were observed at time of inspection. If identified for retention into the development, consideration should be given to the installation of non-invasive termite baiting & monitoring systems for the subject trees.
- Aside the noted Termite mud, no obvious visual presence of any significant pests infestations or fungal sporophores were observed at the time of assessment.

3.9 SUITABILITY FOR INCORPORATION INTO AN URBAN DEVELOPMENT

- *'Suitability For Incorporation Into An Urban Development'* provides a retention value based on:-
  - the trees current health and/or structural status

- if they are well positioned within the landscape
- the species known tolerances for disturbance and
- species characteristics that are considered suitable for retention and incorporation into an urban development area.

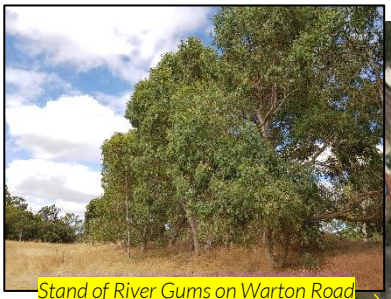
- Synopsis of suitability for incorporation into an urban development was broken down into the following:
  - Optimal = x 15
  - Acceptable = x 40
  - Questionable = x 24
  - Unsuitable = x 9

  Refer Appendix B suitability for incorporation into an urban development for detail.
- The Majority of trees assessed were categorized as Optimal &/or Acceptable (63%) and have been identified green in Appendix A & B. These trees are considered well placed or display favorable health and/or structural characteristics.
- 24 trees were categorized as Questionable (27%) and have been identified Orange in Appendix A & B. These trees may be considered for retention; however, will require specific Arboricultural health and/or structural management measures developed by a AQF 5 Arborist and implemented as part of their retention into the development.
- 9 trees were categorized as Unsuitable (10%) and have been identified Red in Appendix A & B. These trees are considered unsuitable for incorporation into an urban development and display problematic health or structural form or; are not considered compatible with proposed construction or development.

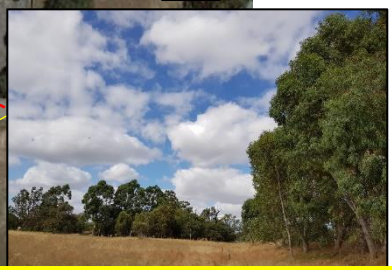
3.10 CANOPY MANAGEMENT CONSIDERATIONS

- Canopy pruning considerations have been made for the trees that may be considered for retention into the development – refer Appendix B for detail.
- Preliminary works include raising of canopies, the removal of major dead wood (Greater than 30 mm in diameter), removal of broken branch stubs and; removal of noted friction (rubbing) stems.
- Where monitoring of unions has been proposed, reinspection of the trees should be undertaken by an AQF 5 Arborist at 12 months from the time of initial inspection to assess changes (if any).
- All canopy pruning works are to be undertaken in keeping with Australian Standard AS 4373 *'Pruning of Amenity Trees'* 2007 by suitably qualified and experienced AQF 3 Arborists under the guidance/direction of an AQF 5 Arborist.

4 SITE IMAGES

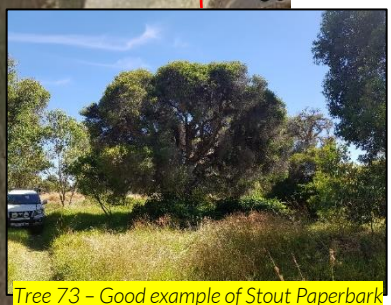


Stand of River Gums on Warton Road

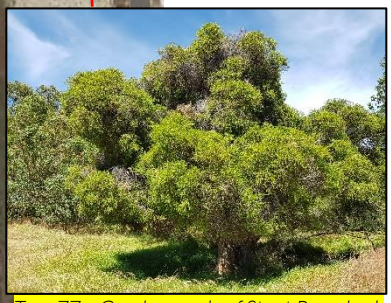


Stand of River Gums on Warton Road (right) looking toward *Stand of natives in western sector*

Stand of natives in western sector



Tree 73 – Good example of Stout Paperbark



Tree 77 – Good example of Stout Paperbark

Stand of natives in western sector

Mature Flooded Gums and River Gums along south western boundary

Mature Flooded Gums adjacent creek and dewatering overflow area

5 CONCLUSIONS

- Further discussion and inputs with a suitably qualified and experienced AQF 5 Arborist will help to assist with the identification of worthwhile trees for incorporation into the proposed Jayes development.

- Tree protection measures in keeping with AS 4970 *'Protection of Trees on development sites'* 2009' must be incorporated into the proposed design and into any proposed works methodologies in order to achieve tree sensitive outcomes for the project.

  The retention of existing ground levels; limiting excavations within the specified TPZs and; implementing appropriate remedial measures will be important in the future success for the trees identified for retention. Where encroachments into a TPZ are necessary, further discussion and input from an AQF level 5 Arborist will be required to review proposed encroachments and assist in the development of appropriate methodologies to allow works to occur in a sensitive manner.

  Consideration will also need to be given to the current development/construction site situated to the southwest of Lot 9012; the proximity of a number of the assessed trees to the adjacent construction; the potential impacts the adjacent development may have on the trees (and the potential impact of fill) and; how best to intergrade and manage these trees over the longer term.

- As part of the Tree Protection responsibilities for the project only suitable qualified and experienced AQF 5 Arborists should be engaged to:
  - Identify worthwhile specimens to be incorporated into the Jayes road development
  - Undertake ongoing reviews and provide Arboricultural inputs into the design; methodologies and/or proposed encroachments for the identified trees
  - Develop a site-specific Tree Protection Plan in keeping with AS 4970 'Protection of Trees on Development Sites' 2009
  - Provide approval of any works within TPZs
  - Supervise approved works within TPZs
  - Approve and oversee canopy pruning works
  - Monitor tree health and structure during works
  - Provide ongoing reporting and assessments as and where required
  - Provide sign off reporting that documents the trees post completion of the works.

- Any canopy pruning works specified are to be undertaken in keeping with Australian Standard AS 4373 *'Pruning of Amenity Trees'* 2007 by suitably qualified and experienced AQF 3 Arborists under the guidance/direction of an AQF 5 Project Arborist.

6 RECOMMENDATIONS

1. Further discussion and inputs be sought from a suitably qualified and experienced AQF 5 Arborist to identify worthwhile trees for incorporation into the development.

2. That based on trees identified for retention, that all project specific drawings include accurate TPZ & SRZ delineations for the subject trees (refer *Appendix B Table of Results for detail*).

3. Where trees have been identified for retention and incorporation into the development that appropriate refinements, design modifications and the development of tree sensitive works methodologies are undertaken by a AQF 5 Arborist and recommendations incorporated into drawings and implemented for the project.

4. That a site-specific Tree Protection Plan (TPP) be developed by an AQF 5 Arborist for trees identified for retention in keeping with the processes identified in Australian Standards AS 4970 *'Protection of Trees on Development Sites'* 2009 to be implemented by the nominated contactor for the duration of the works.

5. That Tree Protection Zones (TPZs) are established at the commencement of construction and are maintained for the duration of the upgrade works for all trees identified for retention (refer Appendix C for detail).

6. That the trees are monitored and any proposed works within the TPZs are supervised & documented by an AQF 5 Arborist in keeping with the Australian Standards AS 4970 *'Protection of Trees on Development Sites'* 2009 & AS 4373 *'Pruning of Amenity Trees'* 2007.

7. That any canopy pruning works for trees identified for retention are undertaken in keeping with Australian Standard AS 4373 *'Pruning of Amenity Trees'* 2007 by suitably qualified and experienced AQF 3 Arborists under the guidance/direction of an AQF 5 Arborist.

8. That sign off reporting be undertaken by an AQF 5 Arborist that documents the condition of the trees post completion of the project and that provides a maintenance schedule for the client to implement post completion of the construction works.

