PRELIMINARY TREE ASSESSMENT FOR DEVELOPMENT at
34-40 South Parade Wagga Wagga NSW 2650.

1. INTRODUCTION.

There is planned development by NSW Department of Planning, Industry and Environment, Land and Housing Corporation at three joining properties identified as 34, 36-38, and 40 South Parade Wagga Wagga, NSW 2650.

A preliminary assessment of the tree vegetation is required to determine what trees are on site, condition, significance and recommendations for retention or removal. The findings are intended to assist the development and design process.

2. SCOPE AND PURPOSE.

The report has been commissioned by Mr. Adam Bower, Land and Housing Corporation Development Manager, Delivery South West Sydney and Southern NSW. He can be contacted on (02) 9374 3650.

The site was formally inspected on 21 September 2021.

The report is designed to provide;

- accurate identification of tree vegetation,
- tree condition, including any hazards present
- evaluation of the trees relative to their contribution to the environment, amenity and any other identified values
- evaluation of potential development impacts
- recommendations for management of the issues identified and interpretation of Wagga Wagga City Council (WWCC) Development Control Plan 2010 – Section 5 Natural Resource and Landscape Management – 5.2 Preservation of Trees.

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

General development impacts or potential issues from development are addressed for guidance.

- Diagram 1 provides the location of the assessment site.
- Diagram 2 provides an overlay of the trees across the site with allocated tree numbers.
- Annexure 1 provides details and assessment of the 14 trees/shrubs across the site.
- Photographs of each tree are provided at the conclusion of the report to aid in identification and relevant assessment details.

3. Site Conditions and Background.

The site currently comprises 3 joining single story dwellings at 34, 36-38 and 40 South Parade. 36 and 38 South Parade are one building and one allotment. Each of the three address is approximately 480 square meters in area.

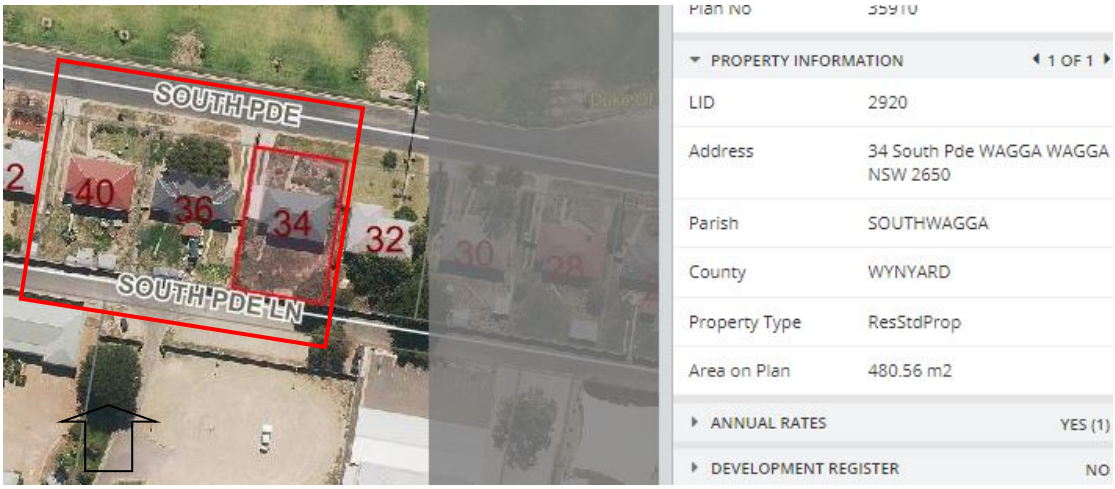

Diagram 1– Location of Assessment site – 3 lots – 34, 36 and 40 South Parade.
(Note Address 36 also contains number 38).
Adapted from WWCC IntraMaps 2021.

The tree vegetation across the three sites is generally described as follows.

- There are a total of 11 trees and shrubs or groups of trees located across the site.
- There are three small WWCC Street trees – 2 located at the front verge of number 34 and 1 located on the front verge of number 40. The trees are not evaluated as significant.
- The remaining tree vegetation is described as a mixture of small exotic and Australian native species, many are noted as environmental weed species with very low environmental values.
- There is no tree/shrub vegetation in the rear yards of 36-38 or 40.

