

**ARBORICUTURAL IMPACT ASSESSMENT - FOR 2022 DEVELOPMENT AT;  
GUNNEDAH HOSPITAL NSW 2380**

**1. INTRODUCTION.**

Health Infrastructure NSW are planning a development at the Gunnedah Hospital. This will involve demolition of existing buildings and construction of new facilities within the site. A preliminary assessment and evaluation of the existing tree population was undertaken by Wade Ryan Contracting and report dated 6 June 2022 provided. This report provides the final impact assessment of the development on the tree population for submission with the development application.

**2. SCOPE AND PURPOSE.**

The report has been commissioned by Hayden Douglas – Principal Project Manager with Ranbury – on behalf of Health Infrastructure NSW. He can be contacted on 02 8039 4500 or 0400 850 173. Lachlan Falconer-Adams of NSW Health Infrastructure is the Project Director – he can be contacted on 0474 982 054.

The report is designed to provide;

- accurate identification of tree vegetation,
- tree condition, including any significant hazards present
- evaluation of the trees relative to their contribution to the environment, amenity, cultural and any other identified values
- evaluation of development impacts on the tree population
- recommendations for retention or removal of trees and management of issues identified.

Following analysis of the tree population and the development footprint the following drawings have been provided detailing the development footprint and trees at site proposed to be retained and the trees proposed to be removed.

*Gunnedah Hospital re-development, Marquis Street Gunnedah NSW 2380. Option 2 - Site Floor Plan - Stage 1. Drawing number SK-S1-9240 issue C dated 3/05/2023. DWP Architects, Sydney NSW.*

*Gunnedah Hospital re-development Anzac Parade Gunnedah. Arboricultural Assessment Review. Job no. 5668. Issue C Dated 05/05/2023. Stewart Surveys - Gunnedah NSW.*

These two drawings have been reproduced at the conclusion of this report and forms the basis for tree retention and removal for the development project.

[Annexure 1 – Tree Data File](#) provides a detailed list of all trees on site including;

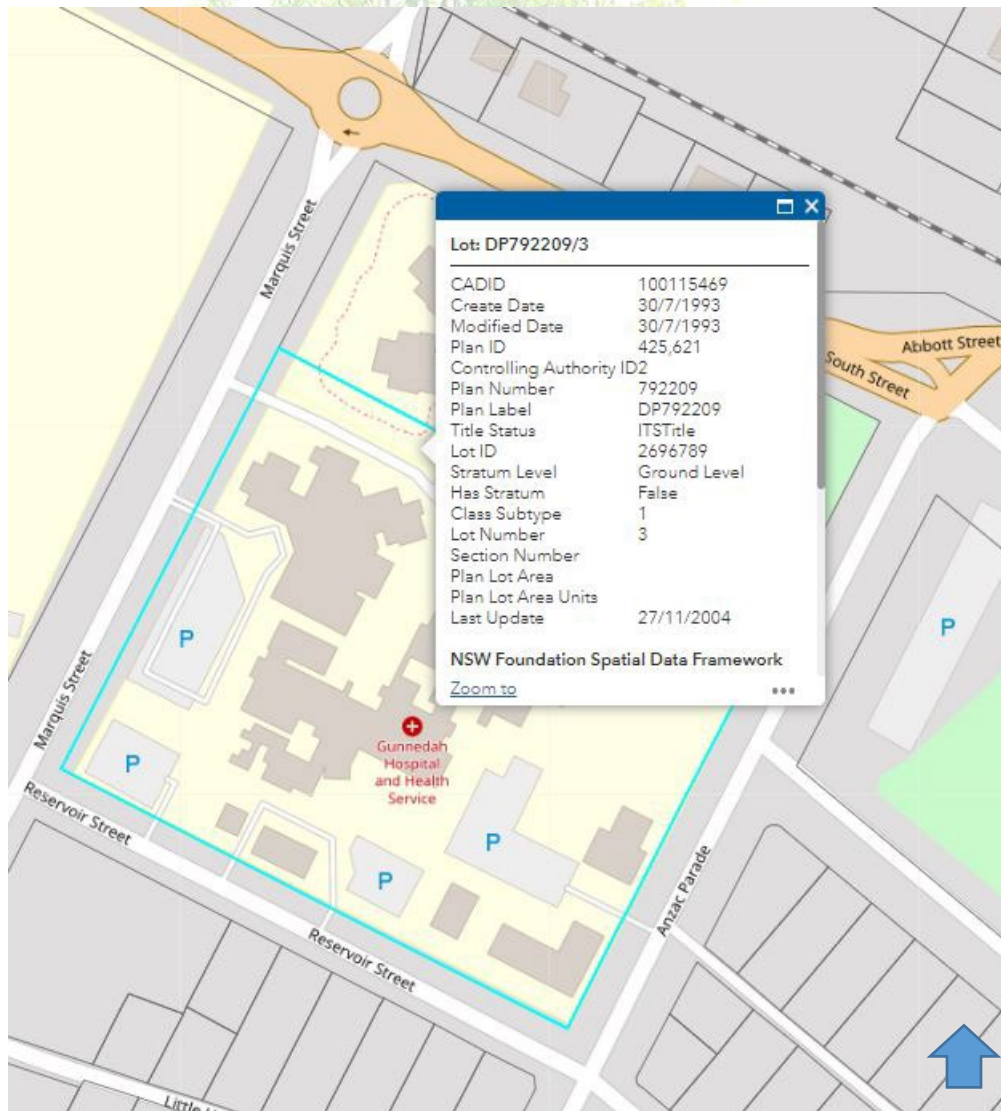
- initial evaluation criteria of the individual trees
- retention values
- development impacts and final recommendations.

Annexure 1 can be found at the conclusion of the report. This Annexure is also available in Microsoft Excel format on request.

Interpretation of impacts and recommendations are based on the author's interpretation of *Australian Standard 4970-2009 Protection of trees on development sites*.

### **3. Site Conditions and Background.**

The site is bounded by Marquis Street to the west, Reservoir Street to the south, Anzac Parade to the east and aged car facility to the north boundary. The current Hospital site consists of a range of buildings, car parks and open space areas of varying ages. As such there are also trees scattered across the site of various ages and conditions. All trees and shrubs on site are considered amenity plantings – there are no remnant trees, although there are Australian Native species. Some 68 trees have been identified across the site – including 3 larger trees that are controlled by Gunnedah Shire Council on Anzac Parade.



**Diagram 1 - Site Location and lot boundary.** Source – NSW Spatial Data Services 2022.

#### **4. Summary of Initial Tree Assessment and Evaluation.**

- 68 Trees in total have been identified and recorded (30 May 2022)
  - NOTE - tree numbered 3 is NO TREE - tree was removed immediately prior to survey.
- Some very small shrubs or trees have not been included and are of no significance.
- Each tree was individually graded for its retention values within the development area based upon a range of criteria as detailed within *Annexure 1 – Tree Data file* contained at the conclusion of the report. The following Table A is a summary of individual tree retention values as initially accessed.