7 REFERENCES AND READING

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APPENDIX A – TREE LOCATION DRAWING

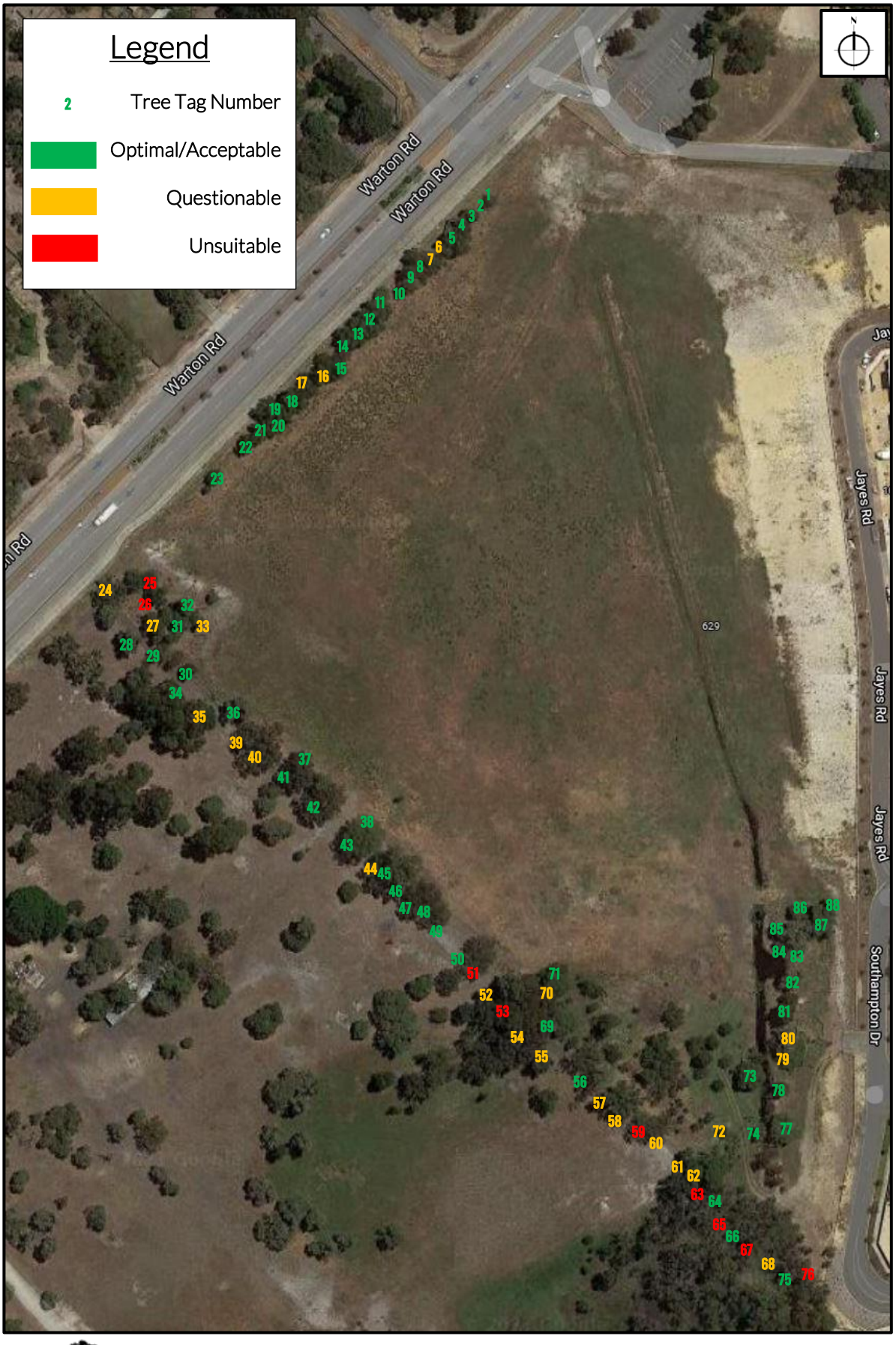


Figure 3 –*Image showing indicative location, individual numbering and Suitability rating of the assessed trees Image Source Image source www.google.com.au/maps/ Please note that trees locations are indicative and for reference purposes only.*

APPENDIX B – TABLE OF RESULTS & DEFINITIONS

DEFINITIONS - GENERAL

Tree ID Number	Provides an individual Tag identification number.
Nomenclature & Tree Identification	Identifies the genus, species and common name for the tree.
Estimated Age	Identifies the estimated age at the time of assessment. (Juvenile, Semi Mature, Early Mature, Mature, Senescing).
Estimated Tree Height	Estimate of the Trees Height in meters.
Estimated Canopy Spread	Estimate of the Trees canopy spread in meters.
Useful Life Expectancy (ULE)	Estimate of the trees Useful Life Expectancy (ULE) (less than 5 Years, 5 – 15 years, 15 – 40 years, or over 40 years).
Canopy Health	Identifies the visual health display at the time of assessment. (Exceptional, Good, Reasonable, Questionable, Poor, Dead) – refer Canopy Health Definitions below for further detail.
Canopy Structure	Identifies the canopies visual structural form at the time of assessment. (Good, Reasonable, Questionable, Poor, Dead) – refer Canopy Health Definitions below for further detail.
Trunk Diameter @ 1.4 meters	Measurement of trunk diameter in millimetres. Typically measured at 1.4 meters above ground level.
Tree Protection Zone (TPZ)	Calculated as: x12 Trunk Diameter. Identified in AS 4970 'Protection of Trees on Development Sites' 2009 ' as *'the area of root and canopy area requiring protection during construction so the tree remains viable. Any works proposed within this area requires approval from an AQF 5 Arborist prior to commencement.*
Trunk Diameter @ Ground Level	Measurement of trunk diameter in millimetres measured at ground level. Measurement essential for accurate calculation of Structural Root Zone (SRZ) radius
Structural Root Zone (SRZ)	Calculated as: Diameter at ground level x 50) $^{0.42}$ x 0.64. Identified in AS 4970 'Protection of Trees on Development Sites' 2009 *'as the area required for tree stability'. Special Note:- the SRZ is not to be mistaken for; or utilised as a Tree Protection Zone (TPZ) refer TPZ definition above for detail.*
Comments	General information for the assessed tree.
Suitability For Incorporation Into An Urban Development	Identifies a retention value based on health and structural status, are well positioned, have known tolerances or species characteristics considered suitable for retention into an urban development area (Optimal, Acceptable, Questionable, Unsuitable).
Canopy Management Considerations	Provides general canopy pruning considerations for the individual tree. *Special Note:- All canopy pruning works are to be undertaken in keeping with Australian Standard AS 4373 'Pruning of Amenity Trees' 2007 by suitably qualified and experienced Arborists under the guidance of Arboribus.*

DEFINITIONS – CANOPY HEALTH

Exceptional
The tree is demonstrating exceptional growth and exhibits a full dense canopy of foliage for a specimen of the species. Leaf colouration, distribution and size are all exceptional for the species. No visual signs of any pests and/or disease impacting tree health. Seasonal growth and/or callous development is active and evident.
Good
Tree displays typical foliage size, colouration, and density for a specimen of the species. Seasonal growth and/or callous development all appear typical. Seasonal deadwood may be apparent however likely as a result of natural attrition and not an indication of reduction in the trees wellbeing. May have minor seasonal pest (or disease) issues; however, unlikely to impact general health and wellbeing.
Reasonable
Tree displays typical foliage size and colouration; however, may display a reduction in ideal growth. The tree may exhibit modest visual health issues or minor areas of concern. Canopy density may be affected or have a slightly higher percentage of deadwood than what would be considered 'typical'. Seasonal growth and/or callous development may be slightly impeded. Presence of a pest or disease may be evident. However, issues noted considered easily addressed within the scope of proactive tree management.
Questionable
Canopy starting to indicate decline. Apical/terminal sections of the canopy may be actively declining or dead. Pests or diseases may be prevalent and impacting health that require intervention. Subject tree will require a tree specific management plan to be developed to address health issues noted and/or require targeted remedial intervention(s) and/or analysis or further investigation and/or monitored on a more detailed basis.
Poor
Canopy Indicates decline. Canopy may display less than 25% live photosynthetic mass. Majority of tertiary and secondary limbs are dead or compromised. Current health condition such that significant remedial intervention is unlikely to assist in appropriate/worthwhile recovery.
Dead
Tree has no active conductive tissue - indicating no chance of recovery.

