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ARBORIST'S STAGE A REPORT

PROPERTY:	47 – 49 Curry Street and 38 Davis Avenue, Wallsend NSW
NUMBER OF SUBJECT TREES:	3 (38 Davis Avenue)
DATE OF REPORT:	27 October 2021
REQUESTED BY:	Sam Crawford Architects

CONTENTS

REPORT SUMMARY

The report recommends the retention and protection of the subject trees during a proposed development, and includes the protection requirements in accordance with Sections 4.5 and 7, Part A of the City of Newcastle Urban Forest Technical Manual, *Private Trees*, and *AS* 4970 (2009), *Protection of Trees on Development Sites*.

INTRODUCTION

Project Brief

Assess the subject trees and supply a written report.

Methodology

A visual inspection was made of the subject trees from ground level on the 20th of October 2021. No internal testing e.g. Resistograph or drilling, or excavation was carried out. The trees were assessed from observations made during the inspection.

SITUATION OVERVIEW

The trees may be affected by a proposed development.

SITES DESCRIPTION

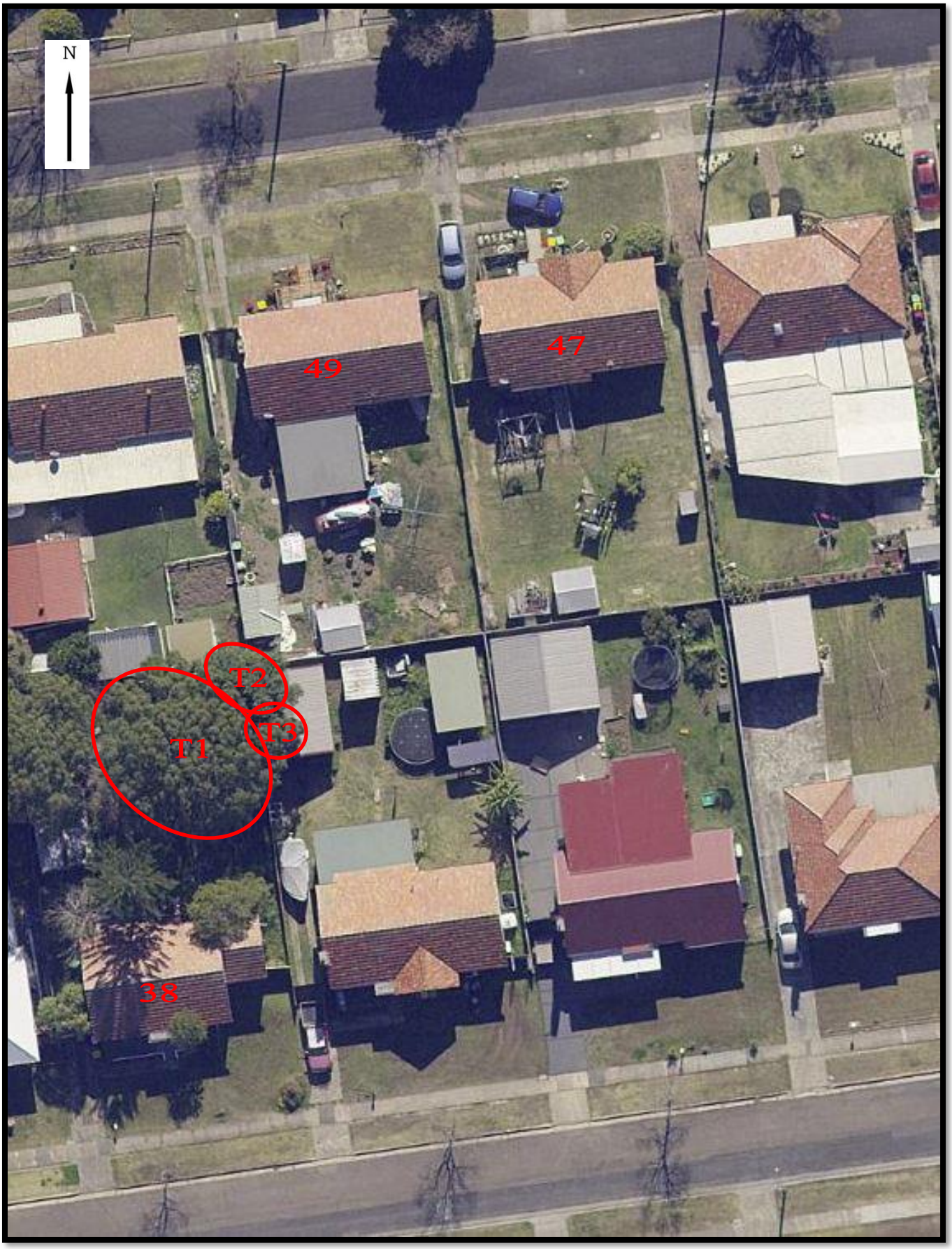
47 – 49 Curry Street are individual suburban blocks facing NNW, and sloping slightly down to the front. There are no trees on these properties, and one shrub is within 3 metres of no. 47 which is exempt under Council's policy.