Table A – Summary of Tree Evaluation - Total of 67 Trees		
Evaluation Category	Descriptors	Tree No's
Retain Priority	<ul style="list-style-type: none"> <li>• Tree Significance, High or Very High.</li> <li>• Strong positive amenity and/or other values – normally long life expectancy.</li> <li>• Replacement very long term 60 - 100 years or more</li> <li>• Removal would be very difficult to justify</li> </ul>	(12 Trees Total) 28, 29, 30 58 to 62 64 66, 67 & 68
Retain	<ul style="list-style-type: none"> <li>• Tree significance moderate or high</li> <li>• Positive Amenity values and/or other values with longer life expectancy</li> <li>• Replacement long term 40 - 80 years.</li> <li>• Removal would be difficult to justify.</li> </ul>	(12 Trees in Total) 19,22,23,27, 31,36,37,38,40 55,57,65



Table A – Summary of Tree Evaluation - Total of 67 Trees		
Evaluation Category	Descriptors	Tree No's
Retain if Possible	<ul style="list-style-type: none"> <li>Tree with some positive landscape, amenity or other values</li> <li>In fair to good condition with some useful remaining life.</li> <li><b>OR</b> a younger semi mature tree in Excellent or good condition with long life expectancy or expected contribution.</li> <li>However if the impost on the development of retention is very high or the development impact on the tree is high then removal or replacement can be considered a valid decision.</li> <li><u>On balance of considerations the tree is worth retaining.</u></li> </ul>	(12 Trees in Total) 4,5,6,8 15,16,18,21 35,39 56 and 63.
Remove	<ul style="list-style-type: none"> <li>The tree is normally in poor condition with short useful life expectancy, or</li> <li>Structurally unsound to a point not worth effort of ameliorating. OR</li> <li>A small tree where the impost of retention is not justified. It would easily be replaced in 0-7 years.</li> <li>At this point a new tree is normally considered a better long term option.</li> </ul>	(23 Trees in Total) 1,9,10,11,12,13,14,17 25, 41,42,43,44,45, 46,47,48,49,50 51, 52, 53 and 54.
Remove Priority	<ul style="list-style-type: none"> <li>An insignificant tree (shrub) - very small or</li> <li>the tree is in very poor condition or a weed species or</li> <li>structurally very poor or short useful life expectancy</li> <li>a replacement tree/s is a far better option</li> </ul>	(8 Trees in total) 2,7, 20, 24,26,32,33 & 34.

- The *Gunnedah Hospital re-development, Anzac Parade Gunnedah - Landscape Plan – Tree Retention and Removal Plan*, provides the location of each tree and a tree number has been added with the calculated Tree Protection Zone where relevant.

The Tree protection zone mark-up is expressed as radius meters form stem centre.

- **Significant Trees.**
  - Trees 28, 29 and 30 are larger *Eucalyptus cladocalyx* (Sugar Gums) – Gunnedah Shire Council controlled trees on the verge of Anzac Parade. The trees are in good condition with longer life expectancy, positive environmental values as native trees with hollows and positive values to the local ecosystems as trees with similar values to remnant species.
  - Trees 58 to 68 inclusive form a line of trees on Reservoir Street that are of some age and are considered significant – particularly as a line of larger trees with strong amenity values and lengthy replacement time frames.
  - Tree 38 – a large *Eucalyptus species* located to the rear of the Ambulance Station is a significant tree. This tree will require tree protection measures – TPZ is 9.6 meters and this presents as close to the preferred masterplan footprint.
- Tree 18 – is a small (shrub) *Magnolia species*. Site contact indicated that the shrub has some cultural values and its preservation was requested. The location is in direct conflict with the development – however if the tree is of notable value it can easily be lifted, stored and replanted. It should be noted that the tree has a number of issues with the current site including lack of required irrigation, and a poor soil profile with low nutrient levels.
  - It is recommended that the value of the tree be validated and if so, a short plan be developed to retain the tree in a new location.
- Tree 3 – the tree is contained on the site survey – but was removed shortly before the arboricultural survey.
- Site Canopy coverage. The area of the site was approximated at 3.1 hectares. The theoretical canopy coverage from the survey indicated current canopy coverage of some 3500 square meters. This equates to about 12% site canopy coverage that is considered quite a small percentage. Opportunity exists to improve this percentage.





**Photo 1 – Tree 24 *Grevillia robusta* (Silky Oak).** Example of a tree evaluated as ‘remove priority’. It has a significant structural issue with the main stem. There is a 1 m vertical crack down the stem and the tree is a high risk of stem failure. Irrespective of the development the tree needs to be removed.





**Photo 2 – Tree 1 – Example of a tree that is recommended for ‘removal’**  
The stem condition is poor with moderate to high potential for failure and the stem is also hard against the kerbing system.



**Photo 3 – Trees 5 and 6 trees evaluated as ‘Retain if possible’**  
Semi mature trees which on balance of considerations the tree is worth retaining.





**Photo 4 – 3 Trees as numbered that are in direct conflict with the development footprint. Tree 50 was evaluated as ‘retain if possible’. It will require removal, but its replacement time frame is about 7 years.**



**Photo 5 – Tree 19 - Eucalyptus camaldulensis (River Red Gum). Example of tree that has been evaluated as ‘Retain’.**

**A sound young tree in excellent condition with longer life expectancy.**





**Photo 6 – Trees 68 to 58 in sequence from foreground. Line of medium to large mature trees evaluated as high significant and ‘Retain Priority’.**

Planning should ensure that the TPZ of these tree is respected and that removal would be difficult to justify. The line of trees provides significant amenity values and would take 30-50 years to replace.

## 5. Development impacts.

Table B provides a summary of the development footprint impact on the tree population – relative to the initial evaluation of the trees - a cross reference.

Table B – Cross Reference of Tree Evaluation and DA Impacts						
	Initial Evaluation and Recommendation					
Development Impacts	Remove Priority	Remove	Retain if possible	Retain	Retain Priority	Grand Total
Remove	9	23	2	3	1	38
Retain – Impacts to Manage			5	6	5	16
Retain - Impacts unlikely			4	3	6	13
Other			1			1
Grand Total	9	23	12	12	12	68

- Loss of High Significance Trees.
  - Tree 64 was the only tree evaluated with high significance as part of a line of Trees in on Reservoir Street and is required to be removed. This tree is in direct conflict with the Development footprint,
- Loss of Moderate Significance Trees.
  - Trees 40, 45, 56 and 57 are also in direct conflict with the development footprint and cannot be retained under this plan.
- Total Development Impact – Removals.
  - There are a total of 38 Trees to be removed – however this needs to be put into context of the evaluation process and 32 of the 38 trees were recommended for removal due to condition or other factors.
- Tree 37 is a small ornamental tree with cultural values to site and will be transplanted to a new location.
- Tree 38, 58 and trees 65 to 68 inclusive are trees evaluated with moderate or high significance and have root zone impacts inside the tree protection zones. The encroachments are in the order of less than 10% and impacts can be managed with appropriate planning and amelioration measures.
- Canopy Loss.
  - The calculated theoretical canopy loss from the 38 removals is about 1170 square meters - or about 1/3 of the existing canopy coverage.
  - A prudent landscape plan should easily be able to not only compensate for the loss of canopy coverage but there is significant opportunity to improve the canopy coverage.

## **6. Findings and Recommendations.**

### **A. Tree Retention or Removal Decisions.**

Existing site trees that are of some age, have good structure and longer life expectancy should be considered for retention and protection unless there is a compelling reason to remove them. New trees cannot replace such trees within short space of time. The loss of tree benefits and public amenity is immediate and replacement time frames are in the order of decades for larger trees.