DEFINITIONS – CANOPY STRUCTURE

Good
Primary and secondary framework and Primary and secondary branch attachments (unions) display typical form for a specimen of the species. Tree exhibits no significant visual issues within the canopy; however, may display minimal/minor structural imperfections (that may be addressed within the scope of proactive tree management).
Reasonable
Tree displays reasonable canopy structural form and generally free of significant issues; however, the tree may exhibit modest visual issues, structural defects or areas of concern that may require to be addressed with remedial work or require to be monitored. This may include, minor competition/suppression issues, minor leans, codominant stems and branches, minor bark inclusions, noticeable wounding & damage, previously lopped canopies; storm damaged and/or vandalisms where epicormic regeneration has developed satisfactory branch attachment etc… However, issues can be addressed or monitored within the scope of proactive tree management.
Questionable
Primary and secondary canopy structural form displays defects, flaws or areas of concern that may lead to future issues. This could include issues that may affect structural integrity including Storm damage & previous deleterious pruning, significant asymmetry & competition issues, problematic leans, codominant stems with bark inclusions and swelling present, substantial wounding & damage, major decay, poor branch taper etc that will require to be addressed with remedial intervention; be further investigated and/or; specifically monitored in an ongoing basis.
Poor
Tree displays substantial/major structural flaws within its primary and/or secondary (or beyond) canopy structural form i.e.: extensive decay and/or hollows, broken or compromised unions, substantial splits breaks and/or fractures etc.. where remedial, Arboricultural or Engineering intervention is unlikely to improve form or substantially reduce site risk.

Tree ID No.	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter @ 1.4m	Tree Protection Zone (TPZ)	Trunk Diameter @ G.L	Structural Root Zone (SRZ)	Comments	Suitability For Incorporation Into An Urban Development	Canopy Management Considerations
0001	*Eucalyptus camaldulensis (River Red Gum)*	Early Mature	7	7	40 + years	Good	Reasonable	0.360	4.32	0.420	2.30	Main stem bifurcates between 1 meter and 2 meters, Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species; Part of a stand of numerous Euc. camaldulensis situated along Warton Road	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia.
0002	*Eucalyptus camaldulensis (River Red Gum)*	Early Mature	9	7	40 + years	Good	Good	0.470	5.64	0.520	2.51	Tree is considered to be a good specimen of the species, Part of a stand of numerous Euc. camaldulensis situated along Warton Road	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia.
0003	*Eucalyptus camaldulensis (River Red Gum)*	Early Mature	8	7	40 + years	Reasonable	Reasonable	0.430	5.16	0.500	2.47	Canopy displays leggy structural form, Deadwood noted within canopy (< 50mm dia.), Main stem bifurcates between 1 meter and 2 meters, Tree is considered to be a reasonable specimen of the species,Part of a stand of numerous Euc. camaldulensis situated along Warton Road	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia.
0004	*Eucalyptus camaldulensis (River Red Gum)*	Early Mature	11	10	40 + years	Good	Reasonable	0.400	4.80	0.510	2.49	Included bark unions noted (minor), Main stem bifurcates between 2 meters and 3 meters, Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, Part of a stand of numerous Euc. camaldulensis situated along Warton Road	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia.
0005	*Eucalyptus camaldulensis (River Red Gum)*	Early Mature	12	8	40 + years	Good	Reasonable	0.310	3.72	0.390	2.23	Canopy displays leggy structural form, Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, Part of a stand of numerous Euc. camaldulensis situated along Warton Road	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia.
0006	*Eucalyptus camaldulensis (River Red Gum)*	Early Mature	7	6	40 + years	Good	Reasonable	0.330	3.96	0.420	2.30	Major canopy suppression noted, Tree on lean (major), tree growing over Warton road footpath, Part of a stand of numerous Euc. camaldulensis situated along Warton Road	Questionable (Modifications and inputs required for incorporation &/or may display Questionable health or structural issues)	*Raise canopy *Remove major deadwood >30mm dia.
0007	*Eucalyptus camaldulensis (River Red Gum)*	Early Mature	10	6	40 + years	Good	Questionable	0.320	3.84	0.390	2.23	Included bark unions with swelling noted, Main stem bifurcates between 1 meter and 2 meters, Minor canopy suppression noted, Minor deadwood noted within canopy, Part of a stand of numerous Euc. camaldulensis situated along Warton Road	Questionable (Modifications and inputs required for incorporation &/or may display Questionable health or structural issues)	*Raise canopy *Remove major deadwood >30mm dia. *Monitor unions
0008	*Eucalyptus camaldulensis (River Red Gum)*	Early Mature	11	7	40 + years	Good	Reasonable	0.310	3.72	0.390	2.23	Minor canopy suppression noted, Minor deadwood noted within canopy, Tree is considered to be a reasonable specimen of the species, Part of a stand of numerous Euc. camaldulensis situated along Warton Road	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia.
0009	*Eucalyptus camaldulensis (River Red Gum)*	Early Mature	12	7	40 + years	Good	Reasonable	0.330	3.96	0.410	2.28	Minor canopy suppression noted, Minor deadwood noted within canopy, Tree is considered to be a reasonable specimen of the species, Part of a stand of numerous Euc. camaldulensis situated along Warton Road	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia.
0010	*Eucalyptus camaldulensis (River Red Gum)*	Early Mature	12	9	40 + years	Good	Reasonable	0.330	3.96	0.420	2.30	Minor canopy suppression noted, Minor deadwood noted within canopy, Part of a stand of numerous Euc. camaldulensis situated along Warton Road	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia.
0011	*Eucalyptus camaldulensis (River Red Gum)*	Early Mature	12	9	40 + years	Good	Reasonable	0.270 + 0.240	4.32	0.410	2.28	Main stem bifurcates between 1 meter and 2 meters, Minor canopy suppression noted, Minor deadwood noted within canopy, Tree is considered to be a reasonable specimen of the species, Part of a stand of numerous Euc. camaldulensis situated along Warton Road	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia.

Tree ID No.	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter @ 1.4m	Tree Protection Zone (TPZ)	Trunk Diameter @ G.L	Structural Root Zone (SRZ)	Comments	Suitability For Incorporation Into An Urban Development	Canopy Management Considerations
0012	*Eucalyptus camaldulensis (River Red Gum)*	Early Mature	12	10	40 + years	Good	Reasonable	0.380	4.56	0.460	2.39	Included bark unions noted (minor), Minor canopy suppression noted, Minor deadwood noted within canopy, Part of a stand of numerous Euc. camaldulensis situated along Warton Road	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia.
0013	*Eucalyptus camaldulensis (River Red Gum)*	Early Mature	13	6	40 + years	Good	Good	0.320	3.84	0.390	2.23	Minor canopy suppression noted, Minor deadwood noted within canopy, Tree is considered to be a good specimen of the species, Part of a stand of numerous Euc. camaldulensis situated along Warton Road	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia.
0014	*Eucalyptus camaldulensis (River Red Gum)*	Early Mature	10	12	40 + years	Good	Reasonable	0.320 + 0.230	4.68	0.450	2.37	Main stem bifurcates between ground level and 500mm, Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, Part of a stand of numerous Euc. camaldulensis situated along Warton Road	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia.
0015	*Eucalyptus camaldulensis (River Red Gum)*	Early Mature	12	8	40 + years	Reasonable	Good	0.300	3.60	0.370	2.18	Minor canopy suppression noted, Minor deadwood noted within canopy, Tree is considered to be a reasonable specimen of the species, Part of a stand of numerous Euc. camaldulensis situated along Warton Road	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia.
0016	*Eucalyptus camaldulensis (River Red Gum)*	Early Mature	11	6	40 + years	Questionable	Reasonable	0.310	3.72	0.330	2.08	Canopy noted to be slightly sparse, Canopy starting to indicate decline, Main stem bifurcates between 500mm and 1 meter, Major canopy suppression noted, Part of a stand of numerous Euc. camaldulensis situated along Warton Road	Questionable (Modifications and inputs required for incorporation &/or may display Questionable health or structural issues)	*Raise canopy *Remove major deadwood >30mm dia.
0017	*Eucalyptus camaldulensis (River Red Gum)*	Early Mature	13	11	40 + years	Good	Questionable	0.480	5.76	0.530	2.53	Canopy displays leggy structural form, Included bark unions with swelling noted, Main stem bifurcates between 500mm and 1 meter, Minor canopy suppression noted, Part of a stand of numerous Euc. camaldulensis situated along Warton Road	Questionable (Modifications and inputs required for incorporation &/or may display Questionable health or structural issues)	*Raise canopy *Remove major deadwood >30mm dia. *Monitor unions.
0018	*Eucalyptus camaldulensis (River Red Gum)*	Early Mature	12	12	40 + years	Good	Reasonable	0.260 + 0.250	4.32	0.420	2.30	Canopy displays leggy structural form, Main stem bifurcates between 500mm and 1 meter, Minor canopy suppression noted, Minor deadwood noted within canopy, Part of a stand of numerous Euc. camaldulensis situated along Warton Road	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia.
0019	*Eucalyptus camaldulensis (River Red Gum)*	Early Mature	12	13	40 + years	Good	Reasonable	0.470	5.64	0.550	2.57	Deadwood noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, Tree on lean (minor), Part of a stand of numerous Euc. camaldulensis situated along Warton Road	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia.
0020	*Eucalyptus camaldulensis (River Red Gum)*	Early Mature	13	10	40 + years	Reasonable	Reasonable	0.380	4.56	0.450	2.37	Canopy noted to be slightly sparse, Main stem bifurcates between 1 meter and 2 meters, Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, Part of a stand of numerous Euc. camaldulensis situated along Warton Road	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia.
0021	*Eucalyptus camaldulensis (River Red Gum)*	Early Mature	10	10	40 + years	Good	Reasonable	0.240 + 0.180	3.60	0.400	2.25	Main stem bifurcates between ground level and 500mm, Minor canopy suppression noted, Minor deadwood noted within canopy, Tree is considered to be a reasonable specimen of the species, Part of a stand of numerous Euc. camaldulensis situated along Warton Road	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia.
0022	*Eucalyptus rudis (Flooded Gum)*	Early Mature	11	10	40 + years	Reasonable	Good	0.320	3.84	0.400	2.25	Minor deadwood noted within canopy, Tree is considered to be a reasonable specimen of the species, Part of a stand of numerous Euc. camaldulensis situated along Warton Road	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia.

