



## Arboricultural Impact Assessment

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Tree/s Location: 25 & 27 Songbird Ave, Chirnside Park VIC 3116

Completed for: [REDACTED]

Inspection date: 15<sup>th</sup> January 2022

Date of report: 22<sup>th</sup> January 2022

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Prepared by: Ryan Roche, Consulting Arborist, Future Tree Health

*Grad Cert Arb, University of Melbourne*

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To whom it may concern,

On the 15<sup>th</sup> January 2022, the services of *Future Tree Health* were provided in assessing multiple trees on the Properties 25 & 27 Songbird Ave, Chirnside Park VIC 3116. This report, as understood by the author is to be submitted to relevant parties regarding planned development of the property and the relationship to the trees present. Inspection was undertaken by Ryan Roche under calm, sunny weather conditions.

As agreed, this tree report will provide the following information regarding trees assessed:

- Onsite inspection of trees using QTRA methods where relevant
- Tree Identification
- Measurements and photographs (DBH tape, height meter, iPad photographs)
- Observations of tree health and condition
- Expected impact on trees and structures (including TPZ/SRZ details)
- Professional recommendations for works (if any), and/or mitigation or changes to construction techniques to allow any significant trees to be retained in accordance with AS4970-2009 *Protection of trees on Development Sites*.
- Specifics, details, or recommendations as required by the determining authority.

**Please note:**

1. Prior to reading this report and subsequently following any advice, opinions, recommendations, or findings provided, you must hereby understand and agree to our *Terms of Advice and Service* as provided at the end of the report.
2. Report inclusions and exclusions, assessment methodology (QTRA) and specifics pertaining to Australian Standards referenced may also be found at the end of the document

Please find the tree report included below.

Kind Regards,

Ryan Roche

## 1.0. Executive Summary

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On the 15<sup>th</sup> January 2022, we inspected multiple trees on the properties 25 & 27 Songbird Ave, Chirnside Park VIC 3116.

This double site encompasses standard residential blocks intended for future development which will include construction in close proximity to these trees.

### General findings:

1. Site is two standard blocks intended for future development as a commercial childcare centre. Few trees are present within the sites.
2. All trees within the two sites are required for removal. Trees are predominately fruit trees, small exotic trees, native hedges or poor-quality trees. We do not consider the removal of these (T2-T8, T10, T11, T15, T16) any great loss to the larger neighbourhood character or to cause any significant environmental impact. No planning permit is required to remove these trees based on the relevant overlays.
3. We believe that Tree 2 falls within the parameters of SCHEDULE 23 TO CLAUSE 42.03 SIGNIFICANT LANDSCAPE OVERLAY as a technicality. This tree is not a substantial tree in our opinion, and only has the elevated DBH due to its multi stemmed nature. Technically you do need a permit for the removal of this tree. In our opinion, however, this type of tree doesn't fall within the parameters of a significant tree.
4. Impact to Tree 1 must be avoided during the removal of the crossover at 25 Songbird via a strong Tree Protection Management Plan to accompany the project. There is a high probability that if not conducted carefully, Structural roots of this tree may be interfered with. With removal of the crossover by hand under the supervision of a consulting Arborist, this tree can be retained with acceptable minor encroachment only.
5. Tree 9 at the rear of 25 Songbird can be retained with acceptable minor impact, as construction does not take place close to the tree. Demolition of the small residence at the rear must be supervised by a consulting Arborist, as this area falls within the TPZ of the tree.
6. Neighbouring shrubs (29 songbird) and small trees will experience acceptable minor impact only and can all be retained.
7. With the view of protecting the two high-value trees (T1, T9) via a supportive Tree Protection Management Plan, we endorse this project to proceed.



### 1.1. Purpose of this report

The purpose of this report is to provide the findings of an independent assessment of the trees occupying the aforementioned area and to provide an arboricultural impact assessment, impact mitigation advice and a risk of harm assessment. This report has been prepared in accordance with *AS4970-2009 – Protection of Trees on Development Sites* and *AS4373-2007 – Pruning of Amenity Trees*.