Alternatively trees in poor condition and/or with short useful life expectancy are normally recommended for removal on the basis that the effort and cost of retention through the development is not commensurate with short term amenity value, or risk a tree may pose if it fails. Removal of the tree and establishing a new tree with a long life expectancy is a better option. Additionally the tree in poor condition often has little ability to cope with significant changes in its root zone from the development impact.



Where trees have major impacts to the tree protection zone then removal is likely the best alternative unless the tree is significant and specific measures and resources can be developed to assist the tree through the development.

It should be noted that the calculated tree protection zone (TPZ) is for the most part the minimum space required for the tree to maintain viability and stability, and the actual tree root zone will in most instances extend well past the calculated TPZ; meaning that if the development encroaches up to the TPZ a large amount of roots and root space is still lost for the tree.

B. Tree Removals.

- a. As per Tree Data file and Table B above 38 trees and large shrubs are recommended for removal.
- b. The impact on the tree population and canopy coverage is considered low and can easily be replaced and improved in the short term of 3-7 years with appropriate landscape plan and replanting's.

C. Tree Retention. All other trees on site are recommended for retention and protection as detailed below.

D. Tree Protection Measures.

- Tree Protection measures should form part of the site project demolition and construction plan – **A tree Protection Plan**
  - The Tree protection Plan should be formulated as part of the demolition contract and reviewed as implemented by Council (or other relevant authority) prior to commencement of demolition.
  - It should remain current for the construction phase.
  - The plan needs to be developed once final development consent conditions are detailed and work methods are established.
- Tree Protection Measures that need to be considered for the Tree Protection Plan include.
  - All trees marked for removal need to be positively identified on site before demolition occurs to ensure that the correct trees are removed and retained.
  - Specific measures will need to be developed in relation to all trees identified as *Retained with Impacts to Manage*. Specifically this relates to Tree 38, 58 and trees 65 to 68 inclusive.
  - Some construction hold points and attendance of Level 5 Arborist to site would be prudent for the trees mentioned above so that appropriate measures are adhered to and tree vitality is maintained through and past project completion.
  - Trees identified for retention should have effective Tree Protection fencing effected prior to commencement of demolition and construction.
  - There should be no parking of vehicles, or plant or storage of any materials within the TPZ of the retained trees.

- There should be no trenching or excavation works within the TPZ without prior consultation with Level 5 Arboricultural consultant to evaluate the impacts on the trees. This specifically includes, trenching for services, electricity, water, gas communications sewer or irrigation pipes, general earth works, including landscaping, that disturbs the soil profile.
- Boring of post holes in the order of 150 to 200 mm diameter for the erection of boundary fence posts are identified as an acceptable impact within the TPZ, but not excavation of soil for the laying of strip footings.
- The landscaping plan for the project needs to consider the TPZ of the trees and look to maximise the opportunity for root retention and future root development – which will be important for the longevity of the trees.
- Any specified pruning, or clearance pruning of trees for machinery operation should be conducted before commencement of any works so that an effective tree protection barrier (fence) can be installed and the canopy not damaged by demolition or construction process.
- Other specific measures outlined in *Australian Standard 4970 -2009 protection of trees on development sites* may be appropriate once final consent condition and demolition/construction works are determined.

*There is little point in trying to preserve trees through a demolition and construction project if the development does not respect the requirements of the trees.*

- The loss of the tree benefits. The project Landscaping Plan should seek to not only replace the approximate 1000 square meters of canopy coverage that will be lost – but there is significant opportunity to improve the canopy coverage across the site. Medium and if appropriate space exists larger species should be planted to maximise the benefits that larger trees provide across our environment and society. As one simple example trees in this location could easily be expected to reduce radiant heat in the order of 5 to 7 degrees from shading (Kaluvarachichi et al 2020).
  - The Preliminary Arboricultural Assessment identified that the existing tree canopy coverage across the site was about 12%. This is considered very low and a target in the range of 30-40% should be seriously considered.
  - Native vegetation or at least exotic trees that will tolerate the hot summer temperatures should be utilised.
  - Native vegetation provides better opportunity to improve the local eco-systems than do exotic plants.

#### Reference.

Kaluvarachichi T.U.N., Tjoelker M.G. and Pfautsch S. (2020). *Temperature Reduction in Urban Surface Materials through Tree Shading Depends on Surface Type Not Tree Species*. *Forests* 2020, 11, 1141.



**Terms, Conditions and Limitations that apply.**

Obviously, visual tree assessment from the ground has some limitation as every single portion of the tree cannot be observed or inspected. Most or the large majority of tree conditions, factors or issues can be observed from the ground. Where aerial inspection or other investigative means should be considered the report or email will recommend or provide those as an additional considerations. The integrity of the root zone of trees can often be difficult to determine from visual inspection – particularly on steep slopes and on shallow soil profiles. Unless there are indicators of some instability then most trees are effectively accessed as stable as part of Visual Tree Assessment.

Trees are a valuable asset and necessary part of both the urban and natural environment. They are the cornerstone of our environment and provide numerous benefits to our social wellbeing, biodiversity and ecology of any area. They provide water balance stability, salinity and erosion control, amenity, cultural, public health and aesthetic benefits; efforts should be made to preserve and plant new trees where possible. As an asset they require appropriate management and resource inputs.

It should be noted that trees cannot be guaranteed 'risk free'. All trees represent some degree of risk. Arboriculture is not an exacting science; rather it is an educated interpretation of the interaction of biotic and environmental circumstances, which change over time. It is not possible to determine or predict all limb or tree failures. This report is such an interpretation at the time of inspection.

Unless Quantified Tree Risk Assessment (QTRA) has been specifically applied and reported, then this report or email does not constitute a risk assessment. The Author does not seek to determine what level of risk any individual or organisation is prepared to accept but serves to provide tree managers with tree condition, hazards and other salient issues or factors associated with the tree or trees; and provide or recommend management options.



15 May 2023

Wade Ryan Contracting – Independent Arboriculture Consultant AQF Level 5.

BAppSc(EnvHort) – AdvDip OH&S

Institute of Australian Consulting Arboriculturists (IACA) Accredited Member (ACM 0622018)

QTRA – Registered Advanced User (4519).

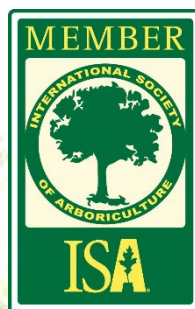
Member - International Society of Arboriculture

Associate Member – The Arboriculture Association (UK)

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Quantified Tree Risk Assessment