Tree ID No.	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter @ 1.4m	Tree Protection Zone (TPZ)	Trunk Diameter @ G.L	Structural Root Zone (SRZ)	Comments	Suitability For Incorporation Into An Urban Development	Canopy Management Considerations
0023	*Eucalyptus rudis (Flooded Gum)*	Early Mature	10	8	40 + years	Good	Good	0.320	3.84	0.350	2.13	Minor deadwood noted within canopy, Tree is considered to be a good specimen of the species, Part of a stand of numerous Euc. camaldulensis situated along Warton Road	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia.
0024	*Eucalyptus rudis (Flooded Gum)*	Mature	9	12	15 - 40 years	Questionable	Reasonable	1.000	12.00	1.000	3.31	Canopy indicates decline, Canopy noted to be slightly sparse, Deadwood noted within canopy (< 50mm dia.), Tree displays multi stemmed form, Stand of x8	Questionable (Modifications and inputs required for incorporation &/or may display Questionable health or structural issues)	*Raise canopy *Remove major deadwood >30mm dia.
0025	*Eucalyptus species (Eucalyptus)*	Mature	14	8	Dead	Dead	Questionable	0.550	N/A	0.900	N/A	Dead Tree – no chance of recovery, consider using timber for habitat, sculpture or furnature for the site	Unsuitable for incorporation (Not compatible with design &/or problematic health or structural form)	Consider removal – Tree Displays Health or Structural issues that may be problematic for long term retention or integration
0026	*Eucalyptus species (Eucalyptus)*	Mature	8	8	Dead	Dead	Questionable	0.420	N/A	0.700	N/A	Dead Tree – no chance of recovery, consider using timber for habitat, sculpture or furnature for the site	Unsuitable for incorporation (Not compatible with design &/or problematic health or structural form)	Consider removal – Tree Displays Health or Structural issues that may be problematic for long term retention or integration
0027	*Allocasuarina fraseriana (WA Sheoak)*	Mature	10	10	15 - 40 years	Questionable	Reasonable	0.390	4.68	0.700	2.85	Canopy starting to indicate decline, Significant deadwood noted within canopy (300 mm + dia.), Tree displays multi stemmed form, Main leader appears to have died some time ago however; tree apprears to have recovered/stabilised	Questionable (Modifications and inputs required for incorporation &/or may display Questionable health or structural issues)	*Raise canopy *Remove major deadwood >30mm dia.
0028	*Eucalyptus marginata (Jarrah)*	Mature	13	9	15 - 40 years	Reasonable	Reasonable	0.500	6.00	0.550	2.57	Deadwood noted within canopy (150 mm to 300 mm dia.), Fire damage noted in main stem (minor), Main stem bifurcates between 1 meter and 2 meters, Tree displays multi stemmed form	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia.
0029	*Melaleuca preissiana (Stout Paperbark)*	Mature	8	6	40 + years	Reasonable	Good	0.360	4.32	0.450	2.37	Deadwood noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species	Optimal (Well Placed &/or Good Specimen)	Remove major deadwood >30mm dia.
0030	*Melaleuca preissiana (Stout Paperbark)*	Mature	9	8	40 + years	Good	Good	0.430	5.16	0.500	2.47	Deadwood noted within canopy (50 mm to 150 mm dia.), Tree is considered to be a good specimen of the species	Optimal (Well Placed &/or Good Specimen)	Remove major deadwood >30mm dia.
0031	*Melaleuca preissiana (Stout Paperbark)*	Mature	10	12	40 + years	Good	Reasonable	0.410 + 0.410	6.96	1.100	3.44	Deadwood noted within canopy (50 mm to 150 mm dia.), Main stem bifurcates at ground level, Tree is considered to be a good specimen of the species	Acceptable (Reasonably located &/or Reasonable Specimen)	Remove major deadwood >30mm dia.
0032	*Eucalyptus marginata (Jarrah)*	Mature	12	10	15 - 40 years	Reasonable	Reasonable	0.400 + 0.400	6.84	1.000	3.31	Deadwood noted within canopy (150 mm to 300 mm dia.), Fire damage noted in main stem (significant), Included bark unions noted (minor), Main stem bifurcates between ground level and 500mm, Minor canopy suppression noted, Tree displays multi stemmed form	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia.

Tree ID No.	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter @ 1.4m	Tree Protection Zone (TPZ)	Trunk Diameter @ G.L	Structural Root Zone (SRZ)	Comments	Suitability For Incorporation Into An Urban Development	Canopy Management Considerations
0033	*Allocasuarina fraseriana (WA Sheoak)*	Mature	8	6	5 - 15 years	Questionable	Reasonable	0.370	4.44	0.450	2.37	Canopy indicates decline, Canopy noted to be sparse, Deadwood noted within canopy (150 mm to 300 mm dia.), Fire damage noted in main stem (minor)	Questionable (Modifications and inputs required for incorporation &/or may display Questionable health or structural issues)	*Raise canopy *Remove major deadwood >30mm dia.
0034	*Eucalyptus camaldulensis (River Red Gum)*	Mature	10	11	40 + years	Good	Reasonable	0.450	5.40	0.530	2.53	Deadwood noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, Also tagged by others as number "68"	Optimal (Well Placed &/or Good Specimen)	*Raise canopy *Remove major deadwood >30mm dia.
0035	*Eucalyptus marginata (Jarrah)*	Early Mature	9	8	40 + years	Good	Questionable	0.350	4.20	0.410	2.28	Deadwood noted within canopy (50 mm to 150 mm dia.), Included bark unions noted (major), Also tagged by others as "83"	Questionable (Modifications and inputs required for incorporation &/or may display Questionable health or structural issues)	*Raise canopy *Remove major deadwood >30mm dia. *Monitor unions.
0036	*Melaleuca preissiana (Stout Paperbark)*	Mature	11	13	40 + years	Good	Reasonable	0.750	9.00	1.100	3.44	Deadwood noted within canopy (150 mm to 300 mm dia.), Tree is considered to be a good specimen of the species	Optimal (Well Placed &/or Good Specimen)	*Raise canopy *Remove major deadwood >30mm dia.
0037	*Melaleuca preissiana (Stout Paperbark)*	Mature	7	8	15 - 40 years	Reasonable	Reasonable	0.640	7.68	0.950	3.24	Deadwood noted within canopy (150 mm to 300 mm dia.), Tree is considered to be a reasonable specimen of the species	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia.
0038	*Melaleuca preissiana (Stout Paperbark)*	Mature	10	12	40 + years	Good	Reasonable	0.540 + 0.320	7.56	1.400	3.81	Significant deadwood noted within canopy (300 mm + dia.), Tree displays multi stemmed form, Tree is considered to be a reasonable specimen of the species	Optimal (Well Placed &/or Good Specimen)	*Raise canopy *Remove major deadwood >30mm dia.
0039	*Eucalyptus rudis (Flooded Gum)*	Mature	8	10	15 - 40 years	Questionable	Reasonable	0.410	4.92	0.460	2.39	Canopy indicates decline, Deadwood noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, Prior branch failures noted within canopy (150 mm to 300 mm dia.), Also tagged by others as number "93"	Questionable (Modifications and inputs required for incorporation &/or may display Questionable health or structural issues)	*Raise canopy *Remove major deadwood >30mm dia. *Remove branch stubs
0040	*Eucalyptus rudis (Flooded Gum)*	Mature	14	16	15 - 40 years	Questionable	Reasonable	0.630	7.56	0.720	2.88	Canopy indicates decline, Canopy noted to be slightly sparse, Deadwood noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, Also tagged by others as number "94"	Questionable (Modifications and inputs required for incorporation &/or may display Questionable health or structural issues)	*Raise canopy *Remove major deadwood >30mm dia.
0041	*Eucalyptus rudis (Flooded Gum)*	Mature	14	17	40 + years	Reasonable	Reasonable	0.650	7.80	0.700	2.85	Deadwood noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, Prior branch failures noted within canopy (150 mm to 300 mm dia.), Also tagged by others as number "97"	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia. *Remove branch stubs
0042	*Eucalyptus rudis (Flooded Gum)*	Mature	14	16	40 + years	Reasonable	Reasonable	0.600	7.20	0.650	2.76	Deadwood noted within canopy (50 mm to 150 mm dia.), Main stem bifurcates between 1 meter and 2 meters, Also tagged by others as number "99"	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia.
0043	*Eucalyptus rudis (Flooded Gum)*	Mature	15	18	40 + years	Reasonable	Reasonable	0.510	6.12	0.570	2.61	Deadwood noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, Prior branch failures noted within canopy (50 mm to 150 mm dia.), Tree is considered to be a reasonable specimen of the species	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia. *Remove branch stubs
0044	*Eucalyptus rudis (Flooded Gum)*	Mature	13	11	15 - 40 years	Reasonable	Reasonable	0.450	5.40	0.520	2.51	Deadwood noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, Prior branch failures noted within canopy (150 mm to 300 mm dia.)	Questionable (Modifications and inputs required for incorporation &/or may display Questionable health or structural issues)	*Raise canopy *Remove major deadwood >30mm dia. *Remove branch stubs