### 2.0. Documents relevant to this report

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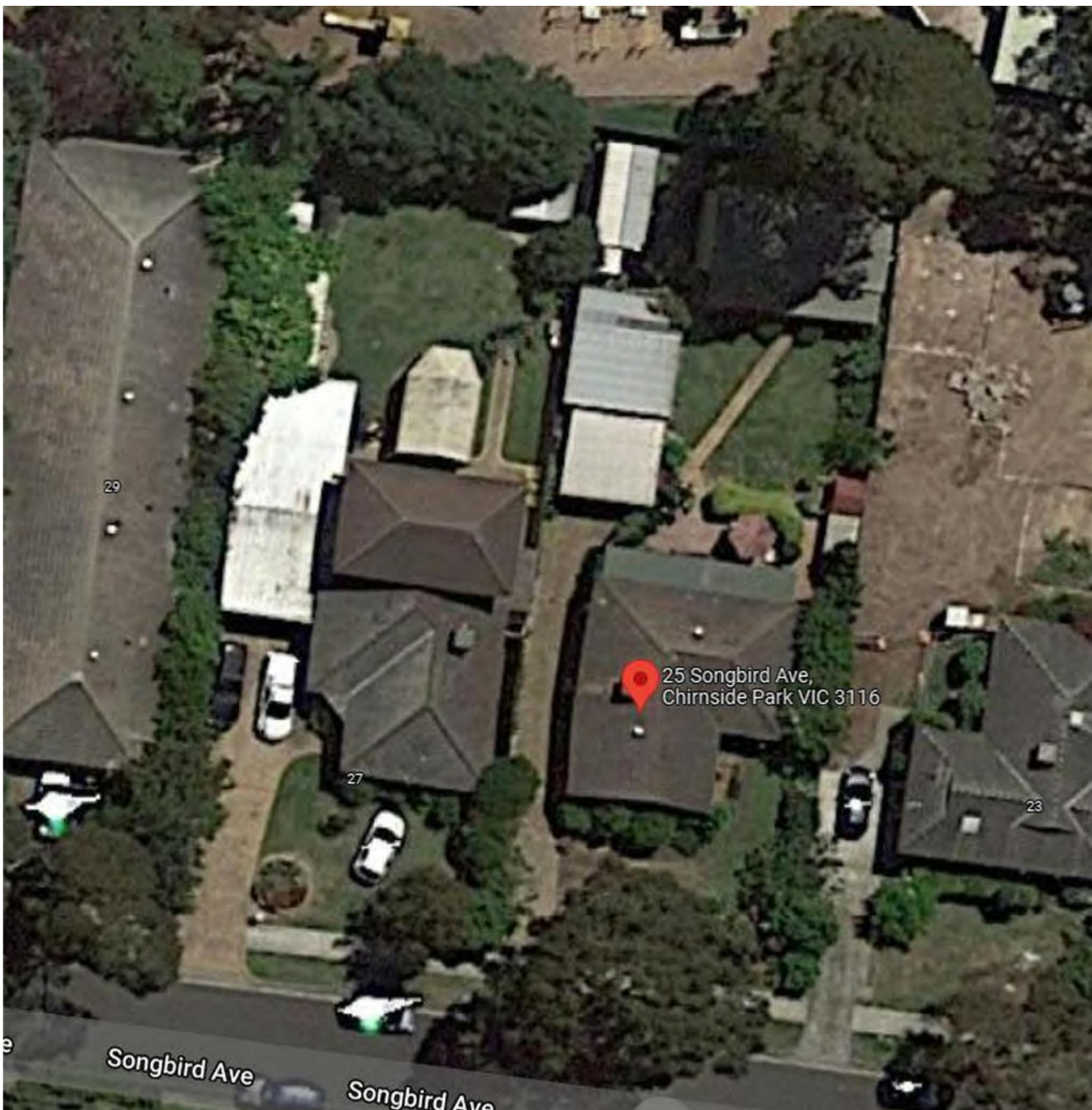
- Australian Standard: Protection of Trees on Development Sites AS4970-2009
- Australian Standard: Pruning of Amenity Trees AS4373-2007
- Site proposal / Plans



## 3.0. Site Observations & Trees Present

### 3.1. Site details

25 & 27 Songbird Ave, Chirnside Park are standard residential land block with few trees trees located on the properties aside from small fruit trees and exotics. Two larger Spotted Gums are located within the nature strip and rear school. Some hedges and smaller trees are located within neighbouring properties.