4519





Developed Wade Ryan Contracting 0408 300 989 waggotreeconsultancy.com.au woderyan1@bigpond.com		Annexure 1 - Tree Date File - Development Impact Assessment at Gunnedah Hospital 2022 (Version date 15.05.2023)																									
Tree No	Species	Lat	Lon	General Location	Species Origin	General Size	Age Class	Stem base Ø (m)	DBH (m)	Height M	Canopy Ø	Tree Vigour	Tree Structure	Canopy Area (M²)	SRZ Radius in m from centre of stem	TPZ Radius in m from stem	Factors, Observed Conditions or Issues Commentary on tree	Enviro Rating or Value	Estimated remaining useful life	Replacement Time Frame	Significant Tree Value	Retention Value	Recommended Action for planning	Primary Reason for Recommendation	Development Impact	Final Evaluation or Comment	
1	<i>Brachychiton populous</i> (Kurrajong)	-30.9834893	150.25043	West Entrance off Reservoir st	Aus Native	Small	Semi Mature	0.43	0.26	6	4	Fair	Poor	12.5714	2.32	3.12	Two stems from ground - enclosed bark union high longer term failure potential - tree hard against kerb - tree has likely seeded in location from bird droppings - wound to stem from vehicle impact	Low	0 to 5	5-10	Low or nil	Poor	Remove	Condition or Safety	Remove		
2	<i>Jacaranda mimosifolia</i>	-30.9834026	150.250479	West Entrance off Reservoir st	Exotic	Small	Dead	0.54	0.47	7	10	Very Poor	Poor	78.5714	2.55	5.64	Tree dead - extensive basal decay	Low	0	0-5	Low or nil	Very Poor	Remove Priority	Poor Condition	Remove		
3	No tree	-30.983308	150.250276	South west corner										0	1.50	0	Removed immediate prior to survey						Remove Priority		Remove		
4	<i>Eucalyptus cladocalyx</i> "nana" Sugar Gum dwarf	-30.9831483	150.250384	Marquis street car park - centre island south	Aus Native	Small	Mature	0.34	0.24	6	7	Good	Good	38.5	2.10	2.88	presents as sound tree	Low	15 plus	5-10	Low or nil	Fair	Retain if possible	Sound tree suited to site	Retain - Impacts to Manage		
5	<i>Eucalyptus camaldulensis</i> (River Red Gum)	-30.9831968	150.250137	South west corner	Aus Native	Medium	Semi Mature	0.5	0.52	14	6	Fair	Fair	28.2857	2.47	6.24	presents as sound tree	Low	15 plus	10-20	Low or nil	Good	Retain if possible	Sound tree suited to site	Retain - Impacts to Manage		
6	<i>Unidentified Eucalyptus species similar to Eucalyptus</i>	-30.9831412	150.250148	South west corner	Aus Native	Medium	Mature	0.36	0.3	14	10	Fair	Fair	78.5714	2.15	3.6	Enclosed bark stem union at 3.5m Stem failure potential moderate	Low	15 plus	10-20	Low or nil	Good	Retain if possible	Sound tree suited to site	Retain - Impacts to Manage		
7	<i>Corymbia ficifolia</i> (Hybrid form flowering gum)	-30.9830157	150.250215	Marquis street boundary	Aus Native	Small	Over Mature	0.34	0.17	10	3	Poor	Poor	7.07143	2.10	2.04	grafted tree - root suckers have overtaken the stem - poor basal unions	Low	0 to 5	0-5	Low or nil	Very Poor	Remove Priority	Condition or Safety	Remove	can be considered failed planting	
8	<i>Eucalyptus camaldulensis</i> (River Red Gum)	-30.9828834	150.250345	Marquis street boundary	Aus Native	Small	Semi Mature	0.63	0.36	10	10	Fair	Fair	78.5714	2.73	4.32	small basal cavity - low risk Stem lean 15 degrees - presents as stable	Low	5 to 15	5-10	Low or nil	Fair	Retain if possible	Positive amenity values	Retain - Impacts unlikely		
9	<i>Corymbia ficifolia</i> (Hybrid form flowering gum)	-30.9829714	150.250463	Marquis street car park - centre island middle	Aus Native	Very Small	Mature	0.19	0.16	3.5	6	Poor	Fair	28.2857	1.65	1.92	3 Trees in tight group - treat as one tree. Small trees with poor vigour	Very Low	0 to 5	0-5	Low or nil	Poor	Remove	Poor Condition	Remove	can be considered failed planting	
10	<i>Corymbia ficifolia</i> (Hybrid form flowering gum)	-30.982776	150.250528	Marquis street car park - centre island north	Aus Native	Very Small	Over Mature	0.09	0.07	2	1.5	Poor	Poor	1.76786	1.50	1.5	Failed planting	Very Low	0 to 5	0-5	Low or nil	Poor	Remove	Poor Condition	Remove	can be considered failed planting	
11	<i>Corymbia ficifolia</i> (Hybrid form flowering gum)	-30.9826473	150.250474	Marquis street car park - entrance south	Aus Native	Very Small	Mature	0.125	0.09	3	3	Poor	Fair	7.07143	1.50	1.5	2 trees in tight group	Very Low	0 to 5	0-5	Low or nil	Poor	Remove	Species not suited to Environment	Remove	can be considered failed planting	
12	<i>Corymbia ficifolia</i> (Hybrid form flowering gum)	-30.9826473	150.250474	Marquis street car park - entrance south	Aus Native	Very Small	Mature	0.125	0.09	3	3	Poor	Fair	7.07143	1.50	1.5	2 trees in tight group	Very Low	0 to 5	0-5	Low or nil	Poor	Remove	Species not suited to Environment	Remove	can be considered failed planting	
13	<i>Corymbia ficifolia</i> (Hybrid form flowering gum)	-30.9826078	150.250608	Marquis street car park - entrance north	Aus Native	Small	Mature	0.2	0.15	4	3	Poor	Fair	7.07143	1.68	1.8	Extensive root suckers from below graft	Very Low	0 to 5	0-5	Low or nil	Poor	Remove	Species not suited to Environment	Remove	can be considered failed planting	
14	<i>Corymbia ficifolia</i> (Hybrid form flowering gum)	-30.9825858	150.250558	Marquis street car park - entrance north	Aus Native	Small	Mature	0.18	0.25	4	5	Poor	Poor	19.6429	1.61	3	Basal cavity and cracking developing in stem - root suckers developing	Very Low	5 to 15	0-5	Low or nil	Poor	Remove	Species not suited to Environment	Remove	can be considered failed planting	
15	<i>Unidentified Eucalyptus species similar to Eucalyptus</i>	-30.9825156	150.250573	Marquis street	Aus Native	Small	Young	0.2	0.18	7	4	Good	Fair	12.5714	1.68	2.16	Tree lopped at 4m young epicormic growth	Low	15 plus	5-10	Low or nil	Fair	Retain if possible	Positive amenity values	Retain - Impacts unlikely		
16	<i>Unidentified Eucalyptus - Gum</i>	-30.9823115	150.250692	Marquis street entrance north	Aus Native	Medium	Young	0.35	0.2	9	7	Good	Good	38.5	2.13	2.4	Sound young tree in good condition	Low	15 plus	5-10	Low or nil	Fair	Retain if possible	Positive amenity values	Retain - Impacts unlikely		