Number 38 Davis Avenue (to the SW of 49 Curry Street) is a generally flat block facing SSE. There are three trees near the NE corner adjacent to 49 Curry Street.

SITE LOCATION

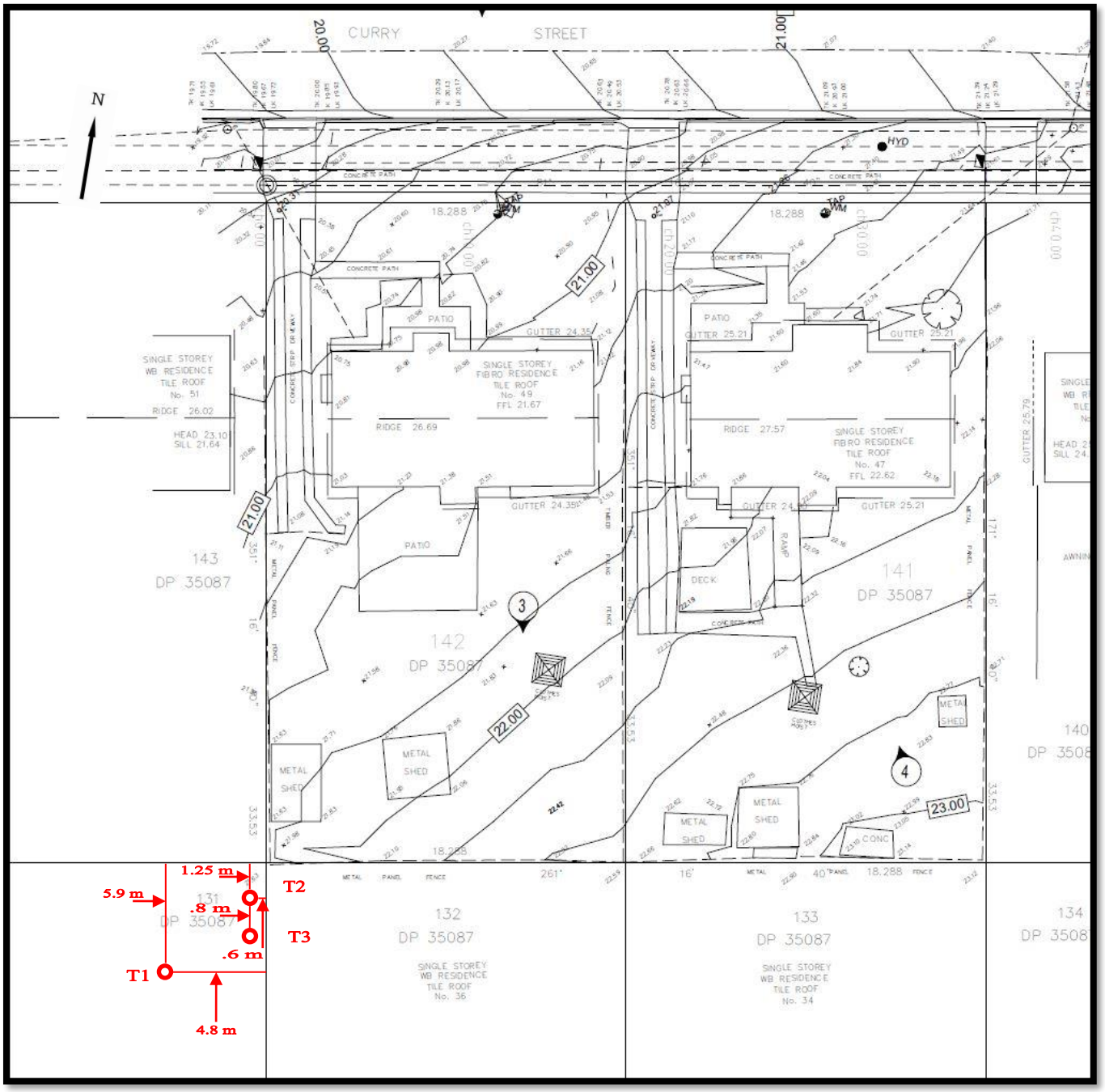
The site location (indicated).