### 3.2. Trees assessed

Trees assessed are included within the below table:

RETAIN TREE REMOVE TREE

#	Botanical name	Common name	DBH	TPZ	DAB	SRZ
1	<i>Corymbia maculata</i>	Spotted Gum	0.62m	7.44m	0.78m	2.98m
2	<i>Acer palmatum</i>	Japanese Maple	0.27m	3.24m	0.37m	2.18m
3	<i>Acer palmatum</i>	Japanese Maple	0.15m	2m	0.2m	1.68m
4	<i>Pittosporum tenuifolium</i>	Pittosporum	0.15m	2m	0.2m	1.68m
5	<i>Malus domestica</i>	Apple	0.1m	2m	0.15m	1.5m
6	<i>Prunus persica</i>	Nectarine	0.15m	2m	0.15m	1.5m
7	<i>Magnolia grandiflora</i>	Bull Bay Magnolia	0.1m	2m	0.1m	1.5m
8	<i>Ligustrum vulgare</i>	Privet	0.1m	2m	0.1m	1.5m
9	<i>Corymbia maculata</i>	Spotted Gum	0.82m	9.84m	1m	3.31m
10	<i>Corymbia maculata</i>	Spotted Gum	0.21,0.21,0.22 ,0.15,0.16m	4.8m	0.55m	2.57m
11	<i>Pittosporum tenuifolium</i>	Kohuhu	0.15m	2m	0.15m	1.5m
12	<i>Angophora costata</i>	Smooth-Barked Apple Gum	0.46m	5.52m	0.56m	2.59m
13	<i>Betula pendula</i>	Silver Birch	0.18m	2.16m	0.22m	1.75m
14	<i>Callistemon viminalis</i>	Bottlebrush	0.14m	2m	0.18m	1.61m
15	<i>Syzygium australe</i>	Lilly Pilly	0.12m	2m	0.15m	1.5m
16	<i>Pittosporum tenuifolium</i>	Pittosporum group	0.2m	2.4m	0.2m	1.68m