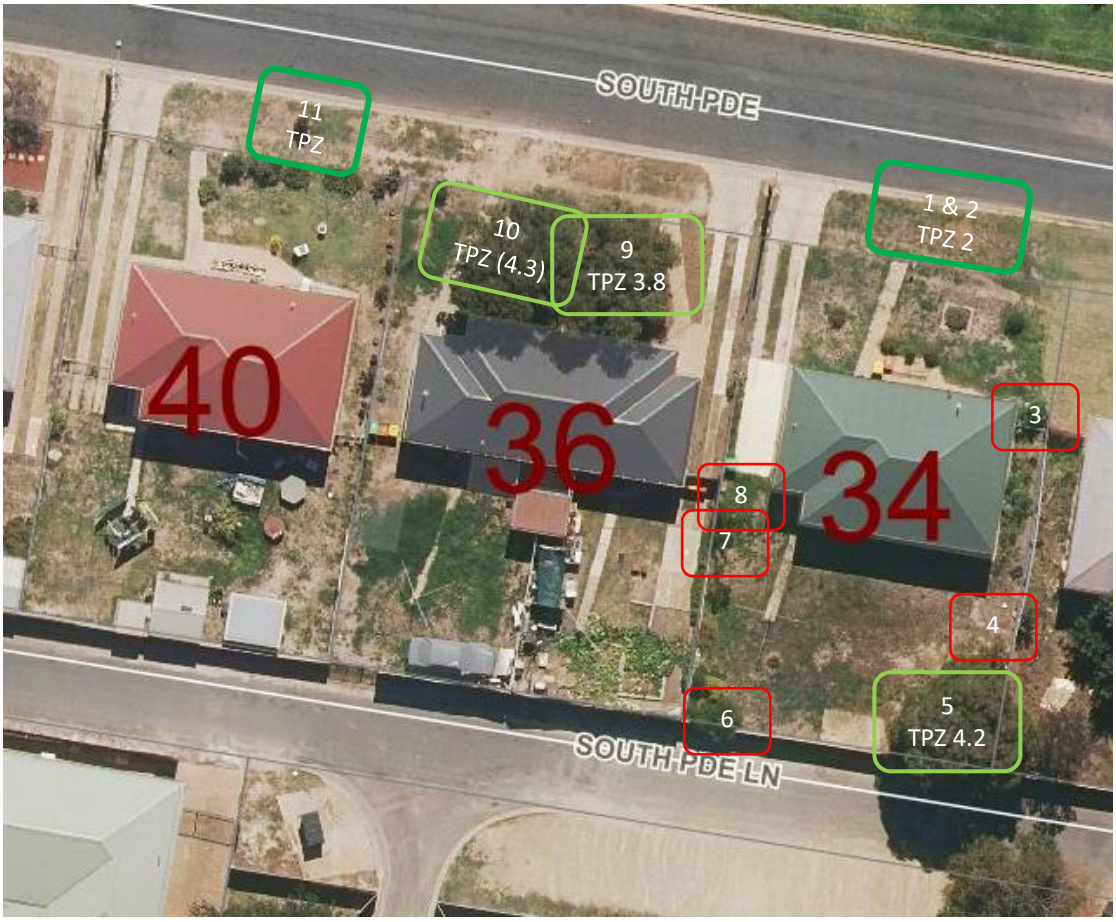

***Diagram 2 - Tree numbers have been overlayed on aerial image of assessment site. 11 Trees and shrubs are identified across the 3 property address* and evaluated. Tree Protection Zones in brackets on trees that are worth retaining**

Dark Green – Retain Priority
Light Green – Retain if possible.
Red – Removal or Priority for removal.

Adapted from– WWCC IntraMaps 2021.

4. Discussion & Recommendations.

The following discussion points are provided in additional to the full details on each tree contained in Annexure 1 below.