17	<i>Escallonia species</i>	-30.9833626	150.250835	Locked area in middle of complex	Exotic	Very Small	Mature	0.3	0.15	2.5	3	Excellent	Good	7.07143	2.00	1.8	Shrub species	Very Low	15 plus	0-5	Low or nil	Poor	Remove	Replaced in short term	Remove	very low amenity values	
18	<i>Magnolia species</i>	-30.9831183	150.250974	Garden bed middle of complex	Exotic	Very Small	Over Mature	0.18	0.12	3.5	3	Poor	Fair	7.07143	1.61	1.5	Shrub - staff indicated some cultural values - tree struggling for nutrients	Very Low	5 to 15	0-5	Low or nil	Poor	Retain if possible	Other	Other	Tree has cultural values - to be transplanted	
19	<i>Eucalyptus camaldulensis</i> (River Red Gum)	-30.9827453	150.251256	North side complex	Aus Native	Medium	Semi Mature	0.9	0.54	15	14	Excellent	Excellent	154	3.17	6.48	roots commencing to lift pathway - tree likely has considerable growth potential	Medium	40 plus	20+	Moderate	Good	Retain	Sound tree suited to site	Retain - Impacts to Manage		
20	<i>Corymbia ficifolia</i> (Hybrid form flowering gum)	-30.9826912	150.251291	North side complex	Aus Native	Small	Over Mature	0.35	0.22	9	2	Very Poor	Very Poor	3.14286	2.13	2.64	Primary tree stem dead - root suckers from graft have taken over - poor structure high risk of failing	Low	0 to 5	0-5	Low or nil	Very Poor	Remove Priority	Condition or Safety	Remove		
21	Eucalyptus species Group of 5 - red gums Bimble box	-30.9824578	150.251248	North side complex	Aus Native	Small	New	0.35	0.23	9	4	Fair	Fair	12.5714	2.13	2.76	Treat as one tree	Low	15 plus	5-10	Low or nil	Fair	Retain if possible	Sound tree suited to site	Retain - Impacts unlikely		
22	<i>Jacaranda mimosifolia</i>	-30.9825266	150.251527	North side complex	Exotic	Small	Semi Mature	0.37	0.26	6	6	Good	Good	28.2857	2.18	3.12	Sound young tree in good condition	Very Low	15 plus	5-10	Low or nil	Good	Retain	Sound tree suited to site	Retain - Impacts unlikely		
23	<i>Jacaranda mimosifolia</i>	-30.9825793	150.251652	North side complex	Exotic	Small	Mature	0.4	0.3	6	8	Good	Good	50.2857	2.25	3.6	Sound young tree in good condition	Very Low			Low or nil	Good	Retain	Sound tree suited to site	Retain - Impacts unlikely		
24	<i>Grevillia robusta</i> (Silky Oak)	-30.982825	150.251744	car park joining park	Aus Native	Medium	Mature	0.65	0.5	14	8	Good	Poor	50.2857	2.76	6	Stem has enclosed bark union at 3 m with active crack 1 m down stem - very high risk of failure	Medium	0	20+	Low or nil	Very Poor	Remove Priority	Condition or Safety	Remove	Stem failure potential very high - remove tree as matter of some priority Tree would be moderate significance except for stem issue.	
25	<i>Grevillia robusta</i> (Silky Oak)	-30.9828546	150.251797	car park joining park	Aus Native	Medium	Over Mature	0.44	0.28	8	5	Poor	Fair	19.6429	2.34	3.36	Canopy dieback 20% - tree with poor performance	Low	5 to 15	5-10	Low or nil	Poor	Remove	Poor Condition	Remove		
26	<i>Melia azedarach</i> (White Cedar)	-30.9829925	150.251826	South side building near park	Aus Native	Medium	Over Mature	1	0.72	11	13	Poor	Very Poor	132.786	3.309385623	8.64	Stem with very extensive decay very high failure potential = canopy die back 25%	Low	0 to 5	10-20	Low or nil	Very Poor	Remove Priority	Condition or Safety	Remove		
27	<i>Brachychiton rupestris</i> (Bottle Tree)	-30.983012	150.252522	Park	Aus Native	Medium	Young	1.1	0.9	9	9	Excellent	Excellent	63.6429	3.444548496	10.8	Sound tree	Medium	40 plus	20+	Moderate	Excellent	Retain	Sound tree suited to site	Retain - Impacts unlikely		
28	<i>Eucalyptus cladocalyx</i> (Sugar Gum)	-30.9831479	150.252575	Anzac Parade - Council Tree	Aus Native	Large	Mature	1	0.84	16	14	Fair	Fair	154	3.309385623	10.08	Several small hollows - tree lifting kerbing	High	15 plus	50+	High	Good	Retain Priority	Significant Tree	Retain - Impacts unlikely		
29	<i>Eucalyptus cladocalyx</i> (Sugar Gum)	-30.9832681	150.252517	Anzac Parade - Council Tree	Aus Native	Large	Mature	1.1	0.77	13	8	Good	Good	50.2857	3.444548496	9.24	Small hollows - tree has had canopy reduction	High	15 plus	50+	High	Good	Retain Priority	Significant Tree	Retain - Impacts unlikely		
30	<i>Eucalyptus cladocalyx</i> (Sugar Gum)	-30.9835464	150.252317	Anzac Parade - Council Tree - driveway entrance	Aus Native	Large	Mature	0.9	0.8	14	18	Fair	Fair	254.571	3.16613355	9.6	Presents as sound tree	High	15 plus	50+	Moderate	Good	Retain Priority	Significant Tree	Retain - Impacts to Manage		
31	<i>Corymbia citriodora</i> (Lemon Scented Gum)	-30.9832153	150.252237	Park - off Anzac	Aus Native	Large	Mature	0.63	0.5	16	12	Good	Good	113.143	2.725652003	6	some bird chewing in branch unions - minor dead wood to 50 mm - 1 failed branch	High	15 plus	20+	Moderate	Good	Retain	Significant Tree	Retain - Impacts to Manage		
32	<i>Fraxinus angustifolia subsp. Angustifolia</i> (Desert Ash)	-30.9832343	150.252146	Park - off Anzac	Exotic	Small	Over Mature	0.4	0.2	5	4	Poor	Poor	12.5714	2.252229135	2.4	canopy dieback 40 % - heavy basal suckering	Very Low	0 to 5	0-5	Low or nil	Very Poor	Remove Priority	Poor Condition	Remove		
33	<i>Jacaranda mimosifolia</i>	-30.9833189	150.252303	Park - off Anzac	Exotic	Small	Over Mature	0.2	0.17	4	4	Poor	Fair	12.5714	1.683371515	2.04	Basal necrotic zones and stem dysfunction from mower or mechanical injury	Very Low	0 to 5	0-5	Low or nil	Very Poor	Remove Priority	Poor Condition	Remove		
34	<i>Jacaranda mimosifolia</i>	-30.9833998	150.252284	Park - off Anzac	Exotic	Small	Dead	0.075	0.075	2.5	1.5	Very Poor	Very Poor	1.76786	1.5	1.5		Very Low	0	0-5	Low or nil	Very Poor	Remove Priority	Poor Condition	Remove		
35	<i>Jacaranda mimosifolia</i>	-30.9834771	150.252236	Park - off Anzac	Exotic	Small	Mature	0.2	0.21	6	6	Fair	Fair	28.2857	1.683371515	2.52	Exposed roots - tree vigour has been fair for some time	Very Low	5 to 15	5-10	Low or nil	Fair	Retain if possible	Positive amenity values	Retain - Impacts to Manage		
36	<i>Corymbia tessellaris</i> (Carbeen)	-30.9834253	150.252137	Park - off Anzac	Aus Native	Medium	Semi Mature	0.4	0.27	11	8	Good	Good	50.2857	2.252229135	3.24	Sound young tree in good condition	Medium	40 plus	10-20	Moderate	Good	Retain	Positive amenity values	Retain - Impacts to Manage		