SITE PLAN



An aerial photograph (Six Maps) used as a site plan showing the position of the subject trees with approximate canopy extents.

SURVEY



A supplied survey showing the positions of Trees 1 – 3 (as inserted by the Arborist).

TREE ASSESSMENT

House Number	Number of Trees	Tree Number	Tree Species	Height (metres)	Condition		CBH (mm)	DBH (mm)	TPZ (metres)	SRZ (metres)	ULE	Canopy Spread (metres)	Retention Value
					Health	Structure							
38 (Davis Av)	3	1	*Cinnamomum camphora* (Camphor Laurel).	13	Good	Fair (form)	2770 (at 500 mm high)	880	10.6	3.1	2B	15 x 16.5	Moderate
		2	*Macadamia integrifolia* (Macadamia)	8	Good	Good	580	180	2.0	1.6	2B	8 x 5.5	Low
		3	*Pittosporum undulatum* (Sweet Pittosporum)	11	Good	Fair (form)	940	300	3.6	2.0	2B	8 x 7	Moderate

DISCUSSION

Tree 1:

- Good health with a leaf density of 80% coverage and slight deadwood to 50 mm diameter.
- Structurally sound with fair form (six dominant stems from 1.5 metres high (stem union stable)).
- 5.9 metres from the north fence.

Tree 2:

- Good health with a leaf density of 95% coverage and slight deadwood to 10 mm diameter.
- Structurally sound with good form.
- 1.25 metres from the north fence.

Tree 3:

- Good health with a leaf density of 90% coverage and slight deadwood to 50 mm diameter.
- Structurally sound with fair form (co – dominant stems from 3 metres high (stem union stable)).
- 800 mm from T2.

The TPZ of T1 encroaches into the yard of 49 Curry Street by approximately 2.1 metres at its longest point. This encompasses the TPZs of T2 & T3, so any protection for T3 will be effective for the other trees.

Cinnamomum camphora (T1) is classed as an undesirable species in the City of Newcastle Urban Forest Technical Manual, however, as it is over 10 metres high, it is not exempt from that policy and must be protected in accordance with *AS* 4970 (2009), *Protection of Trees on Development Sites.*

SIGNIFICANCE CHECKLIST

Trees 1 – 3 have no heritage significance, or any listing on the Biodiversity Conservation Act 2016, No 63, Part 4, Threatened Species and Threatened Ecological Communities or Council's Tree Register.

No faunal activity was observed in the trees, that is, no nests, nesting hollows, claw marks on the stems or scat around the bases.

USEFUL LIFE EXPECTANCY (ULE)

ULE is an acronym for Useful Life Expectancy. There are a number of ULE categories that indicate the safe useful life anticipated for each tree. Factors such as the location, age, condition and health of the [particular] tree are significant to determining this rating. ULE is a broad classification as trees are living organisms and changes can occur over time.

The subject trees are in good health, structurally sound with good - fair form. There are no symptoms of detrimental fungal activity or insect damage, although they are not ideally positioned.

The ULE classification for the trees is assessed as it was at the time of the inspection, and any proposed development is not included as part of the ULE assessment.

TREE PROTECTION

Steel mesh fencing [around the TPZs] should be used where practical. Where this may be impractical, the TPZ of each tree should be measured and marked with road marking paint, and construction staff informed that the area is a Tree Protection Zone.

Overall encroachment should be a maximum of 10% of the area of a TPZ. Encroachment exceeding this, if required, should be discussed with the Project Arborist.

Pedestrian traffic must be kept to a minimum, and no materials are to be stored within the TPZ. Vehicles must not be parked within a TPZ.