- *WWCC DCP Part B section 5.2 preservation of trees* (WWCC 2021) establishes a tree as 8 m in height. Trees and shrubs under this height are effectively exempt and can be removed.
- A total of 11 trees and shrubs were recorded on site including some under 8 m.
    - Effectively there are 8 trees directly on the development site and 3 Council trees.
- There are no trees on site or in joining properties identified as significant or very significant.
- Trees 1, 2 and 11 are WWCC Trees located on the nature strip or Council verge. The trees have been planted in that last year or so – they are newly

established and I would expect that council would be keen to retain these trees.
    - If the trees present and unacceptable impost to the development then Council may agree to transplanting the trees (elsewhere) and establishing new trees as part of the development.
    - If the trees are retained on site development works and planning for delivery of services (trenching) to the development site needs to respect the tree protection zones of these three trees.
- Much of the vegetation is formed by *Ligustrum lucidum* (Broad leaf privet) an environmental weed – the seeds of which are prolifically spread by bird droppings. All these trees should be removed.
    - WWCC DCP recognises this species as an 'undesirable' species and is listed as an exempt species.
    - The species is also listed and recognised by NSW DPI as a weed (DPI 2020)
- **Trees 5, 9 and 10** are smaller mature Australian Native species that have retention values as trees with some positive contribution to the environment, amenity and with medium term life expectancy.
    - It is noted that trees **9 and 10** are in the middle of the development site and retention as part of the development may be difficult.
        - I would expect that removal of the trees and replacement could be an acceptable outcome on the basis that the whole development landscape plan should be capable of providing increased tree canopy and tree values over the current situation.
    - **Tree 5** is located in the south east corner of the site. This tree could be retained if it is not directly impacted by the development – it has a tree protection zone of 4.2 meters.
        - Again its removal could be supported based on the detail provided for trees 9 and 10.
- The total current canopy coverage of the site is approximately 134 square meters including the 3 WWCC Street Trees.
    - This equates to less than 1% of the development site – which is considered very poor.
    - Even if trees 5, 9 and 10 are removed there is considerable opportunity to greatly increase the canopy coverage as part of the new development as part of the landscape plan.
- A simple tree protection plan and measures need to be developed for the trees to be retained on site once the development plan is finalised – assuming that one or more of the trees are retained – including any Council Trees.
- Relevant tree protection measures should form part of the project plan if applicable.

Additional References.

NSW DPI (2020). *NSW Weed Wise. NSW Department of Primary Industries Privet - broad-leaf (Ligustrum lucidum).* Accessed online 6/10/2021 at; https://weeds.dpi.nsw.gov.au/Weeds/PrivetBroadleaf

WWCC (2021). *Wagga Wagga Development Control Plan – Part B Natural Resource and Landscape Management Section 5.2 – Preservation of Trees.* Accessed online 6/10/2021 at: https://wagga.nsw.gov.au/__data/assets/pdf_file/0015/112254/ECM_2509477_v25_Version-Control-Project-Wagga-Wagga-DCP-2010-as-amended-Section-5-Natural-Resource-and-Landsca.pdf

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 defects and tree 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 associated with the tree or trees; and provide or recommend management options.

7 October 2021
Wade Ryan Contracting – Independent Arboriculture Consultant AQF Level 5.
BAppSc(EnvHort) – AdvDip OH&S
Institute of Australian Consulting Arboriculturists (IACA) Associate Member ASM0622018
QTRA – Registered Advanced User (4519).
Member - International Society of Arboriculture
Associate Member – The Arboriculture Association (UK)

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Arboricultural ASSOCIATION

trees.org.uk

AS8205.

Following Photos are provided to aid in the onsite identification of trees.