Tree No	Species	Lat	Lon	General Location	Species Origin	General Size	Age Class	Stem base Ø (m)	DBH (m)	Height M	Canopy Ø	Tree Vigour	Tree Structure	Canopy Area (M²)	SRZ Radius in m from centre of stem	TPZ Radius in m from stem	Factors, Observed Conditions or Issues Commentary on tree	Enviro Rating or Value	Estimated remaining useful life	Replacement Time Frame	Significant Tree Value	Retention Value	Recommended Action for planning	Primary Reason for Recommendation	Development Impact	Final Evaluation or Comment
37	<i>Jacaranda mimosifolia</i>	-30.9833938	150.252081	Park - off Anzac	Exotic	Small	Mature	0.24	0.2	5	6	Fair	Fair	28.2857	1.817339631	2.4	Possibly a memorial tree - plaque at base	Very Low	5 to 15	5-10	Moderate	Fair	Retain	Significant Tree	Retain - Impacts to Manage	If tree is memorial tree - consider retention as priority - if highly significant then could be lifted and replanted at some cost. If not significant then tree has poor retention values
38	<i>Eucalyptus species</i> - possibly leucosylon	-30.9835484	150.25185	Behind Ambulance station	Aus Native	Large	Mature	0.9	0.8	18	18	Good	Good	254.571	3.16613355	9.6	Several small branch failures	High	40 plus	20+	High	Good	Retain	Significant Tree	Retain - Impacts to Manage	Significant Impacts to manage
39	<i>Eucalyptus camaldulensis</i> (River Red Gum)	-30.9834872	150.251776	Behind Ambulance station	Aus Native	Small	Mature	0.5	0.25	7	7	Fair	Fair	38.5	2.473516306	3	Tree performance well below species average	Low	5 to 15	5-10	Low or nil	Fair	Retain if possible	Poor Condition	Remove	Direct Conflict with DA
40	<i>Eucalyptus camaldulensis</i> (River Red Gum)	-30.9835805	150.251748	Behind Ambulance station	Aus Native	Medium	Semi Mature	0.65	0.5	13	16	Excellent	Good	201.143	2.761664934	6	Sound young tree in good condition	Medium	40 plus	10-20	Moderate	Good	Retain	Sound tree suited to site	Remove	Direct Conflict with DA
41	<i>Plumeria</i> (frangipani)	-30.983231	150.251329	Middle of complex in locked area	Exotic	Small	Mature	0.32	0.26	3	4.5	Fair	Fair	15.9107	2.050738887	3.12	Heavily lopped - response fair	Very Low	0 to 5	0-5	Low or nil	Poor	Remove	Poor Condition	Remove	
42	<i>Lagerstroemia species</i> (Crepe myrtle)	-30.983185	150.251463	Middle of complex in locked area	Exotic	Small	Mature	0.5	0.15	2.5	3	Fair	Poor	7.07143	2.473516306	1.8	Heavily lopped - response fair	Very Low	5 to 15	0-5	Low or nil	Poor	Remove	Poor Condition	Remove	
43	<i>Lagerstroemia species</i> (Crepe myrtle)	-30.983255	150.251413	Middle of complex in locked area	Exotic	Small	Mature	0.5	0.15	2.5	3	Fair	Poor	7.07143	2.473516306	1.8	Heavily lopped - response fair	Very Low	5 to 15	0-5	Low or nil	Poor	Remove	Poor Condition	Remove	
44	<i>Citrus species</i> (Orange)	-30.9833338	150.251434	Middle of complex	Exotic	Small	Mature	0.2	0.1	2	2	Good	Good	3.14286	1.683371515	1.5		Very Low	5 to 15	0-5	Low or nil	Poor	Remove	Direct Conflict with DA	Remove	
45	<i>Ulmus glabra</i> 'Lutescens' (Golden Elm)	-30.9834386	150.251501	Middle of complex	Exotic	Medium	Mature	0.2	0.15	4	2	Poor	Fair	3.14286	1.683371515	1.8		Very Low	5 to 15	0-5	Low or nil	Poor	Remove	Poor Condition	Remove	Species poorly suited to environment
46	<i>Ulmus glabra</i> 'Lutescens' (Golden Elm)	-30.9834785	150.251478	Middle of complex	Exotic	Medium	Mature	0.2	0.15	4	2	Poor	Fair	3.14286	1.683371515	1.8	Heavy root stock suckers	Very Low	0 to 5	0-5	Low or nil	Poor	Remove	Poor Condition	Remove	Species poorly suited to environment
47	<i>Ulmus glabra</i> 'Lutescens' (Golden Elm)	-30.9835671	150.251436	Middle of complex	Exotic	Medium	Mature	0.2	0.15	4	2	Poor	Fair	3.14286	1.683371515	1.8	Heavy root stock suckers	Very Low	0 to 5	0-5	Low or nil	Poor	Remove	Poor Condition	Remove	Species poorly suited to environment
48	<i>Ulmus glabra</i> 'Lutescens' (Golden Elm)	-30.9836339	150.251374	Middle of complex	Exotic	Medium	Mature	0.2	0.15	4	2	Poor	Fair	3.14286	1.683371515	1.8		Very Low	5 to 15	0-5	Low or nil	Poor	Remove	Poor Condition	Remove	Species poorly suited to environment
49	<i>Ulmus glabra</i> 'Lutescens' (Golden Elm)	-30.9834627	150.251092	Middle of complex in secured yard	Exotic	Medium	Mature	0.25	0.15	4	3	Fair	Fair	7.07143	1.848766996	1.8		Very Low	5 to 15	0-5	Low or nil	Fair	Remove	Direct Conflict with DA	Remove	This tree has been irrigated - therefore it has performed slightly better than other of this species onsite
50	<i>Fraxinus angustifolia</i> subsp. <i>Angustifolia</i> (Desert Ash)	-30.9835544	150.251217	Fence at Playground	Exotic	Small	Semi Mature	0.4	0.35	7	8	Excellent	Excellent	50.2857	2.252229135	4.2	Sound tree	Very Low	15 plus	5-10	Low or nil	Good	Remove	Direct Conflict with DA	Remove	
51	<i>Fraxinus</i> "Raywood" (Claret Ash)	-30.9836162	150.251212	Fence at Playground	Exotic	Small	Over Mature	0.35	0.25	4	5	Fair	Poor	19.6429	2.129393649	3	canopy dieback 15 % deadwood to 75 mm Ø suckering in canopy from water stress in previous years.	Very Low	0 to 5	5-10	Low or nil	Poor	Remove	Direct Conflict with DA	Remove	
52	<i>Pyrus calleryana</i> 'Capital'.	-30.9836589	150.25117	lawn area off reservoir	Exotic	Small	Mature	0.15	0.125	8	2	Good	Good	3.14286	1.5	1.5		Very Low	15 plus	0-5	Low or nil	Fair	Remove	Direct Conflict with DA	Remove	Species offers little in the way of any environmental or amenity
53	<i>Pyrus calleryana</i> 'Capital'.	-30.983714	150.251282	lawn area off reservoir	Exotic	Small	Mature	0.15	0.13	8	2	Good	Good	3.14286	1.5	1.56		Very Low	15 plus	0-5	Low or nil	Fair	Remove	Direct Conflict with DA	Remove	Species offers little in the way of any environmental or amenity
54	<i>Pyrus calleryana</i> 'Capital'.	-30.9838297	150.25128	lawn area off reservoir	Exotic	Small	Mature	0.1	0.075	3	1	Fair	Fair	0.78571	1.5	1.5	Heavy root suckers	Very Low	0 to 5	0-5	Low or nil	Poor	Remove	Direct Conflict with DA	Remove	Species offers little in the way of any environmental or amenity
55	<i>Eucalyptus camaldulensis</i> (River Red Gum)	-30.9837531	150.251478	Car Park off Anzac - south side	Endemic	Medium	Semi Mature	1	0.75	12	15	Good	Good	176.786	3.309385623	9	Canopy hangs quite low may require pruning	High	40 plus	10-20	Moderate	Good	Retain	Sound tree suited to site	Remove	Direct Conflict with DA
56	<i>Grevillia robusta</i> (Silky Oak)	-30.983889	150.251524	Between buildings	Aus Native	Medium	Mature	0.9	0.68	14	8	Excellent	Fair	50.2857	3.16613355	8.16	Tree has been lopped at 7m mark in recent times - epicormic attachment fair to good 60 mm Ø at this point - no obvious decay as yet. Species prone to decay when lopped.	Medium	5 to 15	20+	Moderate	Fair	Retain if possible	Positive amenity values	Remove	Direct Conflict with DA
57	<i>Jacaranda mimosifolia</i>	-30.9839352	150.251491	Between buildings	Exotic	Medium	Mature	0.9	0.87	15	8	Good	Fair	50.2857	3.16613355	10.44	Tree lopped at 7m mark - epicormic shoots good attachment 50-70 mm Ø- no decay evident at this	Low	5 to 15	20+	Moderate	Good	Retain	Positive amenity values	Remove	Direct Conflict with DA
58	<i>Jacaranda mimosifolia</i>	-30.9842258	150.251825	corner of Anzac and Reservoir	Exotic	Medium	Mature	0.9	0.74	13	13	Excellent	Good	132.786	3.16613355	8.88	East tree in a significant line of trees	Low	15 plus	20+	High	Excellent	Retain Priority	Significant Tree	Retain - Impacts unlikely	Forms part of a significant line of trees
59	<i>Jacaranda mimosifolia</i>	-30.9841908	150.251756	Reservoir	Exotic	Medium	Mature	0.8	0.8	13	13	Excellent	Good	132.786	3.013319419	9.6		Low	15 plus	20+	High	Excellent	Retain Priority	Significant Tree	Retain - Impacts unlikely	Forms part of a significant line of trees
60	<i>Jacaranda mimosifolia</i>	-30.9841513	150.251682	Reservoir	Exotic	Medium	Mature	0.7	0.6	9	13	Good	Good	132.786	2.848974438	7.2		Low	15 plus	20+	High	Excellent	Retain Priority	Significant Tree	Retain - Impacts unlikely	Forms part of a significant line of trees
61	<i>Jacaranda mimosifolia</i>	-30.9841193	150.251569	Reservoir	Exotic	Medium	Mature	0.9	0.78	12	10	Good	Fair	78.5714	3.16613355	9.36	Tree partially lopped - epicormic attachment good.	Low	15 plus	20+	High	Excellent	Retain Priority	Significant Tree	Retain - Impacts unlikely	Forms part of a significant line of trees
62	<i>Jacaranda mimosifolia</i>	-30.9840656	150.251449	Reservoir	Exotic	Medium	Mature	0.6	0.55	11	12	Good	Fair	113.143	2.670366684	6.6	Tree lopped twice - epicormic attachment good.	Low	15 plus	20+	High	Excellent	Retain Priority	Significant Tree	Retain - Impacts to Manage	Forms part of a significant line of trees
63	<i>Eucalyptus camaldulensis</i> (River Red Gum)	-30.9840529	150.251427	Reservoir	Exotic	Medium	Mature	0.23	0.14	4	3	Poor	Poor	7.07143	1.785143229	1.68	Tree heavily supressed by larger trees	Low	15 plus	0-5	Low or nil	Poor	Retain if possible	Other	Retain - Impacts to Manage	Joining trees are to be retained - retain this tree unless there is compelling reason to remove.
64	<i>Jacaranda mimosifolia</i>	-30.9840432	150.251372	Reservoir	Exotic	Medium	Mature	0.7	0.7	12	12	Good	Fair	113.143	2.848974438	8.4	lopped at 4 m epicormic attachment good	Low	15 plus	20+	High	Excellent	Retain Priority	Significant Tree	Remove	Direct Conflict with DA
65	<i>Eucalyptus camaldulensis</i> (River Red Gum)	-30.9839985	150.251313	Reservoir	Exotic	Medium	Mature	0.46	0.38	13	8	Fair	Good	50.2857	2.388392315	4.56		Medium	15 plus	20+	Moderate	Good	Retain	Sound tree suited to site	Retain - Impacts to Manage	Joining trees are to be retained - retain this tree unless there is compelling reason to remove.
66	<i>Jacaranda mimosifolia</i>	-30.9839738	150.251272	Reservoir	Exotic	Medium	Mature	1.1	0.8	10	10	Good	Fair	78.5714	3.444548496	9.6	Minor dead wood to 160 mm Ø	Low	15 plus	20+	High	Excellent	Retain Priority	Significant Tree	Retain - Impacts to Manage	Forms part of a significant line of trees
67	<i>Jacaranda mimosifolia</i>	-30.9839266	150.251144	Reservoir	Exotic	Medium	Over Mature	0.9	0.8	10	10	Good	Poor	78.5714	3.16613355	9.6	Extensive basal cavity leading into leader system from ground - sound wood estimated 20% with opening of 5% stem failure moderate to high potential	Low	15 plus	20+	High	Excellent	Retain Priority	Significant Tree	Retain - Impacts to Manage	Forms part of a significant line of trees - tree requires a canopy reduction of 25% to reduce weight loading on stem and leader system - do no lop tree.
68	<i>Jacaranda mimosifolia</i>	-30.9838903	150.251043	Reservoir at entrance to engineering	Exotic	Medium	Mature	0.7	0.61	10	10	Good	Poor	78.5714	2.848974438	7.32	lopped at 4 m epicormic growth 75 mm Ø - necrotic zones and decay in north leader at 500 mm to 2 m mark sounding indicated about 20% sound wood with 15 % opening - but good diameter to height ratio - dead branches and	Low	15 plus	20+	High	Good	Retain Priority	Significant Tree	Retain - Impacts to Manage	Forms part of a significant line of trees - tree requires a canopy reduction of 25% to reduce weight loading on stem and leader system - do no lop tree.