### 3.3. Site overview



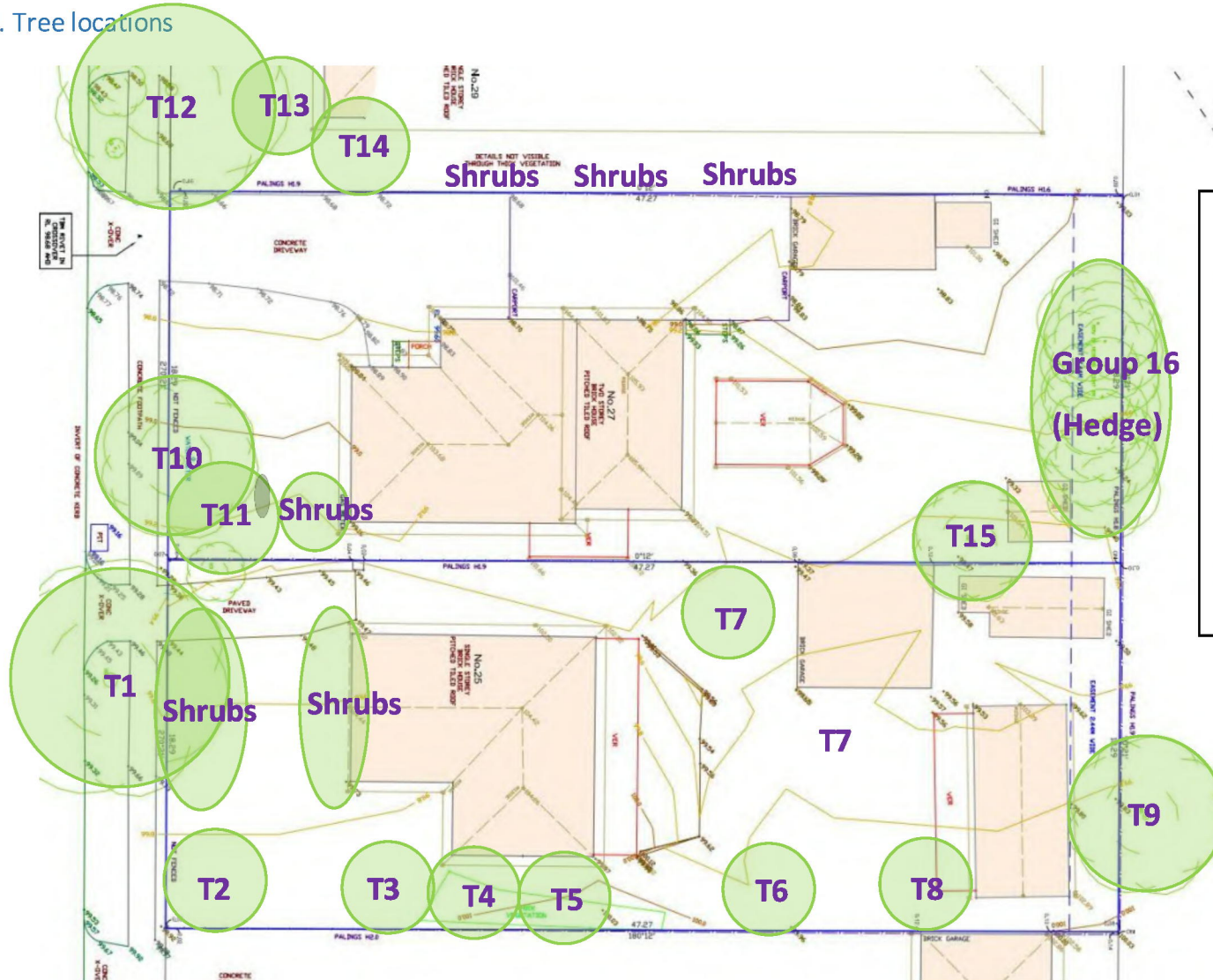


27 Songbird Ave Chirnside Park  
341° N  
15 Jan 2022





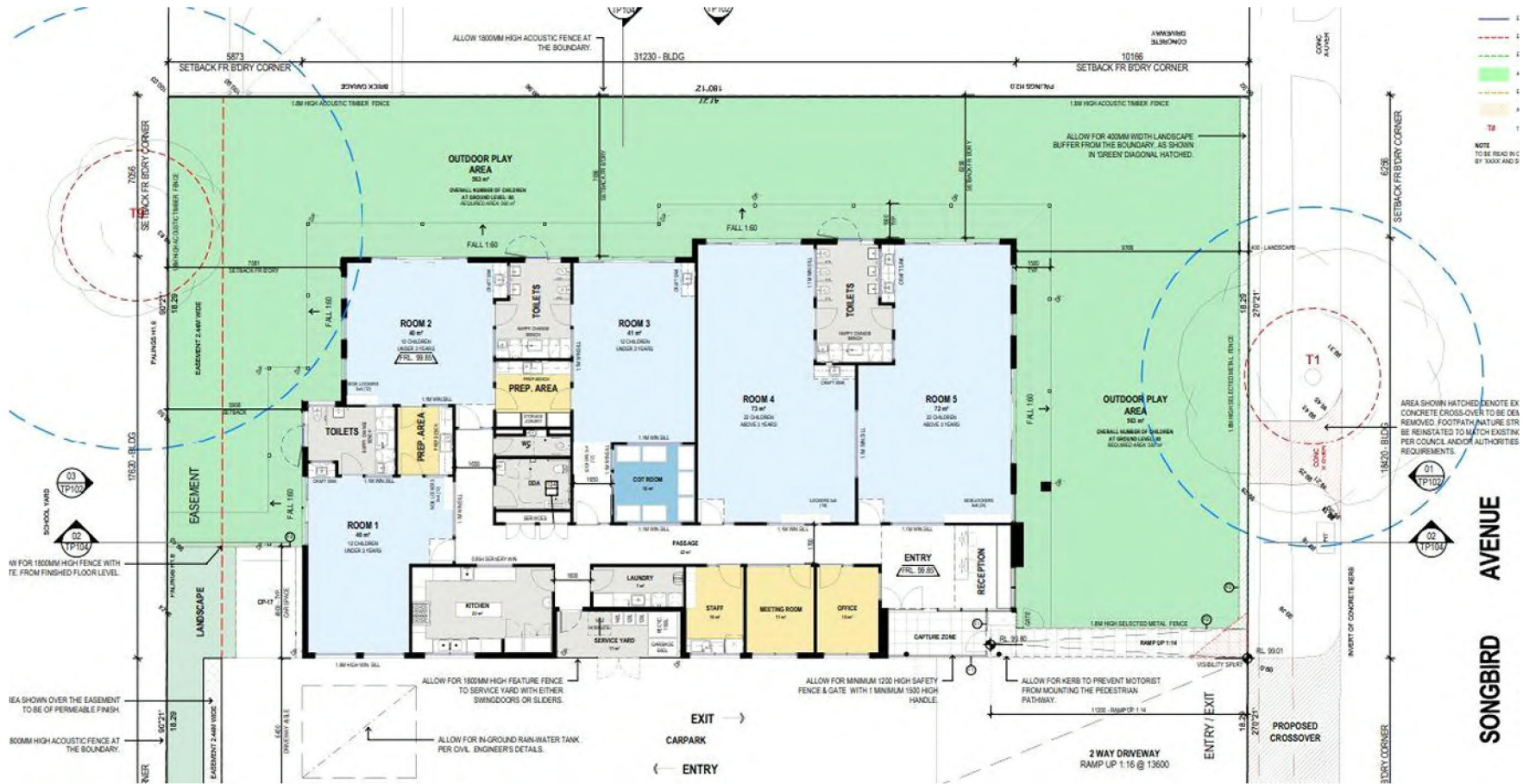
### 3.4. Tree locations



- Shrubs within 25/27 comprised of:
- Agapanthus
  - Japanese Maples
  - Photinea sp.
  - Rosa sp.
  - Camellia sp.
  - Cypressus sp.
  - Schefflera
  - Strzeleckii
  - Hibiscus
  - Hydrangea



### 3.4 Proposed plans and retained trees







## 4.1. Tree details

### TREE 1 - *Corymbia maculata* Spotted Gum

Native	Eastern Australia	Evergreen
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B. Name	ULE	DBH	TPZ	DAB	SRZ
<i>C. maculata</i>	50+	0.62m	7.44m	0.78m	2.98m
Height	Spread	Structure/Health	Age	Arb Value	Impact
18m	6m	Good, Good	Maturing	High	Minor





TREE 2 - *Acer palmatum* Japanese Maple

Exotic	Asia	Deciduous
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B. Name	ULE	DBH	TPZ	DAB	SRZ
<i>A. palmatum</i>	20-30	0.27m	3.24m	0.37m	2.18m
Height	Spread	Structure/Health	Age	Arb Value	Impact
3m	3m	Average, Average	Semi-mature	Low	Remove





### TREE 3 - *Acer palmatum* Japanese Maple

Exotic	Asia	Deciduous
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B. Name	ULE	DBH	TPZ	DAB	SRZ
<i>A. palmatum</i>	20-30	0.15m	2m	0.2m	1.68m
Height	Spread	Structure/Health	Age	Arb Value	Impact
3m	2m	Average, Average	Young	Low	Remove