T 1


T 2


T 3

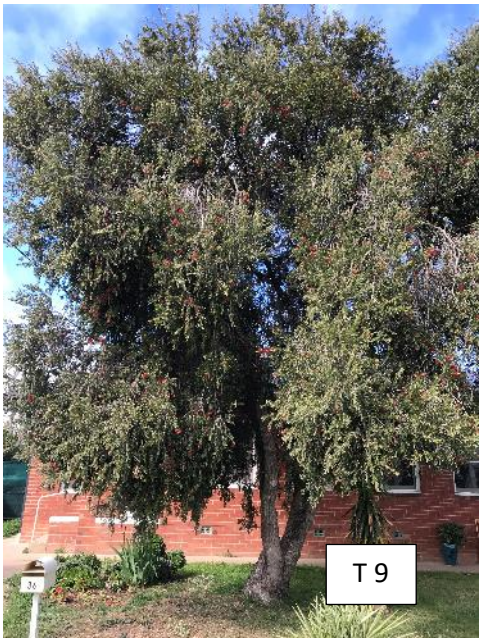

T 4


T 5


T 6


T 7


T 8


T 9


T 10


T 11

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Annexure 1 - Tree Date File - 34 - 40 South Parade Wagga Wagga - 2021.

Tree No	Species	General Location	Species Origin	General Size	Height M	Canopy Ø	DBH (m)	Age Class	Tree Vigour	General Condition	Canopy Area (M²)	Defects/Hazards/Issues Present Commentary on tree	Enviro Rating (Values)	Expected Remaining Life	Significant Tree Status	Retention Value	Replacement Time Frame	Recommended Action for planning of development	Primary Reason for Recommendation	Secondary Reason for Recommendation	SRZ Radius in m	TPZ Radius in m	Other Comments
1	*Lagerstroemia species* (Crepe Myrtle)	34 South prd WWCC Verge	Exotic	Very Small	2	1	0.02	New	2 - Good	2 - Good	0.8	Recent Council Planting	5 - Very Low	15 plus	Not Significant	2 - Good	0-5	Retain Priority	Sound tree suited to site		1.50	2	
2	*Lagerstroemia species* (Crepe Myrtle)	34 South prd WWCC Verge	Exotic	Very Small	2	1	0.02	New	2 - Good	2 - Good	0.8	Recent Council Planting	5 - Very Low	15 plus	Not Significant	2 - Good	0-5	Retain Priority	Sound tree suited to site		1.50	2	
3	*Ligustrum lucidum* (Broad leaf privet)	34 South Prd front - east boundary	Exotic	Very Small	2	2	0.08	Young	1 - Excellent	3 - Fair	3.1	Coppice on stump - tree has recently been cut back near ground	5 - Very Low	15 plus	Not Significant	5 - Very Poor	0-5	Remove Priority	Exempt species	Exempt height	1.50	2	Environmental Weed (DPI 2020) and WWCC DCP
4	*Brachychiton populneus* (Kurrajong) (Count - 2 stems)	34 South Prd Rear - East boundary	Aus Native	Small	4	2	0.14	Young	1 - Excellent	2 - Good	3.1	Two young trees seeded close to each other	4 - Low	40 plus	Not Significant	4 - Poor	0-5	Remove	Exempt height	Other	1.50	2	Not subject to WWCC preservation of trees
5	*Melaleuca styphelioides* (Prickly Paperbark)	34 South Prd Rear south east corner	Aus Native	Small	8	8	0.35	Semi Mature	2 - Good	3 - Fair	50.3	Multi stemmed tree with poor stem unions at ground - moderate risk of failure	3 - Medium	15 plus	Not Significant	3- Fair	5-10	Retain if possible	Positive amenity values		2.13	4.2	Tree has some retention value - but could be replaced in medium term.
6	*Brachychiton populneus* (Kurrajong)	34 South Prd Rear - South west corner	Aus Native	Small	4	4	0.15	Young	2 - Good	4 - Poor	12.6	Tree hard on rear fence - seeded from bird droppings - now a coppice has been cut back at least once	4 - Low	15 plus	Not Significant	5 - Very Poor	0-5	Remove Priority	Exempt height	Unsuitable for location	1.50	2	
7	*Ligustrum lucidum* (Broad leaf privet)	34 South Prd Rear -West boundary	Exotic	Very Small	3	2	0.1	Young	1 - Excellent	2 - Good	3.1	Coppice from cut back tree - Weed species	5 - Very Low	15 plus	Not Significant	5 - Very Poor	0-5	Remove Priority	Exempt height	Exempt species	1.50	2	Environmental Weed (DPI 2020) and WWCC DCP
8	*Ligustrum lucidum* (Broad leaf privet) (count 2 stems)	34 South Prd Rear -West boundary	Exotic	Very Small	3	2	0.1	Young	1 - Excellent	2 - Good	3.1	Coppice from cut back tree - Weed species	5 - Very Low	15 plus	Not Significant	5 - Very Poor	0-5	Remove Priority	Exempt height	Exempt species	1.50	2	Environmental Weed (DPI 2020) and WWCC DCP
9	*Callistemon species* (Bottle Brush)	36-38 South Prd Front Yard	Aus Native	Medium	8	6	0.32	Mature	2 - Good	2 - Good	28.3	Sound tree	3 - Medium	15 plus	Not Significant	2 - Good	5-10	Retain if possible	Sound tree suited to site	Positive amenity values	2.05	3.84	
10	*Callistemon species* (Bottle Brush)	36-38 South Prd Front Yard	Aus Native	Medium	8	6	0.36	Mature	2 - Good	2 - Good	28.3	Sound tree	3 - Medium	15 plus	Not Significant	2 - Good	5-10	Retain if possible	Sound tree suited to site	Positive amenity values	2.15	4.32	
11	*Lagerstroemia species* (Crepe Myrtle)	40 South prd WWCC Verge	Exotic	Very Small	2	1	0.02	New	2 - Good	2 - Good	0.8	Recent Council Planting	5 - Very Low	15 plus	Not Significant	2 - Good	0-5	Retain Priority	Sound tree suited to site		1.50	2	
											134.4	Total Caonoy coverage.											
											132	Canopy coverage lost if all trees on site removed - and WWCC trees retained.											