Tree ID No.	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter @ 1.4m	Tree Protection Zone (TPZ)	Trunk Diameter @ G.L	Structural Root Zone (SRZ)	Comments	Suitability For Incorporation Into An Urban Development	Canopy Management Considerations
0045	*Eucalyptus camaldulensis (River Red Gum)*	Mature	16	15	40 + years	Good	Good	0.950	11.40	1.080	3.42	Deadwood noted within canopy (50 mm to 150 mm dia.), Tree is considered to be a good specimen of the species	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia.
0046	*Eucalyptus camaldulensis (River Red Gum)*	Mature	13	9	15 - 40 years	Reasonable	Reasonable	0.460	5.52	0.520	2.51	Canopy displays leggy structural form, Minor canopy suppression noted, Prior branch failures noted within canopy (50 mm to 150 mm dia.)	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia. *Remove branch stubs
0047	*Eucalyptus camaldulensis (River Red Gum)*	Mature	20	20	15 - 40 years	Good	Reasonable	0.630 + 0.680	7.56	1.500	3.92	Deadwood noted within canopy (50 mm to 150 mm dia.), Main stem bifurcates between 1 meter and 2 meters, Tree is considered to be a reasonable specimen of the species	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia.
0048	*Eucalyptus rudis (Flooded Gum)*	Mature	12	14	15 - 40 years	Reasonable	Reasonable	0.690	8.28	0.710	2.87	Deadwood noted within canopy (50 mm to 150 mm dia.), Friction stems noted within canopy (50 mm to 150 mm dia.), Prior branch failures noted within canopy (50 mm to 150 mm dia.), Tree displays multi stemmed form, Tree is considered to be a reasonable specimen of the species, Wounding noted on main trunk, surface roots noted	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia. *Remove rubbing stems & stubbs
0049	*Eucalyptus rudis (Flooded Gum)*	Mature	11	12	40 + years	Reasonable	Reasonable	0.300 + 0.240	4.56	0.500	2.47	Deadwood noted within canopy (< 50mm dia.), Main stem bifurcates between ground level and 500mm, Minor canopy suppression noted	Acceptable (Reasonably located &/or Reasonable Specimen)	Remove major deadwood >30mm dia.
0050	*Eucalyptus rudis (Flooded Gum)*	Mature	12	15	15 - 40 years	Reasonable	Reasonable	0.800 + 0.890	14.40	0.920	3.20	Canopy starting to indicate decline, Deadwood noted within canopy (50 mm to 150 mm dia.), Main stem bifurcates between 1 meter and 2 meters, Prior branch failures noted within canopy (50 mm to 150 mm dia.), wounding noted on trunk, 100mm dia hanging branch noted within canopy, Also tagged by others as number "133"	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia. *Remove branch stubs
0051	*Eucalyptus rudis (Flooded Gum)*	Mature	20	10	Dead	Dead	Questionable	0.650	N/A	0.900	N/A	Dead Tree – no chance of recovery, consider using timber for habitat, sculpture or furnature for the site	Unsuitable for incorporation (Not compatible with design &/or problematic health or structural form)	Consider removal – Tree Displays Health or Structural issues that may be problematic for long term retention or integration
0052	*Eucalyptus rudis (Flooded Gum)*	Mature	16	22	15 - 40 years	Reasonable	Reasonable	0.850	10.20	0.950	3.24	Canopy noted to be slightly sparse, Canopy starting to indicate decline, Deadwood noted within canopy (50 mm to 150 mm dia.), Prior branch failures noted within canopy (150 mm to 300 mm dia.), Also tagged by others as number "132"	Questionable (Modifications and inputs required for incorporation &/or may display Questionable health or structural issues)	*Raise canopy *Remove major deadwood >30mm dia. *Remove branch stubs
0053	*Eucalyptus rudis (Flooded Gum)*	Mature	12	8	5 - 15 years	Questionable	Reasonable	0.310	3.72	0.350	2.13	Canopy noted to be slightly sparse, Canopy starting to indicate decline, Deadwood noted within canopy (150 mm to 300 mm dia.), Minor canopy suppression noted, limited ULE, Also tagged by others as number "128"	Unsuitable for incorporation (Not compatible with design &/or problematic health or structural form)	Consider removal – Tree Displays Health or Structural issues that may be problematic for long term retention or integration
0054	*Eucalyptus rudis (Flooded Gum)*	Mature	12	13	15 - 40 years	Reasonable	Questionable	0.700	8.40	0.900	3.17	Canopy starting to indicate decline, Deadwood noted within canopy (50 mm to 150 mm dia.), Friction stems noted within canopy (150 mm to 300 mm dia.), Prior branch failures noted within canopy (150 mm to 300 mm dia.), Tree displays multi stemmed form, Wounding noted on main trunk, Also tagged by others as number "127"	Questionable (Modifications and inputs required for incorporation &/or may display Questionable health or structural issues)	*Raise canopy *Remove major deadwood >30mm dia. *Remove rubbing stems and branch stubs