3576.38 Theoretical canopy coverage in square meters.  
31000 Approximate area of site - square meters  
12% Approximate site canopy coavrage - existing



Annexure 2 - Assessment and Evaluation criteria - Definitions. (Version date 02/06/2022)												
Species Origin		General Tree Size		Age Class		Overall Condition - summation of all considerations. Includes Stem/Canopy Structure Defects, Form, Canopy Vigour, Extent of any decay, Pest and Disease influences	ERL - estimated remaining useful life in years under current Situation	Tree Vigour	Retention value			
Remnant	Endemic species naturally occurring	Very Large	> 25m	New	Recent Planting - last year or two	Excellent	0	Excellent	Excellent	Interpretation Based on overall tree condition, species performance in local environment, expected remaining life significance of tree in landscape and replacement time frame		
Endemic	Species is native to this location	Large	18-25m	Young	Sapling, extended growth remaining	Good	0 to 5	Good	Good			
Aus Native	Species native to Australia but not this location	Medium	10-18m	Semi Mature	Some remaining growth to reach maturity for the site and species	Fair	5 to 15	Fair	Fair			
Exotic	Species introduced to Australia	Small	< 10m	Mature	Considered mature size for site and species - typically no sign of decline	Poor	15 plus	Poor	Poor			
		Very Small	< 3m	Over Mature	Tree has commenced to decline - obvious signs	Very Poor	40 plus	Very Poor	Very Poor			
				Senescent	Extended signs of decline - recovery not expected							
				Dead	Little or no metabolic function remaining							