Any excavation within a TPZ/SRZ must be dug using hand tools or hydraulic or pneumatic excavating equipment, e.g. air spade.

Some root pruning within the TPZ is acceptable, however, excavation machinery such as backhoes and hand tools (shovels etc.) must not be used to cut tree roots. Root pruning must be carried out using secateurs or a saw. Any roots over 75 mm diameter within the TPZ requiring pruning should be inspected by an AQF 5 Arborist to ensure their removal will not have an adverse effect on the tree.

Root pruning within the SRZ should not be carried out, however, if [absolutely] necessary, may only be carried out for roots 50 mm diameter or less using secateurs or a saw. If a structural root larger than 50 mm diameter is encountered where a footing is required, engineering adjustments (e.g. bridge footing) must be made so the root is not damaged. A distance of 100 mm between structural roots and footings is recommended for spatial separation.

Any concrete paths should be laid above ground on a 75 – 100 mm thick layer of 15 – 20 mm aggregate, so as to not disturb any roots beneath, and reduce the likely-hood of infrastructure damage in the future. Permeable paving is preferred if possible.

The aggregate allows air and moisture exchange with the soil and tree roots (all plant roots need air as well as water, which is why plants will decline in health if the surrounding soil becomes compacted or sealed).

The use of honeycomb concrete slabs for a car park would also allow air and moisture exchange with the soil and tree roots.

Any pruning of the tree canopies must be carried out by a qualified contractor in accordance with *AS* 4373 (2007), *Pruning of Amenity Trees*, and within Council's policy. Pruning of public trees is not permitted by private contractors (contact Council if such pruning is required).

CONCLUSION

As the TPZs for T2 & T3 are encompassed in the TPZ of T1, any protection measures for T1 will protect all the trees. Camphor Laurel is a hardy species and is expected to tolerate the construction well.

The shrub in front of 49 is exempt from Council's policy and can be removed without their approval.

RECOMMENDATIONS

Based on the observations made during the inspection, information supplied and the considerations in the conclusion, it is recommended that trees 1 – 3 be retained and protected as discussed.

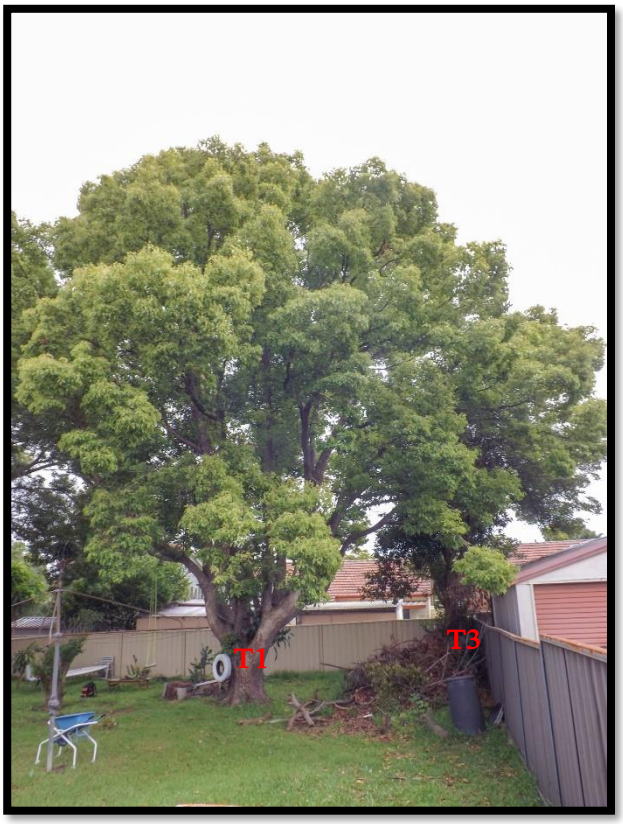
PHOTOGRAPHS

Trees 2 & 3 viewed from the west.

Trees 2 & 3 viewed from the SW.

PHOTOGRAPHS CONTINUED

Trees 1, 2 and 3 viewed from the west.



Trees 1 and 3 viewed from the south.