Tree ID No.	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter @ 1.4m	Tree Protection Zone (TPZ)	Trunk Diameter @ G.L	Structural Root Zone (SRZ)	Comments	Suitability For Incorporation Into An Urban Development	Canopy Management Considerations
0055	*Eucalyptus camaldulensis (River Red Gum)*	Mature	20	12	15 - 40 years	Good	Questionable	0.640	7.68	0.720	2.88	Canopy displays leggy structural form, Deadwood noted within canopy (50 mm to 150 mm dia.), Included bark unions noted (major), Included bark unions with swelling noted, Main stem bifurcates between 1 meter and 2 meters, Minor canopy suppression noted, Prior branch failures noted within canopy (150 mm to 300 mm dia.)	Questionable (Modifications and inputs required for incorporation &/or may display Questionable health or structural issues)	*Raise canopy *Remove major deadwood >30mm dia. *Remove branch stubs
0056	*Eucalyptus camaldulensis (River Red Gum)*	Mature	22	12	15 - 40 years	Good	Reasonable	0.510	6.12	0.600	2.67	Canopy displays leggy structural form, Deadwood noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia.
0057	*Eucalyptus rudis (Flooded Gum)*	Mature	15	15	15 - 40 years	Reasonable	Questionable	0.920	11.04	0.950	3.24	Deadwood noted within canopy (50 mm to 150 mm dia.), Included bark unions noted (minor), Tree displays multi stemmed form, Also tagged by others as number "126", Termite mud noted on main stem however no active termites observed at time of inspection	Questionable (Modifications and inputs required for incorporation &/or may display Questionable health or structural issues)	Remove rubbing stems and major deadwood >30mm dia. Impliment non invasive termite baiting & monitoring system
0058	*Eucalyptus rudis (Flooded Gum)*	Mature	14	15	15 - 40 years	Reasonable	Reasonable	0.560	6.72	0.620	2.71	Prior branch failures noted within canopy (150 mm to 300 mm dia.), Termite mud noted on main stem however no active termites observed at time of inspection, wounding noted on main stem	Questionable (Modifications and inputs required for incorporation &/or may display Questionable health or structural issues)	Remove rubbing stems and major deadwood >30mm dia. Impliment non invasive termite baiting & monitoring system
0059	*Eucalyptus botryoides (Southern Mahogany)*	Mature	22	18	15 - 40 years	Good	Questionable	1.200	14.40	1.500	3.92	Canopy displays leggy structural form, Fire damage noted in main stem (minor), Minor canopy suppression noted, Prior branch failures noted within canopy (150 mm to 300 mm dia.), Significant branch failures noted (300 mm + dia.), Significant wounding of northern side of main trunk, Termite mud noted on main stem and 1st order limbs however no active termites observed at time of inspection, fire damaged, tree situated adjacent creek/dewatering area	Unsuitable for incorporation (Not compatible with design &/or problematic health or structural form)	Consider removal – Tree Displays Health or Structural issues that may be problematic for long term retention or integration
0060	*Eucalyptus rudis (Flooded Gum)*	Mature	11	10	15 - 40 years	Reasonable	Questionable	0.550	6.60	0.600	2.67	Deadwood noted within canopy (50 mm to 150 mm dia.), Fire damage noted in main stem (minor), Minor canopy suppression noted, Prior branch failures noted within canopy (50 mm to 150 mm dia.), Tree also tagged as 115 by others, wounding on main trunk, Adjacent creek/dewatering area	Questionable (Modifications and inputs required for incorporation &/or may display Questionable health or structural issues)	*Raise canopy *Remove major deadwood >30mm dia. *Remove branch stubs
0061	*Eucalyptus rudis (Flooded Gum)*	Mature	13	14	15 - 40 years	Questionable	Reasonable	0.650	7.80	0.720	2.88	Canopy noted to be sparse, Canopy starting to indicate decline, Deadwood noted within canopy (50 mm to 150 mm dia.), Included bark unions noted (minor), Prior branch failures noted within canopy (150 mm to 300 mm dia.), Recovery possible if conditions change, Adjacent creek/dewatering area	Questionable (Modifications and inputs required for incorporation &/or may display Questionable health or structural issues)	*Raise canopy *Remove major deadwood >30mm dia. *Remove branch stubs
0062	*Eucalyptus rudis (Flooded Gum)*	Mature	13	12	5 - 15 years	Questionable	Reasonable	0.400	4.80	0.450	2.37	Canopy displays leggy structural form, Canopy noted to be sparse, Canopy starting to indicate decline, Minor canopy suppression noted, Recovery possible if conditions change, Adjacent creek/dewatering area	Questionable (Modifications and inputs required for incorporation &/or may display Questionable health or structural issues)	*Raise canopy *Remove major deadwood >30mm dia.
0063	*Eucalyptus rudis (Flooded Gum)*	Mature	13	12	<5 years	Poor	Reasonable	0.370	4.44	0.420	2.30	Canopy noted to be sparse, Canopy indicates decline, Minor canopy suppression noted, limited ULE, Adjacent creek/dewatering area	Unsuitable for incorporation (Not compatible with design &/or problematic health or structural form)	Consider removal – Tree Displays Health or Structural issues that may be problematic for long term retention or integration

Tree ID No.	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter @ 1.4m	Tree Protection Zone (TPZ)	Trunk Diameter @ G.L	Structural Root Zone (SRZ)	Comments	Suitability For Incorporation Into An Urban Development	Canopy Management Considerations
0064	*Eucalyptus rudis (Flooded Gum)*	Mature	21	20	15 - 40 years	Reasonable	Reasonable	0.810	9.72	0.900	3.17	Deadwood noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, Prior branch failures noted within canopy (150 mm to 300 mm dia.), Wire fencing noted around trunk, Adjacent creek/dewatering area	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia. *Remove branch stubs
0065	*Eucalyptus rudis (Flooded Gum)*	Mature	11	10	5 - 15 years	Questionable	Reasonable	0.400	4.80	0.460	2.39	Canopy indicates decline, Canopy noted to be sparse, Deadwood noted within canopy (50 mm to 150 mm dia.), Friction stems noted within canopy (50 mm to 150 mm dia.), limited ULE, Adjacent creek/dewatering area	Unsuitable for incorporation (Not compatible with design &/or problematic health or structural form	Consider removal – Tree Displays Health or Structural issues that may be problematic for long term retention or integration
0066	*Eucalyptus camaldulensis (River Red Gum)*	Mature	22	27	40 + years	Good	Reasonable	1.030	12.36	1.200	3.57	Deadwood noted within canopy (50 mm to 150 mm dia.), Tree is considered to be a good specimen of the species, Also tagged by others as number "116", Adjacent creek/dewatering area	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia.
0067	*Eucalyptus rudis (Flooded Gum)*	Mature	13	7	Dead	Dead	Questionable	0.330	N/A	0.480	N/A	Dead Tree – no chance of recovery, consider using timber for habitat, sculpture or furnature for the site	Unsuitable for incorporation (Not compatible with design &/or problematic health or structural form)	Consider removal – Tree Displays Health or Structural issues that may be problematic for long term retention or integration
0068	*Eucalyptus rudis (Flooded Gum)*	Mature	14	16	15 - 40 years	Questionable	Reasonable	0.590	7.08	0.680	2.81	Canopy noted to be sparse, Canopy starting to indicate decline, Deadwood noted within canopy (50 mm to 150 mm dia.), Main stem bifurcates between 1 meter and 2 meters, Prior branch failures noted within canopy (50 mm to 150 mm dia.), Also tagged by others as number "117", Adjacent creek/dewatering area	Questionable (Modifications and inputs required for incorporation &/or may display Questionable health or structural issues)	*Raise canopy *Remove major deadwood >30mm dia. *Remove branch stubs
0069	*Melaleuca preissiana (Stout Paperbark)*	Mature	11	15	15 - 40 years	Reasonable	Reasonable	0.450 + 0.600 + 0.400 + 0.550 + 0.600	14.16	3.000	5.25	Deadwood noted within canopy (50 mm to 150 mm dia.), Fire damage noted in main stem (minor), Tree displays multi stemmed form, Tree is considered to be a reasonable specimen of the species, multi stem form stand of x5	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia.
0070	*Melaleuca preissiana (Stout Paperbark)*	Mature	9	11	15 - 40 years	Good	Questionable	0.680	8.16	0.750	2.93	Deadwood noted within canopy (50 mm to 150 mm dia.), Fire damage noted in main stem, major wounding/cavity on trunk	Questionable (Modifications and inputs required for incorporation &/or may display Questionable health or structural issues)	*Raise canopy *Remove major deadwood >30mm dia..
0071	*Eucalyptus rudis (Flooded Gum)*	Early Mature	11	10	40 + years	Reasonable	Reasonable	0.330	3.96	0.350	2.13	Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia..
0072	*Eucalyptus rudis (Flooded Gum)*	Early Mature	13	12	15 - 40 years	Good	Questionable	0.330 + 0.220 + 0.210	5.28	0.600	2.67	Canopy displays leggy structural form, Included bark unions noted (minor), Minor canopy suppression noted, Prior branch failures noted within canopy (150 mm to 300 mm dia.), Tree displays multi stemmed form	Questionable (Modifications and inputs required for incorporation &/or may display Questionable health or structural issues)	*Raise canopy *Remove major deadwood >30mm dia. *Remove branch stubs
0073	*Melaleuca preissiana (Stout Paperbark)*	Mature	10	12	15 - 40 years	Good	Reasonable	1.000	12.00	1.100	3.44	Deadwood noted within canopy (50 mm to 150 mm dia.), Tree is considered to be a reasonable specimen of the species, Partial assessment only due to blackberry bramble surrounding tree (tree not tagged due to being inaccessible). Further assessment required, situated adjacent creek	Optimal (Well Placed &/or Good Specimen)	*Raise canopy *Remove major deadwood >30mm dia
0074	*Eucalyptus rudis (Flooded Gum)*	Early Mature	15	11	40 + years	Good	Reasonable	0.330	3.96	0.360	2.15	Included bark unions noted (minor), Tree is considered to be a reasonable specimen of the species, Adjacent creek	Optimal (Well Placed &/or Good Specimen)	*Raise canopy *Remove major deadwood >30mm dia..