Tree 3  
29° NE  
15 Jan 2022



TREE 4 - *Pittosporum undulatum* Sweet Pittosporum

<b>Native</b>	South Eastern Australia	<b>Evergreen</b>
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<b>B. Name</b>	<b>ULE</b>	<b>DBH</b>	<b>TPZ</b>	<b>DAB</b>	<b>SRZ</b>
<i>P. undulatum</i>	20-30	0.15m	2m	0.2m	1.68m
<b>Height</b>	<b>Spread</b>	<b>Structure/Health</b>	<b>Age</b>	<b>Arb Value</b>	<b>Impact</b>
3m	2m	Average, Average	Young	Low	Remove







### TREE 5 - *Malus domestica* Apple

Exotic	Asia	Deciduous
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B. Name	ULE	DBH	TPZ	DAB	SRZ
<i>M. domestica</i>	20-30	0.1m	2m	0.15m	1.5m
Height	Spread	Structure/Health	Age	Arb Value	Impact
3m	2m	Average, Average	Young	Low	Remove





### TREE 6 - *Prunus persica* Nectarine

Exotic	Asia	Deciduous
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B. Name	ULE	DBH	TPZ	DAB	SRZ
<i>P. persica</i>	20-30	0.15m	2m	0.15m	1.5m
Height	Spread	Structure/Health	Age	Arb Value	Impact
2.5m	2m	Average, Average	Young	Low	Remove





TREE 7 - *Magnolia grandiflora* Bull Bay Magnolia

Exotic	North America	Evergreen
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B. Name	ULE	DBH	TPZ	DAB	SRZ
<i>M. grandiflora</i>	20-30	0.1m	2m	0.1m	1.5m
Height	Spread	Structure/Health	Age	Arb Value	Impact
2.5m	2m	Average, Average	Young	Low	Remove