Environmental Rating/Value	Environmental Evaluation Considerations/criteria
Very High	Normally Old growth Remnant Tree, multiple hollows important to threatened or endangered fauna, replacement would be well in excess of 150 years
High	Large or mature Endemic Tree or Aus Native that has high substitute values as endemic tree with or without hollows, plays an important part in local ecology - replacement would take 50-100 years
Medium	Young or semi mature Endemic tree or Aust native species that has some positive values for local fauna/ecosystems - replacement would take 20 or more years. Large Exotic tree with elevated general values.
Low	Normally exotic species, or small, young endemic or native that could be replaced in the short term 5-10 years
Very Low	Listed Weed or nuisance species; or very small value or insignificant to local ecology - could be replaced within 5 years or readily replaced with species of greater value

Significant Tree value considerations/criteria	
Very High	Defined as Significant Tree by regulatory or other authority or
	Environmental rating 1 or
	Heritage Listed or
	Very High Cultural or heritage Values
High	Environmental rating 2 or
	Medium or large tree in good/excellent condition, suited to local environment or
	imposing within the local landscape with long life expectancy and or
	strong amenity values or some cultural or heritage links
Moderate	A tree that is somewhat noteworthy - it is likely to grow into a significant tree
Not Significant	A tree with low or very values to the environment or local amenity

Recommended Action for DA/Development	Primary Reasons
Retain Priority	Very Significant tree
Retain	Significant Tree
Retain if possible	Sound tree suited to site
Remove	Positive amenity values
Remove Priority	Poor Condition
	Unsuitable for location
	Species not suited to Environment
	Condition or Safety
	Replaced in short term
	Direct Conflict with DA
	Exempt species
	Exempt height
	Weed Species
	Other

Picks		
Replacement time:	1	Very High
0-5	2	High
5-10	3	Moderate
10-20	4	Low or nil
20+	5	Yes
50+		No
100+		

Known Development Impact
Remove
Retain - Impacts to Manage
Retain - Impacts unlikely
Other
Not determined

Direct Conflict with DA  
Significant Impacts to manage

#### Other Definitions

**Significance** - 'sufficiently great or important to be worthy of attention; noteworthy'. Oxford Dictionary (2022).

Tree Height and canopy spread is estimated unless otherwise specified.

Tree stem diameter is measured at approximately 1.4m above - or at a point indicative of the tree dimension where abnormal growth occurs at 1.4m above ground. Multi stemmed trees are calculated as per AS 4970

**TPZ – Tree Protection Zone** - specified area above and below ground and at a given distance from the trunk set aside for the protection of the tree's roots and crown to provide for the viability and stability of a tree to be retained where it is potentially subject to damage by development.

**SRZ - Structural Root Zone** – the area around the base of a tree required for the tree's stability in the ground - calculated in meters radially from stem centre.

From Australian Standard 4970-2009 Protection of Trees on development sites

TPZ and SRZ are calculated from AS 4970

Tree canopy area is a calculated area from the diameter of the of the canopy - some actual variation may exist in the calculation if the canopy is not symmetrical.

Detailed explanation of Recommendations for Development	
Retain Priority	The Tree is a high value tree from an amenity, environmental or other perspective - its removal should only occur under some extenuating circumstance
Retain	The tree has good or excellent retention values - a compelling reason should exist to remove the tree
Retain if Possible	The tree has some positive values for retention - it will not be significant - the positive values outweigh the negative values It is recognised that removal may be required in many instances.
Remove	The tree condition, structure, size, species or other consideration dictates that a new tree is a better option
Remove Priority	The tree condition, structure, size species of other consideration dictates that the tree should be removed and not retained for stated reasons.





MARQUIS STREET

RESERVOIR STREET

ANZAC PARADE

LIONS PARK

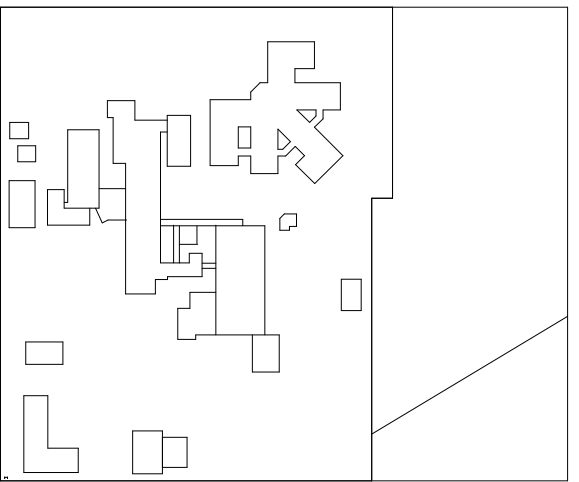
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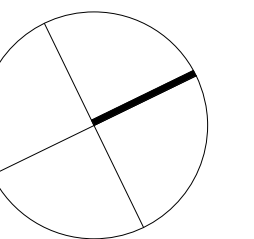
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Nominated Architect Angus Rose NSW ARB 8341 &

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- DEPARTMENT LEGEND**
- EXISTING BUILDING
  - FRONT OF HOUSE
  - PLANT / ENGINEERING
  - INPATIENT UNIT
  - EMERGENCY DEPARTMENT
  - DAY SURGERY & THEATRES
  - VACANT

- SITE LEGEND**
- TURFED AREA
  - MASS PLANTING OF NATIVE GRASSES
  - MASS PLANTING AREA
  - PAVING TYPE 1
  - PAVING TYPE 2
  - EXISTING ROADWAYS/PARKING
  - NEW ROADWAYS/PARKING



**DESIGN DEVELOPMENT**  
NOT TO BE USED DURING CONSTRUCTION

C	FOR INFORMATION	03.05.2023	LS	DC
B	FOR INFORMATION	26.04.2023	LS	DC
A	FOR INFORMATION	21.04.2023	SA	DC

Issue	Description	Date	Chk	Auth

Architect/ Designer  
dwp  
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Client  
NSW HEALTH INFRASTRUCTURE

Project  
GUNNDAH HOSPITAL  
REDEVELOPMENT  
Location  
MARQUIS STREET, GUNNDAH,  
NSW 2380

Project Number  
21-0218

Drawing  
OPTION 2 - SITE FLOOR  
PLAN - STAGE 1

Scale (A1)  
As indicated  
Drawing Number  
SK-S1-9240

Date Printed  
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Issue  
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CARPARKING		
MAIN	49	incl 3 ACCESSIBLE
NORTH	37	
AMBULANCE	9	
EMERGENCY	17	
	2	
	30	incl 2 ACCESSIBLE
DROPOFF	5	
	= 151 (5 CARPARKS DISPLACED IN OPTION 2)	
EXISTING	156	
	17 FLEET	

RETAIN EXISTING HARD STAND AND BITUMEN SURFACES WITH NEW PARKING LINEWORK. CIVIL TO CONFIRM IF EXISTING LEVELS CAN WORK WITH NEW DROP OFF ROADWAY PROPOSED LEVELS

CIVIL TO CONFIRM IF CONTINUOUS ACCESSIBLE PATH OF TRAVEL IS ACHIEVED (BLUE DASHED PATH). MAXIMUM CROSS FALL OF 1:40 OR 1:33 FOR UNCOVERED BITUMEN SURFACES