Tree ID No.	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter @ 1.4m	Tree Protection Zone (TPZ)	Trunk Diameter @ G.L	Structural Root Zone (SRZ)	Comments	Suitability For Incorporation Into An Urban Development	Canopy Management Considerations
0075	*Eucalyptus rudis (Flooded Gum)*	Mature	16	15	15 - 40 years	Reasonable	Reasonable	0.650	7.80	0.700	2.85	Deadwood noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, Adjacent 2 creeks	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia..
0076	*Eucalyptus rudis (Flooded Gum)*	Mature	16	15	Dead	Dead	Questionable	0.500 + 0.500 + 0.500	N/A	1.500	N/A	Dead Tree – no chance of recovery, consider using timber for habitat, sculpture or furnature for the site	Unsuitable for incorporation (Not compatible with design &/or problematic health or structural form)	Consider removal – Tree Displays Health or Structural issues that may be problematic for long term retention or integration
0077	*Melaleuca preissiana (Stout Paperbark)*	Mature	8	14	15 - 40 years	Good	Reasonable	0.550 + 0.500 + 0.500	10.80	1.200	3.57	Deadwood noted within canopy (150 mm to 300 mm dia.), Tree displays multi stemmed form, Tree is considered to be a good specimen of the species, Adjacent creek	Optimal (Well Placed &/or Good Specimen)	*Raise canopy *Remove major deadwood >30mm dia..
78	*Eucalyptus rudis (Flooded Gum)*	Early Mature	13	12	40 + years	Good	Good	0.350	4.20	0.450	2.37	Considered a good specimen of the species, friction stems to 50mm dia, situated adjacent creek	Optimal (Well Placed &/or Good Specimen)	*Raise canopy *Remove major deadwood >30mm dia. *Remove rubbing stems
0079	*Melaleuca preissiana (Stout Paperbark)*	Mature	8	13	15 - 40 years	Questionable	Questionable	1.500	15.00	1.500	3.92	Canopy indicates decline, Canopy noted to be sparse, Prior branch failures noted within canopy (150 mm to 300 mm dia.),Partial assessment only due to blackberry bramble surrounding tree (tree not tagged due to being inaccessible). Further assessment required, situated adjacent creek	Questionable (Modifications and inputs required for incorporation &/or may display Questionable health or structural issues)	*Raise canopy *Remove major deadwood >30mm dia. *Remove branch stubs
0080	*Eucalyptus rudis (Flooded Gum)*	Early Mature	14	13	40 + years	Good	Questionable	0.330 + 0.220 + 0.280	5.88	0.700	2.85	Canopy displays leggy structural form, Main stem bifurcates at ground level, Prior branch failures noted within canopy (50 mm to 150 mm dia.), Tree displays multi stemmed form, Adjacent creek	Questionable (Modifications and inputs required for incorporation &/or may display Questionable health or structural issues)	*Raise canopy *Remove major deadwood >30mm dia. *Remove branch stubs
0081	*Eucalyptus rudis (Flooded Gum)*	Early Mature	12	11	40 + years	Good	Reasonable	0.300 + 0.200 + 0.180	4.80	0.500	2.47	Friction stems noted within canopy (50 mm to 150 mm dia.), Main stem bifurcates at ground level, Tree displays multi stemmed form, Adjacent creek	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia. *Remove rubbing stems
0082	*Melaleuca preissiana (Stout Paperbark)*	Mature	11	12	15 - 40 years	Reasonable	Reasonable	0.800	9.60	1.200	3.57	Canopy noted to be slightly sparse, Deadwood noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, Prior branch failures noted within canopy (50 mm to 150 mm dia.), Adjacent creek	Optimal (Well Placed &/or Good Specimen)	*Raise canopy *Remove major deadwood >30mm dia. *Remove branch stubs
0083	*Melaleuca preissiana (Stout Paperbark)*	Mature	6	6	15 - 40 years	Reasonable	Reasonable	0.330 + 0.280 + 0.250	6.00	0.800	3.01	Deadwood noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, Prior branch failures noted within canopy (50 mm to 150 mm dia.), Tree displays multi stemmed form, Part of stand of melaleuca in area	Optimal (Well Placed &/or Good Specimen)	*Raise canopy *Remove major deadwood >30mm dia. *Remove branch stubs
0084	*Melaleuca preissiana (Stout Paperbark)*	Mature	12	15	15 - 40 years	Reasonable	Reasonable	1.200	14.40	2.000	4.43	Deadwood noted within canopy (150 mm to 300 mm dia.), Fire damage noted in main stem (minor), Main stem bifurcates between 2 meters and 3 meters, Minor canopy suppression noted, Significant friction stems noted (300 mm + dia.), Part of stand of melaleuca in area	Acceptable (Reasonably located &/or Reasonable Specimen)	*Raise canopy *Remove major deadwood >30mm dia. *Remove rubbing stems
0085	*Melaleuca preissiana (Stout Paperbark)*	Mature	8	7	40 + years	Good	Reasonable	0.340	4.08	0.450	2.37	Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, Part of stand of melaleuca in area	Optimal (Well Placed &/or Good Specimen)	*Raise canopy *Remove major deadwood >30mm dia..
0086	*Melaleuca preissiana (Stout Paperbark)*	Mature	10	12	40 + years	Good	Reasonable	0.400 + 0.320 + 0.310	7.20	0.850	3.09	Deadwood noted within canopy (50 mm to 150 mm dia.), Main stem bifurcates at ground level, Prior branch failures noted within canopy (50 mm to 150 mm dia.), Tree is considered to be a good specimen of the species, Part of stand of melaleuca in area	Optimal (Well Placed &/or Good Specimen)	*Raise canopy *Remove major deadwood >30mm dia. *Remove branch stubs

Tree ID No.	Nomenclature & Tree Identification	Est Age	Est Tree Height	Est Canopy Spread	Useful Life Expectancy (ULE)	Canopy Health	Canopy Structure	Trunk Diameter @ 1.4m	Tree Protection Zone (TPZ)	Trunk Diameter @ G.L	Structural Root Zone (SRZ)	Comments	Suitability For Incorporation Into An Urban Development	Canopy Management Considerations
0087	*Melaleuca preissiana (Stout Paperbark)*	Mature	11	8	15 - 40 years	Reasonable	Good	0.320	3.84	0.370	2.18	Deadwood noted within canopy (50 mm to 150 mm dia.), Minor canopy suppression noted, Tree is considered to be a reasonable specimen of the species, Part of stand of melaleuca in area	Optimal (Well Placed &/or Good Specimen)	*Raise canopy *Remove major deadwood >30mm dia..
0088	*Melaleuca preissiana (Stout Paperbark)*	Mature	10	12	40 + years	Good	Reasonable	0.350	4.20	0.450	2.37	Deadwood noted within canopy (< 50mm dia.), Tree is considered to be a reasonable specimen of the species, Part of stand of melaleuca in area	Optimal (Well Placed &/or Good Specimen)	*Raise canopy *Remove major deadwood >30mm dia..

APPENDIX C - TREE PROTECTION ZONE (TPZ) OVERVIEW

INTRODUCTION

- Tree protection measures in keeping with AS 4970 'Protection of Trees on development sites' 2009' must be incorporated into the proposed design and implemented under the supervision of a AQF Level 5 Consulting Arboriculturist in order to achieve tree sensitive outcomes for the project.
- Reporting is to be in keeping with the stages identified within *AS 4970 'Protection of Trees on Development Sites'* 2009 and industry best practice.

TPZ BACKGROUND INFORMATION

- To determine a Tree Protection Zone (TPZ), the trunk Diameter measured at Breast Height (1.4 meters from ground level) is multiplied by x 12. This is to be measured as a radius from the centre of the main stem at ground level. As identified in AS 4970 *The TPZ is to not be less than 2 meters and no greater than 15 meter radius.*
- The calculated TPZ includes both the above ground and below ground parts of the tree.
- Any construction works proposed to occur within the TPZ will require Arboricultural assessment and approval from a AQF 5 Project Arborist prior to commencement.
- Modification of the design and/or construction methodologies may be necessary to allow the proposed design to proceed.
- Ongoing Arboricultural review of methodologies and works within the TPZs will be required by the Project Arborist for the duration of the development or construction works.