## TREE 8 - *Ligustrum vulgare* Privet

Exotic	Europe	Evergreen
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B. Name	ULE	DBH	TPZ	DAB	SRZ
<i>L. vulgare</i>	20-30	0.1m	2m	0.1m	1.5m
Height	Spread	Structure/Health	Age	Arb Value	Impact
2m	2m	Average, Average	Young	Low	Remove





## TREE 9 - *Corymbia maculata* Spotted Gum

<b>Native</b>	Eastern Australia	<b>Evergreen</b>
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B. Name	ULE	DBH	TPZ	DAB	SRZ
<i>C. maculata</i>	50+	0.82m	9.84m	1m	3.31m
Height	Spread	Structure/Health	Age	Arb Value	Impact
18m	8m	Good, Good	Maturing	High	Minor



Tree 9  
17° N  
15 Jan 2022



### TREE 10 - *Corymbia maculata* Spotted Gum

Native	Eastern Australia	Evergreen
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B. Name	ULE	DBH	TPZ	DAB	SRZ
<i>C. maculata</i>	15-20	0.21,0.21,0.22,0.15,0.16m	4.8m	0.55m	2.57m
Height	Spread	Structure/Health	Age	Arb Value	Impact
6m	3m	Poor, Average	Epi-regen	Low	Remove



**Tree 10**  
**43° NE**  
**15 Jan 2022**



TREE 11 - *Pittosporum tenuifolium* Kohuhu

Exotic	New Zealand	Evergreen
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B. Name	ULE	DBH	TPZ	DAB	SRZ
<i>P. tenuifolium</i>	20-30	0.15m	2m	0.15m	1.5m
Height	Spread	Structure/Health	Age	Arb Value	Impact
4m	3m	Average, Average	Young	Low	Remove







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TREE 12 - *Angophora costata* Smooth-Barked Apple Gum

<b>Native</b>	South-Eastern Australia	<b>Evergreen</b>
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<b>B. Name</b>	<b>ULE</b>	<b>DBH</b>	<b>TPZ</b>	<b>DAB</b>	<b>SRZ</b>
<i>A. costata</i>	20-30	0.46m	5.52m	0.56m	2.59m
<b>Height</b>	<b>Spread</b>	<b>Structure/Health</b>	<b>Age</b>	<b>Arb Value</b>	<b>Impact</b>
10m	5m	Average, Average	Semi-mature	Low	None





## TREE 13 - *Betula pendula* Silver Birch

Exotic	Northern Hemisphere	Deciduous
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B. Name	ULE	DBH	TPZ	DAB	SRZ
<i>B. pendula</i>	5-10	0.18m	2.16m	0.22m	1.75m
Height	Spread	Structure/Health	Age	Arb Value	Impact
8m	3m	Average, Poor	Young	Low	None





TREE 14 - *Callistemon viminalis* Bottlebrush

<b>Native</b>	North Eastern Australia	<b>Evergreen</b>
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<b>B. Name</b>	<b>ULE</b>	<b>DBH</b>	<b>TPZ</b>	<b>DAB</b>	<b>SRZ</b>
<i>C. viminalis</i>	20-30	0.14m	2m	0.18m	1.61m
<b>Height</b>	<b>Spread</b>	<b>Structure/Health</b>	<b>Age</b>	<b>Arb Value</b>	<b>Impact</b>
7m	3m	Average, Average	Young	Low	Minor





TREE 15 - *Syzygium australe* Lilly Pilly

Native	South Eastern Australia	Evergreen
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B. Name	ULE	DBH	TPZ	DAB	SRZ
<i>S. australe</i>	20-30	0.12m	2m	0.15m	1.5m
Height	Spread	Structure/Health	Age	Arb Value	Impact
4m	2m	Average, Average	Young	Low	Remove

TREE 16 – *Pittosporum tenuifolium* Pittosporum group

Exotic	New Zealand	Evergreen
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B. Name	ULE	DBH	TPZ	DAB	SRZ
<i>P. tenuifolium</i>	15-20	0.2m	2.4m	0.2m	1.68m
Height	Spread	Structure/Health	Age	Arb Value	Impact
6m	4m	Average, Average	Semi-mature	Low	Remove



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## 5.0. General retention notes

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Regarding trees intended for retention, the following information is essential for consideration.