Stephen Williams

AQF 5 Arborist
Hunter Horticultural Services

DISCLAIMER

The recommendations given in this report assumes that reasonable maintenance will be provided by a qualified Arboriculturist working to Australian Standard 4373 (2007), *Pruning Amenity Trees* and *AS* 4970 (2009), *Protection of Trees on Development Sites.*
Incorrect tree work practices can significantly accelerate tree decline and increase hazard potential.

No liability is accepted for any effects if the recommendations in this report were not followed.

The information in this report does not take into account the effects of unforeseen circumstances, severe weather, external organisms or tree aging on the subject tree.

ACKNOWLEDGEMENTS

Aerial Photographs courtesy of Google Earth and Six Maps.

REFERENCES

Australian Standard 4970 (2009), *Protection of Trees on Development Sites.*

City of Newcastle Urban Forest Technical Manual, Section 9.0, Table 7, page 36, Part A Private Trees.

APPENDICES

ULE

ULE is an acronym for Useful Life Expectancy. There are a number of ULE categories that indicate the safe useful life anticipated for each tree. Factors such as the location, age, condition and health of the tree are significant to determining this rating. Other influences such as the tree's effect on better specimens and the economics of managing the tree successfully in its location are also relevant to ULE (Barrell 1993, 1995).
ULE Categories and Subgroups

1 = Long ULE of > 40 years

A	B	C
Structurally sound in suitable location	Suitable to retain with some remedial care	Significant status – requires Special care to preserve

2 = Medium ULE of 15 – 40 years

A	B	C	D
Lifespan limit	Eventual removal for safety or nuisance	Remove for adjacent trees or replanting	Requires extensive remedial care

3 = Short ULE of 5 – 15 years

A	B	C	D
Lifespan limit	Eventual removal for safety or nuisance	Remove for adjacent trees or replanting	Requires extensive remedial care

4 = Remove tree within 5 years

A	B	C	D	E	F	G
Dead, dying or diseased	Unstable or exposed by new clearing	Structurally defective	Damaged and unsafe	Remove for adjacent trees or replanting	Damaging existing structures	Clearing will affect stability

5 = Trees suitable to transplant

A	B	C
Less than 5m high	Young trees over 5m high	Height/width contained by pruning

The ULE rating given to any tree in this report assumes that reasonable maintenance will be provided by a qualified Arboriculturist using correct and acknowledged techniques. Retained trees are to be protected from root damage. Incorrect tree work practices can significantly accelerate tree decline and increase hazard potential.

Appendix 1

Glossary of Terminology

CBH: Trunk circumference at 1.4 metres high or as otherwise stated

DBH: Trunk diameter at 1.4 metres high or as otherwise stated

Epicormic: Leaf shoots which arise from under the bark, and are not attached to the heartwood. These can detach, especially as they become larger, and have a high risk factor

Frass Sawdust and webbing combined to cover holes of certain types of wood borer

Kino: A type of resin exudated by Eucalypts and Angophoras as a defence mechanism against pathogen attack

Mistletoe: A family (*Loranthaceae* in the southern hemisphere) of several genera [in the Sydney region] of parasitic plants, often hastening the decline of trees in poor health; many species are host specific.

Structure: The shape of the tree, ranging from very good, with a single straight trunk, to very poor, with misshapen multiple trunks. Trees with multiple trunks etc. can have a higher risk factor, as splitting and trunk collapse may occur.

ULE: An acronym for Useful Life Expectancy. A system for rating the possible longevity of a tree, designed by English Arborist Jeremy Barrell (see appendix 1.2).

Included Bark: Bark that occurs in a crotch between branch and trunk or between co-dominant stems.

Included bark usually:

- prevents the trunk from growing around a branch.
- occurs on defective V-shaped crotches in which the bark grows inward and on itself, causing a physical weakness where the co-dominant leaders meet.

Appendix 2

Contact Details	Qualifications
P.O. Box 3193 **Glendale NSW 2285** **Ph 0409 559 147** **Email: jwi52886@bigpond.net au**	**Bachelor of Arts Degree (Botany)** **Horticulture Certificate (1989) with Arboriculture component included.** **Horticulture Certificate (2000 Northern Melbourne Institute of Technology)** **Diploma of Horticulture (2007 Kurri Kurri Tafe) Arboriculture.** **AQF Level 5** **Accreditation Number 5510397**

Appendix 3