Annexure 1 - Assessment and Evaluation criteria - Definitions.

Origin		General Tree Size		Age Class		General Condition - summation of all considerations. Includes Stem/Canopy Structure Defects, Form, Canopy Vigour, Extent of any decay, Pest and Disease influences	ERL estimated remaining life in years under current Situation	Tree Vigour	Retention value	
Endemic	Species is native to this location	Very Large	> 25m	New	Recent Planting - last year or two	1 - Excellent	0	1 - Excellent	1 - Excellent	Interpretation Based on overall tree condition, species performance in local environment, expected remaining life and significance of tree in landscape
Aus Native	Species native to Australia but not this location	Large	18-25m	Young	Sapling, extended growth remaining	2 - Good	0 to 5	2 - Good	2 - Good	
		Medium	10-18m	Semi Mature	Some remaining growth to reach maturity for the site and species	3 - Fair	5 to 15	3- Fair	3- Fair	
Exotic	Species introduced to Australia	Small	< 10m	Mature	Considered mature size for site and species - typically no sign of decline	4 - Poor	15 plus	4 - Poor	4 - Poor	
		Very Small	< 3m	Over Mature	Tree has commenced to decline - obvious signs	5 - Very Poor	40 plus	5 - Very Poor	5 - Very Poor	
				Senescent	Extended signs of decline - recovery not expected					
				Dead	Little or no metabolic function remaining					

Environmental Rating	Environmental Evaluation Considerations/criteria
1 -Very High	Normally Old growth Remnant Tree, multiple hollows important to endangered fauna, replacement would be well in excess of 150 years
2 - High	Mature or semi mature Endemic Tree with or without hollows, plays an important part in local ecology, or Australian Native that has high substitute values as endemic tree replacement would take 50-100 years
3 - Medium	Young or semi mature Endemic tree or Australian 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.
4 - Low	Normally exotic species, or small, young endemic or native that could be replaced in the short term 5-10 years
5 - 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 Significant	Defined as Significant Tree by regulatory or other authority or Environmental rating 1 or Heritage Listed or Very High Cultural or heritage Values
Significant	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

Recommended Action for DA	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 & Safety
	Replaced in short term
	Allow development
	Exempt species
	Exempt height
	Other

Picks		
Replacement times	1	Very significant
0-5	2	Significant
5-10	3	Not Significant
10-20	4	
20+	5	Yes
50+		No
100+		

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

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.