1. Works must not enter the SRZ under any circumstances. Doing so may destabilise the tree, leading to potential total tree failure.
2. **Any tree removal is to be undertaken only with prior-approved written consent from the determining authority or under appropriate licence and undertaken by the determining authority.**
3. Tree protection fences should be installed around all trees for retention to ensure ongoing health and vitality where relevant.
4. In general, works should encroach no closer to the centre of the trunk than 10% of the total TPZ area in order to maintain tree health and viability (this is minor, acceptable encroachment).
5. Should works or access be required within or close to Tree Protection Zones, the presence of a project arborist is required in conjunction with an approved TPMP.

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## 6.0 References

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1. Bardgett, R, 2005, *The Biology of Soil : A Community and Ecosystem Approach*, Oxford University Press, New York
2. Costello, L, Perry, E, Matheny, N, Henry, J, Geisel, P, 2003, *Abiotic disorders of landscape plants : a diagnostic guide*, Oakland, Calif. : University of California, Agriculture and Natural Resources
3. Draper, D, Richards, P, 2009, *Dictionary for Managing Trees in Urban Environments*, CSIRO Publishing, Collingwood
4. James et al, 2014, *Tree Biomechanics Literature Review: Dynamics*, Arboriculture & Urban Forestry 2014. 40(1): 1–15, International Society of Arboriculture
5. Harris, R, 1992, *Arboriculture : Integrated Management of Landscape Trees, Shrubs, and Vines*, 2<sup>nd</sup> edn, Prentice Hall Career & Technology, New Jersey
6. Mathney & Clark, 1994, A photographic guide to the evaluation of hazard trees in urban areas, International Society of Arboriculture, Champaign, IL.
7. Moore, G.M., 2003, Crown Thinning and Weight Reduction, Proceedings, ISAA Conference, Annual
8. Standards Australia, 4970-2009 – *Protection of Trees on Development Sites*.
9. Standards Australia 4373-2007 – *Pruning of Amenity Trees*
10. Urban, J, 2008, *Up By The Roots : Healthy Soils and Trees in the Built Environment*, International Society of Arboriculture.



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## 7.0. Report exclusions

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This assessment/report did not include the following:

1. Below ground inspection (includes: location, condition and/or integrity of roots; condition of inaccessible parts of trunk; property or asset conflicts and/or damage due to roots).
2. Soil profile test (includes levels of compaction if any)
3. Detailed aerial tree inspection observations/findings (Visual Tree Inspection was conducted from the ground)
4. Abiotic disorder certainty (resulting from groundwater analysis, gas leak investigations, etc.).
5. Certainty of presence/identity of biotic agents (pests, pathogens). Where present, biotic agents must be sampled and sent for lab analysis, a process not included in this commission.
6. Certainty of decay present (if any) within the tree (tree was inspected from the outside only, meaning the condition and integrity of the xylem - wood - within the tree cannot be ascertained).

## 8.0. Australian Standard 4970-2009: Protection of Trees on Development Sites

This report has been prepared in accordance with Australian Standard 4970-2009: Protection of Trees on Development Sites. Where proposed works are within the vicinity of trees, this standard is used to determine acceptable distances of works from trees via the calculation of Tree Protection Zones (TPZ) and the Structural Root Zone (SRZ).

A tree protection zone is calculated ( $DBH \times 12$ ) to establish the acceptable proximity of works, equipment, and construction practices/procedures from an existing tree. Following this, the erection of isolation fencing, the tying of branches, tree protection measures or instalment of tree protection zone signage may be required. This ensures the tree is protected for the duration of the works. The proposed works must not encroach within the tree protection zone unless this encroachment is less than 10% of the TPZ, is previously agreed upon and compensation of additional TPZ area (% of encroachment) is added to the TPZ.

Structural Root Zone (SRZ) refers to the structural roots within closer vicinity to the trunk which are required by the tree to remain upright. Encroachment into the SRZ of an existing tree is not permitted. Works conducted within the SRZ may destabilise the tree, requiring removal to avoid subsequent tree failure.



## 9.0. Approach to acceptable risk within QTRA (Quantified Tree Risk Assessment)

QTRA is a risk assessment method which aims to limit the risk of harm or damage from trees while also maintaining and promoting the benefits of trees. All trees were assessed using this method.