ESTABLISH TREE PROTECTION ZONES (TPZ) WITHIN THE SITE

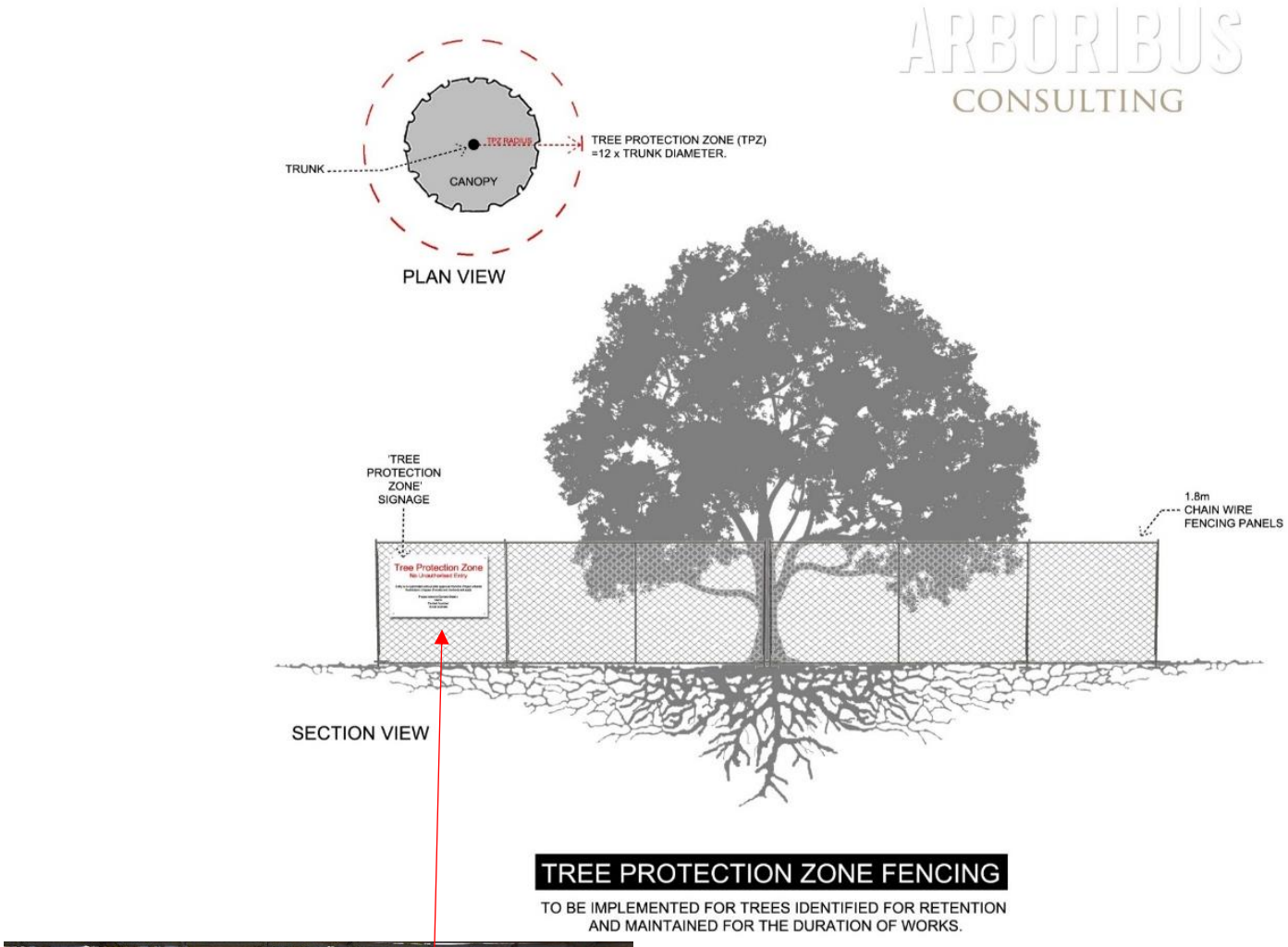
- TPZs are to be identified at their perimeter via 1.8-meter chain wire fencing panels (refer below figure for detail).
- This dedicated Fencing is to have signage installed (refer below figure for detail) that identifies the TPZ as a protected area and that no access is permitted without prior approval from the Project Arborist.
- TPZ Fencing is to remain for the duration of the construction phase. Maintenance and general upkeep of the fencing is the responsibility of the nominated Contractor.
- Any alteration or modification of the fencing is to be approved prior by the Project Arborist and documented as part of ongoing tree preservation reporting for the site.

PROHIBITED ACTIVITIES WITHIN TPZS

- Unauthorised access
- Mechanical Excavation, trenching or unapproved works of any kind

- Unauthorised modification of existing grade (i.e., raising or lowering of soil levels)
- Storage of construction materials, fuels, or phytotoxic chemicals etc…
- Parking, fuelling, tracking, or storage of vehicles or machinery of any kind
- Unauthorised placement of site facilities or waste disposal bins
- Stockpiling of soil, spoil or any construction debris
- Disposal of liquid waste including paint and concrete wash out
- Cleaning or washing of tools and equipment
- Unauthorised pruning of branches or roots.

TPZ EXAMPLE



If you have any queries or if I can be of further assistance, do not hesitate to contact me on 0406 396 778.

Regards,

Luke Lumbus

COMPANY AND CONSULTANTS DETAILS

Consultant Details:	Luke Lumbus – Consulting Arboriculturist & Director
Qualifications:	AQF 8 - Graduate Certificate in Arboriculture (Melbourne University) AQF 5 - Diploma in Arboriculture – (Challenger TAFE, Western Australia) International Society of Arboriculture (ISA) Certified Arborist - AU 0014A Quantified Tree Risk Assessment (QTRA) User Number 1935
Company Trading Name:	Arboribus Pty Ltd
Established:	October 2021
Australian Business Number:	82 653 281 782
Australian Company Number:	653 281 782
Contact Number:	0406 396 778
Email Address:	luke@arboribus.com.au
Website:	www.arboribus.com.au
Insurance:	Public Liability Insurance $20 Million (Dual Australia) Professional Indemnity $5 Million (Dual Australia)

DISCLAIMER

The Consultant is trained, qualified and competent in their field of expertise and will employ their knowledge, training, and skill to provide informed comments and recommendations. However, the Client acknowledges there may be latent conditions and factors the Consultant cannot reasonably determine from a visual inspection. Unless otherwise agreed with the Client and documented in the Report, the Consultant's inspection will be conducted visually and so will not determine any latent conditions hidden within the tree or below the ground level.

The Client hereby acknowledges that the information contained in this report is intended to provide preliminary guidance and recommendations for how to manage and protect the tree(s) that are the subject of this report, however, given the nature of the subject matter, trees as living organisms are subjected to many varied and dynamic factors.
This report does not attempt to predict or anticipate potential future failure(s) of the subject tree(s) and/or its above and/or below ground parts – failure of trees and their parts can be influenced by numerous factors including (but not be limited to): -

- Age
- Health and Structural status of both above and/or below ground component(s)
- Recent, historic or prolonged impacts to root(s)
- Sudden or unapproved alterations to the trees growing environ(s)
- Storm events, high winds, persistent heat and/or other severe climatic events
- Standard and quality of previous works undertaken.

This report and the advice within it cannot and shall not be construed as a guarantee the subject trees will not at some point deteriorate further and/or not survive.

Where recommendations or advice have been provided, and the Client (or approved third party) does not adhere to such recommendations this shall be deemed to be an act or omission of the Client and the Client shall indemnify the Consultant for any damage, injury or loss that may occur as a result. It is the client's responsibility to organise any required re-inspections at the intervals specified.

The Client warrants that it has disclosed all complete and accurate information in relation to the trees that are the subject of this report and the like and the Client hereby indemnifies and holds the Consultant harmless from any costs, losses or damage resulting in any way from matters not disclosed by the Client.

The Client must acknowledge that it is their responsibility, prior to any work being conducted in connection with the Report, to obtain all necessary approvals in relation to carrying out the work that may be recommended by this report, including without limitation: approval from any local council, local or state government agency, or other authorised body, landlord, neighbour or any other persons or body corporate with legislative, regulatory or other interest over the trees or land that is the subject of this report.

Arboribus shall not be required to attend court or provide evidence regarding this report unless predetermined provisions are agreed to between Arboribus and the Client, including additional payment of fees for such services.

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