### Assessment method

1. Tree defects, size health, condition, form, vitality, structure, past works, abiotic & biotic influences.
2. Target. Where no target (people or property) is present, a risk assessment is not required.
3. Occupancy of people/property within the target area. This is calculated using averages of occupancy over a one-year period.
4. Probability of failure is calculated using all information from point 1 above
5. A quantified risk assessment probability (Risk of Harm) for a period of 12 months is reached.

### Risk of harm

Levels of risk are ranked within QTRA in four categories based on increases/decreases in probability

1. High risk/Unacceptable risk = 1/1 – 1/1K. **RED**
2. Medium risk/Unacceptable to impose on others without discussion – 1/1K-1/10K **ORANGE**
3. Low risk/Generally acceptable – 1/10K-1/1M **YELLOW**
4. Broadly acceptable – <1/M **GREEN**

### Acceptable risk

Acceptable risk is not zero risk. Trees and tree populations come with benefits and inherent risks. As shedding organisms, trees do drop branches. Trees also have thresholds of tolerance to levels of extreme force such as wind (similar to buildings and man-made structures). When these levels are exceeded due to environmental factors or changed circumstances, trees or tree parts can fail. QTRA aims at assessing identifiable risk and its probability of failure leading to the risk of harm, based on presented aspects combined with target and occupancy. In this way, the benefits of trees can be promoted and maintained, and the risks managed and/or removed where necessary.



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## 10.0. Terms of advice and service

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Prior to reading this report and subsequently following any advice, opinions, recommendations, or findings provided, you must hereby understand and agree to the following:

- This assessment and subsequent report findings are the culmination of research combined with the professional opinion of a qualified consulting arborist. Our consultants pride themselves on independent reports. This report has not been produced to support a particular motive, produce a desired value, or predict a desired occurrence. All findings are reported without bias towards certain parties or results.
- To the authors knowledge, all facts, assessment techniques and material presented is current and accurately researched. Opinions expressed within this report are supported by current research.
- This report contains sketches, photographs, plans, and/or diagrams. These are for illustrative use only and should not be considered to scale unless stipulated otherwise.
- *Future Tree Health* and its representatives will assume that all information divulged to them regarding legal matters, ownership of property or titles is correct. Any properties or projects will be considered to be compliant to relevant codes, legislation, and/or appropriate regulations.
- *Future Tree Health* has gone to every professional length to ensure data and information provided is correct, reliable, and accurate. Data or information provided by third parties is considered outside the control of our consultants and neither they, nor *Future Tree Health* will be held responsible for discrepancies or inaccuracies.
- Representatives of *Future Tree Health* are not required to give testimony or appear in court as a result of this tree report. An expert opinion may be presented by *Future Tree Health* where further arrangements are made, however, this is not a requirement or contractual obligation of this report.
- *Future Tree Health* and its representatives will not be held responsible for occurrences outside the consultants' control.
- This report is the product of a tree assessment, undertaken at the specific time and date listed on the Cover Page, within specific weather and environmental conditions. Thus, all information expressed within is relevant to this time, and date only. As a result, *Future Tree Health* will be in no way held responsible for damages, matters, occurrences, or other issues occurring after this inspection was completed. Following the inspection, all aspects pertaining to the tree/s and site/s in question are considered out of the control of *Future Tree Health*.
- Alterations or loss of this report will result in the entire report being deemed invalid.
- Publication and ownership rights of this report remain with *Future Tree Health*, and no file sharing, hard copy sharing, unauthorised publication or other unintended use will be undertaken without gaining prior consent from *Future Tree Health*.
- This report will not include or pertain to matters other than those aforementioned within the introductory letter and will not include any items listed within the 'Report exclusions' section.
- *Future Tree Health* cannot guarantee that any opinions expressed will come to fruition, and will not be held responsible should matters discussed either eventuate or fail to do so.

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## 11.0. Disclaimer

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- *Future Tree Health* and its representatives are qualified professionals and we take great care to provide information that is accurate, knowledgeable, and reliable. You hereby agree to the extent of the law that we will not be held responsible (regardless of liability theory) for occurrences or advice, due to direct, indirect or negligent actions (using professional opinions, experience, or information – including information from third parties) which lead to or are perceived to lead to: any loss or damage (monetary, or otherwise), perceived loss, perceived damage; injury; revenue changes; aesthetic changes; and/or lifestyle impacts. We do not provide warranties or guarantees.

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